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First Semester 2007 Compliance Monitoring Report Lawrence Livermore National Laboratory Site 300

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September 30, 2007

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1. Introduction

This Compliance Monitoring Report (CMR) summarizes the Lawrence Livermore National Laboratory (LLNL) Site 300 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Remedial Action compliance monitoring activities performed during January through June 2007. 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 post-shutdown monitoring requirements (Holtzapple, 2007), are also included in this report.

During the reporting period of January through June 2007, 6 million gallons of ground water and 32 million cubic feet of soil vapor were treated at Site 300, removing approximately 36 kilograms (kg) of volatile organic compounds (VOCs), 40 g of perchlorate, 390 kg of nitrate, 68 g of Research Department Explosive (RDX), and 2.6 g of tetrabutyl orthosilicate (TBOS) (Table Summ-1).

Since remediation began in 1991, approximately 354 million gallons of ground water and over 298 million cubic feet of soil vapor have been treated, removing approximately 480 kg of VOCs, 630 g of perchlorate 4,800 kg of nitrate, 0.78 kg of RDX, and 9.4 kg of TBOS (Table Summ-2).

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

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

2.1. General Services Area OU 1

2.2. Building 834 OU 2

2.3. Pit 6 Landfill (Pit 6) OU 3

2.4. High Explosive Process Area OU 4

2.5. Building 850 OU 5

2.6. Building 854 OU 6

2.7. Building 832 Canyon OU 7

2.8. Site-Wide OU 8 (Building 833, Building 801, Building 845, Building 851)

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

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

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

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 2007 and influent and effluent analytical data collected during first semester 2007 are included in this report. Treatment facility pH, and dissolved oxygen data collected during the first semester of 2007 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 2007 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 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) operated in the Eastern GSA from 1991 to 2007 to remove VOCs from ground water. VOC-contaminated ground water was extracted from three wells (W-26R-03, W-25N01, and W-25N-24), located downgradient from the debris burial trenches, at a combined flow rate of 45 gallons per minute (gpm). The extracted ground water was treated in three 1,000-pound (lb) granular activated carbon units that removed VOCs through adsorption. The treated effluent water was discharged to nearby Corral Hollow Creek.

Remediation efforts in the Eastern GSA have successfully reduced concentrations of TCE and other VOCs in ground water to below their respective cleanup standards set in the GSA Record of Decision (ROD) (United States [U.S.] Department of Energy [DOE], 1997). The Eastern GSA ground water extraction and treatment system was shut off on February 15, 2007 with the U.S. Environmental Protection Agency (EPA), RWQCB, and California Department of Toxic Substances Control (DTSC) approval. As required by the GSA ROD, ground water monitoring is being conducted to determine if VOC concentrations rise or "rebound" above cleanup standards.

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 (ft) deep and two ft in diameter. The Central GSA dry wells were used until 1982. In 1983 and 1984, these dry wells were decommissioned and excavated.

The Central GSA GWTS 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) at an approximate combined flow rate of approximately 3.0 gpm. However, as described in Section 2.1.1.2 and 2.7, the Central GSA GWTS began receiving partially treated water from the Building 830-Distal South (830-DISS) facility at the end of the first semester, increasing the flow rate to approximately 5.0 to 6.0 gpm. The current GWTS configuration includes particulate filtration, air stripping to remove VOCs from extracted water, and 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. Three wells (W-875-07, W-875-08, and W-875-10) extract soil vapor at an approximate flow rate of 17.6 standard cubic feet per minute (scfm). Vapor extraction from W-7I was discontinued in November 2005 due to lack of vapor flow. 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. Eastern GSA receiving water field data and visual observations are presented in Appendix B.

2.1.1.2. GSA Operations and Maintenance Issues

The Eastern GSA GWTS was temporarily shut down on January 11, 2007 to repair the offsite pipeline that conveys facility discharge to Corral Hollow Creek. The pipeline was damaged by bulls in the Connolly pasture.

On February 15, 2007, the Eastern GSA GWTS was shut down as ground water cleanup standards have been achieved (see Section 2.1).

Continuous operations of the Central GSA GWTS and SVE were interrupted by the following routine maintenance activities and equipment failures:

- Six extraction well Solo pumps were discovered offline on January 5, 2007. The treatment system continued to operate on one well, W-7O that has a submersible pump. Two of the six Solo pumps were replaced and the others began operating again.
- The GWTS was shut down from January 16 to January 29, 2007 to repair the facility's freeze-damaged effluent pipeline and effluent discharge misting towers.
- On June 26, 2007, the GWTS began receiving partially treated water from the 830-DISS GWTS. Extracted water from 830-DISS is treated for perchlorate prior to combining flow with the Central GSA extraction well field. VOC treatment will continue to be conducted at the Central GSA GWTS. No Central GSA operations were affected.

2.1.1.3. GSA Receiving Water Monitoring

No continuous surface water flow was present at the discharge point in Corral Hollow Creek during the entire first semester 2007 to necessitate Eastern GSA receiving water monitoring. Therefore, no analytical data for receiving water is included in any of the GSA analytical tables. The lack of continuous flow is documented in the field measurements and visual observations of the upstream and downstream monitoring points are presented in Appendix B.

2.1.1.4. GSA Compliance Summary

The Central GSA GWTS operated in compliance with the Substantive Requirements for Wastewater Discharge during the first semester 2007. 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 during the first semester 2007. The GWTS was shut down on February 15, 2007 as described above. The RWQCB has given LLNL permission to discharge a subset of constituents above discharge limits until 2010. The only constituents for which the treatment facility effluent exceeded these limits were selenium, specific conductance, and sulfate. Selenium was detected in the GWTS effluent sample collected January 23, 2007 at 4.5 micrograms per liter (μg/L). This did not exceed the daily maximum discharge limit of 8.2 μg/L, but does exceed the monthly average discharge limit of 4.1 μg/L for selenium. Sulfate concentrations were detected in the GWTS effluent samples collected in January at 340 milligrams per liter (mg/L), which is above the monthly average discharge limit of 250 mg/L. No maximum daily limit is specified. The specific conductance of both effluent samples collected in January and February, 1,600 micro ohms per centimeter (μmhos/cm) and 1,500 μmhos/cm, respectively, were above the monthly average of 900 μmhos/cm. Again, no maximum daily limit is specified. Issues regarding discharge limits are included in the Eastern GSA Remediation Optimization Plan (Holtzapple and Ferry, 2007). Selenium, sulfate, and specific conductance are all constituents for which the RWQCB has given permission to exceed discharge limits until 2010. As discussed in this plan, the DOE have 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 [CRWQCB], 2005), the names and telephone numbers of persons to contact regarding the facility for emergency and routine situations are provided below:

Steve Gregory, (925) 422-9904

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 2007 (LLNL, 2007), respectively and are still relevant to the current operating systems.

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. There were no modifications made to the plan during the reporting period. However, no GWTS monitoring was conducted at the Eastern GSA after shutdown on February 15, 2007.

2.1.2. GSA Surface Water and Ground Water Monitoring

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

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

VOCs are the COCs in ground water at the Eastern GSA. VOCs are present at very low concentrations in ground water within Quaternary alluvial deposits (Qal) that directly overlie the

$Tnbs_1$ bedrock. A total VOC isoconcentration contour map based on data collected during the first semester 2007 for this shallow Qal-$Tnbs_1$ hydrostratigraphic unit (HSU) is presented in Figure 2.1.5.

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. The number of wells with TCE concentrations exceeding the maximum contaminant level (MCL) of 5 μg/L has decreased from 18 to 0 wells. Within the Qal-$Tnbs_1$ HSU, total VOC concentrations detected in samples during the first semester 2007 ranged from 5.8 μg/L (W-26R-01, April 2007) to <0.5 μg/L. The TCE concentration contributing to the total VOC concentration of 5.8 μg/L detected in the ground water sample collected in April 2007 from W-26R-01 was 4.6 μg/L. Total VOCs were detected in a sample from only one $Tnbs_1$ well, W-25N-08, at a concentration of 0.58 μg/L (April 2007). First semester 2007 data indicate that remediation of Eastern GSA ground water has successfully reduced concentrations of TCE and other VOCs to below their drinking water MCL in all wells.

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

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

A VOC plume exists within the Qt-$Tnsc_1$ and Qal-$Tnbs_1$ HSUs in the Central GSA. A total VOC isoconcentration contour map based on data collected during the first semester 2007 for these HSUs is presented in Figure 2.1.6.

Within the Qt-$Tnsc_1$ and Qal-$Tnbs_1$ HSUs, total VOC concentrations during the first semester 2007 ranged from a maximum of 320 μg/L (W-875-08, April 2007) in the Building 875 dry well pad area to <0.5 μg/L. VOCs were not detected in ground water samples from wells in the deeper $Tnbs_1$ HSU that underlies the Qt-$Tnsc_1$ HSU. In the vicinity of the sewage treatment pond, where Qal deposits directly overlie the $Tnbs_1$ bedrock, VOCs were detected at low concentrations in a sample from only one $Tnbs_1$ well, W-7N, at a concentration of 0.54 μg/L (April 2007). Prior to remediation, the maximum total VOC concentration detected in Central GSA ground water was 272,000 μg/L (1992), compared to the current (first semester 2007) maximum of 320 μg/L. This decline in VOC concentrations exemplifies the effectiveness of the cleanup operations. The overall extent of ground water impacted by VOCs in Central GSA has not changed significantly over the last few years. However, the extent of wells with VOCs with concentrations greater than 1,000 μg/L has disappeared as a result of remediation efforts.

The Central GSA SVE system was operating fulltime during the first semester 2007. A TCE soil vapor concentration contour map is presented in Figure 2.1-7. The magnitude of the vapor plume is less than that depicted during the second semester 2006. The second semester 2006 plume represented minor rebound of TCE vapor during a two-week SVE shutdown period.

2.1.3.3. GSA Remediation Optimization Evaluation

By 2007, ground water extraction and treatment had reduced VOC concentrations in all Eastern GSA wells to below the GSA ROD ground water cleanup standards (MCLs) and TCE concentrations to below analytical reporting limits (0.5 μg/L) in the majority of wells. In January of 2007, DOE/LLNL proposed to initiate the "Requirements for Closeout" described in the Remedial Design document for the GSA OU (Rueth et al., 1998). These requirements specified 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." The U.S. EPA, RWQCB, and DTSC approved this proposal and the Eastern GSA ground water extraction and treatment system was shut off and effluent discharge to Corral Hollow Creek was discontinued on February 15, 2007, thereby meeting the Substantive Requirements. As required by the GSA ROD, ground water monitoring is being conducted to determine if VOC concentrations rebound above cleanup standards. As of the end of first semester 2007, VOCs have not been detected in any Eastern GSA wells above cleanup standards. In the Eastern GSA Compliance Feasibility Report, submitted to regulatory agencies on July 15, 2007, DOE/LLNL evaluated onsite discharge options that could be implemented if VOC concentrations rebound above cleanup standards requiring that the Eastern GSA extraction and treatment system be restarted.

At the Central GSA, pumping at W-7O, W-7I, W-875-07, and W-875-08 continued to adequately capture the highest concentrations in ground water emanating from the Building 875 dry wells source area. During the first semester of 2007, no modifications to the extraction wellfield were made. Extraction wells W-7O and W-7R removed the majority of the ground water while wells W-7O and W-875-08 removed the most total VOC mass.

2.1.3.4. GSA OU Remedy Performance Issues

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

2.2. Building 834 (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, and TBOS within the Tpsg HSU and the SVE system treats VOCs in the vadose zone. The area immediately to the southwest of the core area is the leachfield area and further to the south is the distal (T2) area. Due to the very low ground water yield from individual ground water extraction wells (<0.1 gpm), the GWTS and 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 13 extraction wells for both ground water and soil vapor extraction. Ten extraction wells (W-834-B2, -B3, -D4, -D5, -D6, -D7, -D12, -D13, -J1, and -2001) are located within the core area and three (W-834-S1, -S12A, and -S13) in the leachfield portion of the distal area. Ground water and soil vapor extraction well W-834-2001 was added to the system in March 2007. Extracted ground water from this well contains dissolved-phase diesel related to the former underground diesel storage tank. The GWTS extracts ground water at an approximate combined flow rate of approximately 0.25 gpm and the SVE extracts soil vapor at a combined flow rate of 105 scfm. The current GWTS configuration includes floating hydrocarbon adsorption devices to remove the floating silicon oil, TBOS, and any floating diesel, followed by aqueous-phase GAC to remove VOCs and dissolved-phase TBOS and diesel from ground water. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses. The 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 2.2-2 through 2.2-5. The pH measurement results are presented in Appendix A.

2.2.1.2. Building 834 OU Operations and Maintenance Issues

Continuous operations of the Building 834 GWTS and SVE were interrupted by the following routine maintenance activities and equipment failures:

- The GWTS and SVE were shut down from January 1 to January 8, 2007 and from January 11 to January 29, 2007 to prevent freeze damage.
- Extraction wells W-834-S1, -S12A, and –S13 were offline due to a leak in the pipeline and began operation on February 5, 2007.
- SVE was shutdown June 28, 2007 to prepare for routine replacement of the GAC treatment media.

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. As mentioned previously, the SVE system was shut down for routine GAC change out.

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 this reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; sixty-seven required analyses were not performed because there was insufficient water in the wells to collect the samples. 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 for the Tpsg HSU is presented in Figure 2.2-2. Ground water elevations in the Tps-Tnsc$_2$ HSU are presented in Figure 2.2-3.

2.2.3. Building 834 OU Remediation Progress Analysis

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

2.2.3.1. Building 834 OU Mass Removal

The monthly ground water and soil vapor mass removal estimates 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 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-Tnsc$_2$ perching horizon.

Total VOC concentration data are contoured for the Tpsg HSU and posted for the Tps-Tnsc$_2$ HSU based on data collected during the first semester 2007 and are presented in Figures 2.2-4 and 2.2-5, respectively.

2.2.3.2.1. Total VOCs Contaminant Concentrations and Distribution

Total VOC concentrations have decreased from a pre-remediation maximum of 1,060,000 μg/L in 1993 to a maximum of 232,060 μg/L (W-834-A1, February 2007) in the first semester 2007. The highest VOC concentrations continue to be detected in the Building 834 core area ground water. However, the historical maximum concentration of 1,060,000 μg/L was detected in the Tpsg HSU, while the first semester 2007 maximum of 232,060 μg/L was detected in the underlying Tps-Tnsc$_2$ HSU perching horizon. Remediation has significantly reduced VOC concentrations in the more permeable Tpsg HSU to a 27,620 μg/L (W-834-D4, April 2007) maximum in the first semester 2007. Although the maximum VOC ground water concentration in this OU was detected in the Tps-Tnsc$_2$ HSU, core area VOC concentration trends in this HSU show relatively stable trends.

Historical and first semester 2007 VOC concentrations in Tpsg and Tps-Tnsc$_2$ HSU ground water are significantly lower in the leachfield and distal areas than in the core area. In addition, the extent of VOCs in Tps-Tnsc$_2$ HSU ground water in the leachfield and distal areas in first semester 2007 was limited to three wells. Total VOC concentrations in the Tpsg HSU have decreased from a pre-remediation maximum of 179,200 μg/L in 1988 to a first semester 2007 maximum of 24,000 μg/L (W-834-2113, February 2007) in the leachfield area, and from an historical maximum of 86,000 μg/L in 1988 to a first semester 2007 maximum of 20,000 μg/L (W-834-2117, February 2007) in the distal area. VOC concentrations from leachfield area wells screened within the Tps-Tnsc$_2$ HSU show relatively stable trends. VOC concentrations from the one distal area well screened within the Tps-Tnsc$_2$ HSU (W-834-2119) shows a slightly increasing trend.

Total VOCs remain below detection limits in the deep Tnbs$_1$ guard wells, W-834-T1 and W-834-T3.

While the overall extent of VOCs in core and leachfield area ground water has not changed significantly, the extent of VOCs with concentrations greater than 10,000 μg/L has decreased significantly since remediation began at Building 834. VOC concentrations and its extent in ground water are expected to continue to decrease over time as remediation progresses. VOC concentrations and plume extent have remained relatively stable in the distal area primarily because ground water extraction and treatment has not yet been initiated in this area. *In situ* bioremediation is being evaluated in this area as part of a long-term treatability test and the current status is described in subsection 2.2.3.4. Ground water extraction would be initiated if the results of the treatability test indicate that *in situ* bioremediation is not a viable treatment method for VOCs in this area.

TCE biodegradation continues within the core area where significant amounts of TBOS are present and serve as an electron donor for intrinsic *in situ* biodegradation. The primary byproduct of this biodegradation has historically been cis-1,2-DCE, although limited vinyl chloride has also been detected. Both cis-1,2-DCE and vinyl chloride were detected in core area ground water in first semester 2007. While low concentrations of the electron donor TBOS and the breakdown product cis-1,2-DCE have been periodically detected in some leachfield area wells, no vinyl chloride has ever been detected in this area. This indicates that while some intrinsic biodegradation may be taking place in this area, the biodegradation reaction may not be complete.

2.2.3.2.2. TBOS Contaminant Concentrations and Distribution

During first semester 2007, the maximum TBOS ground water concentrations detected in ground water samples in the Building 834 OU was 19,000 μg/L (W-834-D3, March 2007). The maximum historical TBOS concentration in the Building 834 OU was 7,300,000 μg/L in 1995. TBOS continues to be detected at high concentrations almost exclusively in the core area. Historically, floating product has been measured intermittently in some core area wells, however, no floating product was observed during first semester 2007. TBOS concentrations in Tpsg HSU wells in the leachfield and distal area were below reporting limits during first semester 2007.

Both the concentrations and extent of TBOS in ground water are greater in the Tpsg HSU than in the underlying Tps-Tnsc$_2$ HSU perching horizon. In first semester 2007, TBOS was detected in only one Tps-Tnsc$_2$ HSU well at a concentration of 14 μg/L (W-834-1711, February 2007). TBOS continues to remain below reporting limits in the deep Tnbs$_1$ guard wells, W-834-T1 and W-834-T3.

2.2.3.2.3. Nitrate Contaminant Concentrations and Distribution

During first semester 2007, nitrate was detected in samples in Tpsg and Tps-Tnsc$_2$ HSU ground water at concentrations exceeding the 45 mg/L MCL in the Building 834 core, leachfield, and distal areas. Nitrate concentrations in Tpsg HSU ground water ranged from a maximum of 280 mg/L (W-834-M1, February 2007) to less than the 0.5 mg/L reporting limit. Nitrate concentrations in Tps-Tnsc$_2$ HSU ground water ranged from a maximum of 94 mg/L (W-834-1711, February 2007) to less than the 0.5 mg/L reporting limit. A combination of both natural and anthropogenic (e.g., septic) sources are likely contributing to the nitrate in Building 834 OU ground water.

While nitrate concentrations have decreased from a historical maximum of 749 mg/L in 2000, the high concentrations detected in first semester 2007 indicate a continuing contribution from natural sources in the bedrock and the septic system.

Both the concentrations and extent of nitrate in ground water are greater in the Tpsg HSU than in the underlying Tps-Tnsc$_2$ HSU perching horizon. The source of nitrate in the core area is unknown. There may be multiple anthropogenic and natural sources. Nitrate concentrations in the core area vary spatially and temporally related to denitrification associated with the intrinsic *in situ* biodegradation. 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 78 mg/L in April 2007. This increase could be due to the introduction of oxygen into the subsurface during SVE operation that subdues intrinsic biodegradation and denitrification.

Nitrate levels in the leachfield area are presumably due to a large anthropogenic component associated with the septic system. The source of elevated nitrate levels in the distal area is unknown. The elevated concentrations may be related to a past slug of nitrate-bearing waste fluids discharged to the septic system long ago that have migrated downgradient to the distal area. It is also possible that there is a significant natural source.

Nitrate was not detected in guard wells W-834-T1 and W-834-T3 during first semester 2007.

2.2.3.2.4. Other Contaminant Concentrations and Distribution

The extent of diesel in ground water appears to be limited to an area near the previous location of an underground storage tank. Diesel fuel was detected in two wells, W-834-U1 and W-834-S9, at concentrations of 340 μg/L and 130 μg/L, respectively.

Benzene, toluene, ethylbenzene, and xylene (BTEX) monitoring was conducted in fourteen Building 834 OU wells during first semester 2007. No BTEX compounds were detected in these wells during the first semester 2007. BTEX data will continue to be evaluated to support a monitoring reduction.

In first semester 2007, chromium samples were collected from four core area wells that were affected by improperly wired pressure transducers that produced electrical short circuits in 2000. Chromium concentrations were significantly below the 0.05 mg/L MCL in these wells.

In first semester 2007, perchlorate samples were collected from fourteen wells, twelve of which were sampled for perchlorate for the first time. Of these wells, perchlorate was detected in only one well, W-834-S7 at a concentration of 8.8 μg/L. This was the first time that well W-834-S7 has been sampled for perchlorate. This well will be sampled for perchlorate again during second semester 2007.

2.2.3.3. Building 834 OU Remediation Optimization Evaluation

The GWTS and the SVE system were operational throughout the first semester 2007, and continue to adequately capture the highest concentrations in ground water within the core and leachfield areas. During the first semester 2007, no modifications of the extraction wellfields for either the core area or the leachfield area were made. Significant VOC mass was removed from the vapor phase during this period of operation mostly due to the three leachfield area extraction wells, which began operation during the second semester 2004. The leachfield area wells, W-834-S1, -S12A, and -S13, accounted for approximately 80% (10.03 kg) of VOC mass removed in vapor during the first semester 2007. The VOC mass removed from ground water during the first semester of 2007 was 0.89 kg; 0.74 kg from the core area and 0.15 kg from the leachfield area. For comparison, 1.18 kg were removed during the second semester 2006. 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. The use and feasibility of induced fracturing is being evaluated to possibly assist in remediating the underlying perching horizon, however this evaluation is still in the research phase.

2.2.3.4. Treatability Studies

The T2 area enhanced biotreatability test, which began in 2005, is ongoing. The objective of this test is to evaluate the feasibility of fluid injection (sodium lactate) for source area cleanup. The first phase of this test was the tracer experiment (completed in early 2007), which indicated that the Tpsg HSU in the T2 area could be influenced in a reasonable timeframe (<1 year). Given these preliminary results, the second phase was started during the current semester (April 2007), in which two slug additions of sodium lactate syrup (e.g. Wilclear™), each approximately 10 gallons, were added into a single injection well (W-834-1824) to promote biological dechlorination of chloroethenes in the area. Hetch-Hetchy water has been added in a nearly continuous fashion since the start of the test, by maintaining the level of Hetch-Hetchy water in the injection well at a height of 20 ft above its screen. The purpose of continuous Hetch-Hetchy water injection is to facilitate the transport of sodium lactate into the formation, purge the injection well to minimize biofouling, and to provide a conservative tracer for subsequent performance monitoring. Water levels in nearby monitoring wells increased within days of starting the injection, but at present, indicators of biological activity (decreasing nitrate and sulfate concentrations; decreasing oxidation- reduction potentials) have not yet been observed in any monitoring well. This suggests either that the reduced conditions created by lactate addition have not yet arrived in nearby monitoring wells, or that the amount of lacate added was too small to create anoxic conditions. The results of isotope samples collected late in the present semester will help distinguish between these two possibilities, and the test will be modified appropriately early next semester to speed up biological activity.

2.2.3.5. Building 834 OU Remedy Performance Issues

There were no issues that affect the performance of the cleanup remedy for the Building 834 OU during this reporting period. The remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

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

The Pit 6 Landfill was capped and closed in 1997 under CERCLA to prevent further leaching of contaminants resulting from percolation of rainwater through the buried waste. The engineered, multi-layer cap is intended to prevent rainwater infiltration into the landfill, mitigate potential damage by burrowing animals and vegetation, prevent potential hazards from the collapse of void spaces in the buried waste, and prevent the potential flux of 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; twenty-four required analyses were not performed because there was insufficient water in the wells to collect the samples. The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.3-1.

A ground water potentiometric surface map is presented in Figure 2.3-2.

2.3.2. Pit 6 Landfill OU Remediation Progress Analysis

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

2.3.2.1. Pit 6 Landfill OU 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. These constituents have been identified within the $Qt\text{-}Tnbs_1$ HSU. The distribution of total VOCs and tritium in the $Qt\text{-}Tnbs_1$ HSU based on data collected during the first semester 2007 are contoured on Figures 2.3-3 and 2.3-4, respectively.

Isoconcentration maps for the secondary COCs, based on data collected during the first semester 2007, will be presented in the 2007 annual report.

2.3.2.1.1. Total VOC Contaminant Concentrations and Distribution

TCE, cis-1,2-DCE, and PCE were detected at low concentrations within the Qt-$Tnbs_1$ HSU during the first semester 2007. Total VOC concentrations during the semester ranged from 7.7 µg/L (EP6-09, January 2007) to below the reporting limit (<0.5 µg/L).

TCE concentrations have decreased from the historical maximum of 250 µg/L in 1988 to a maximum concentration of 7.7 µg/L in first semester 2007 (EP6-09, January 2007). During the semester, cis-1,2-DCE was detected in ground water sample from only one Pit 6 Landfill OU well at a maximum concentration of 2.4 µg/L (K6-01S, April 2007). The 2006 maximum concentration of cis-1,2-DCE was 2.5 µg/L detected in a sample from the same well. The presence of cis-1,2-DCE, a degradation product of TCE, suggests that natural decomposition may be occurring. PCE was also detected in two ground water samples from one well at a concentration of 1.4 µg/L (EP6-08, January and April 2007) during the semester. The 2006 maximum concentration of PCE was 1.0 µg/L detected in samples from the same well.

VOCs were not detected in ground water samples collected from guard wells W-PIT6-1819 and K6-17 during the semester.

2.3.2.1.2. Tritium Contaminant Concentrations and Distribution

Tritium was detected above the 100 picoCuries per liter (pCi/L) background activity in ground water samples from several wells completed in the Qt-$Tnbs_1$ HSU both north of the fault and within the fault zone. First semester 2007 ground water sample tritium activities ranged from 444 pCi/L (K6-24, February 2007) to below reporting limits (<100 pCi/L).

Well K6-36 was recently the location of the highest measured tritium activities (3,420 pCi/L in 2003) in ground water in the Pit 6 OU, but has been dry since October 2006. However, because the Qt-$Tnbs_1$ HSU is likely saturated below the well screen, the August 2006 tritium activity of 1,200 pCi/L is included on the tritium isoconcentration contour map presented on Figure 2.3-4, and thus the 1,000 pCi/L contour is presented.

Well W-PIT6-1819 is a guard well that is used to define the downgradient extent of the tritium plume. It is located about 100 ft west of the Site 300 boundary with the Carnegie State Vehicle Recreation Area residence area and about 200 ft west of the CARNRW1 and CARNRW2 water-supply wells (Figure 2.3-4). The April 2007 routine sample from well W-PIT6-1819 yielded a tritium activity of 295 pCi/L. A duplicate sample collected from well W-PIT6-1819 at the same time yielded <100 pCi/L. The maximum 2006 tritium activity of this well was 241 pCi/L.

Tritium activities were below 100 pCi/L in all the monthly ground water samples obtained from the four off-site CARNRW wells during the first semester 2007.

Based on these analyses, the tritium plume appears to be relatively stable and tritium activities in ground water samples from monitoring wells within the plume are generally decreasing.

2.3.2.1.3. Perchlorate Contaminant Concentrations and Distribution

During the first semester 2007, perchlorate was detected in a ground water sample from well K6-18 (completed in the Qt-Tnbs$_1$ HSU within the fault zone) at 6.6 µg/L (February 2007). A duplicate sample collected from the well at the same time did not contain perchlorate above the 4 µg/L reporting limit. Perchlorate was not detected in the ground water samples collected from any of the other monitor wells or CARNRW water-supply wells during the semester.

Perchlorate concentrations in ground water have been steadily decreasing from their historical maximum concentration of 65 µg/ detected in a ground water sample collected from well K6-19 in 1998.

2.3.2.1.4. Nitrate Contaminant Concentrations and Distribution

During the first semester, nitrate was detected in ground water samples collected from wells completed within the Qt-Tnbs$_1$ HSU within and north of the fault zone. The maximum concentration of nitrate detected during the semester was 4.3 mg/L in a ground water sample from well EP6-09 (January 2007). During 2006, nitrate was only detected above the 45 mg/L MCL in a ground water sample from well K6-23 (200 mg/L, February 2006). This well was not sampled this semester. Well K6-23, consistently yields ground water nitrate concentrations in excess of the MCL. Well K6-23 is located in close proximity to the Building 899 septic system, which may be a potential source of the nitrate at this location. The elevated nitrate appears to be localized near this building.

Nitrate was not detected in the monthly ground water samples collected from the CARNRW water-supply wells during the semester.

2.3.2.2. Pit 6 Landfill OU Remediation Optimization Evaluation

The remedy for tritium and VOCs, the primary COCs in ground water at the Pit 6 Landfill, as selected in the Site 300 Interim ROD, is Monitored Natural Attenuation (MNA). 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. Maximum TCE concentrations in ground water remain slightly above the 5 µg/L MCL in only one well (EP6-09) and concentrations and the extent of VOCs in ground water are generally declining.

2.3.2.3. Pit 6 Landfill OU Performance Issues

There were no issues that affect the performance of the cleanup remedy for the Pit 6 Landfill OU during this reporting period. The remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

2.4. High Explosives Process Area (HEPA) OU4

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

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

The 815-SRC GWTS treats ground water for TCE, RDX, and perchlorate and has been in operation since September 2000. Ground water is extracted from wells W-815-02 and W-815-04 at a combined flow rate of approximately 1.2 gpm. The current GWTS configuration includes a Cuno filter to remove particulates, three aqueous-phase GAC canisters connected in series for TCE and RDX and HMX removal, and two ion-exchange columns containing SR-7 resin (also connected in series) for perchlorate removal. Treated water containing nitrate is injected into the $Tnbs_2$ well W-815-1918 where a natural denitrification process reduces the nitrate to nitrogen.

The 815-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 a combined flow rate of approximately 2 gpm. The current GWTS configuration includes a Cuno filter to remove particulates, two ion-exchange columns with SR-7 resin that are connected in series for perchlorate removal, and three aqueous-phase GAC (also connected in series) for TCE removal. Treated water containing nitrate is injected into the $Tnbs_2$ well W-815-2134 where a natural denitrification process reduces the nitrate to nitrogen.

The 815-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 a combined flow rate of approximately 4 gpm. The current GWTS configuration includes aqueous-phase GAC connected in series for TCE removal. Treated ground water has been discharged to the subsurface via an infiltration trench.

The 817-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 500 to 800 gallons per month. The current GWTS configuration includes two ion-exchange columns with SR-7 resin that are connected in series for perchlorate removal, a Cuno filter to remove particulates, and three aqueous-phase GAC (also connected in series) for RDX and High-Melting Explosive (HMX) removal. Treated ground water is injected into upgradient injection well W-817-06A.

The 817-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 rate of approximately 1.0 gpm, the vast majority of which comes from W-817-03. The current GWTS configuration includes a Cuno filter to remove particulates, two aqueous-phase GAC canisters connected in series for TCE and RDX removal, two ion-exchange columns containing SR-7 resin (also connected in series) for perchlorate removal, and a third aqueous-phase GAC canister completes the treatment chain. Treated ground water containing nitrate is injected into upgradient injection well W-817-2109 where a natural denitrification process reduces the nitrate to nitrogen. The 817-PRX GWTS is currently being expanded to meet a fiscal year 2007 milestone.

The 829-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 a flow rate of 0.2 gpm. The current GWTS configuration includes two ion-exchange columns containing SR-7 resin connected in series for perchlorate removal, a biotreatment unit to treat nitrate, and three aqueous phase GAC canisters (also connected in series) for VOC removal. Although the biotreatment unit is in place, no acetate injection has been needed as all nitrate has been removed by the SR-7 resin. As soon as nitrate breakthrough occurs from the resin, acetate injection may be initiated to promote bacterial nitrate treatment. Treated ground water is injected into 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

Continuous operations of the 815-SRC, 815-PRX, 815-DSB, 817-SRC, 817-PRX, and 829-SRC were interrupted by the following routine maintenance activities and equipment failures:

<u>815-SRC</u>

- The GWTS was taken offline on April 16, 2007 to evaluate an effluent detection of perchlorate. The result was found to be a false positive and the facility was restarted on April 17, 2007.

<u>815-PRX</u>

- The GWTS was shut down from January 16 to January 29, 2007 to repair freeze damage to the treatment system pipeline.
- Methylene chloride was detected in a sample of the GWTS effluent collected on March 5, 2007. The effluent was resampled on March 8, 2007 to verify the detection. The detection was confirmed and the GWTS was shut down on March 9, 2007. The GAC was replaced and one of the GAC canisters was moved in front of the ion-exchange resin canisters. The system was restarted on March 20, 2007 and samples were collected. Additional VOCs were detected in the samples so the system was shut down on

March 21, 2007. Due to the constituents detected, such as methylene chloride and methyl-ethyl ketone, which are not COCs in the HEPA and are contained in polyvinyl chloride glues, it was believed that the source of the VOCs was the glue used to repair the pipelines. Since it was extremely cold during repair, it is believed that the glue did not harden. The pipeline was drained and allowed to remain empty for three days, followed by purging the system with extracted ground water. The facility had been disconnected from the injection well, and all water collected in a bubble tank. The same compounds were again detected. Over the course of several weeks, water recirculation through the pipelines and a series of air blow downs were performed to setup all glue joints and remove residual VOCs. Organic vapor measurements were collected at various locations during the blow-down process to narrow in on the source of the contamination. The system was allowed to remain down to allow for potential VOC rebound, followed by additional vapor measurement to confirm the absence of VOCs. The GWTS was restarted June 4, 2007, samples were collected, and the facility was shut down until results were received. All effluent water was still being collected in a bubble tank. The samples collected on June 6, 2007 indicated that glue related compounds had been removed from the system pipelines. The GWTS was restarted on June 11, 2007, with start-up samples collected on June 12, 2007 and again on June 19, 2007. No VOCs were detected in either set of effluent samples, and all influent and intermediate samples collected only contained the normal COCs.

<u>815-DSB</u>

- The GWTS was temporarily shut down from March 26, 2007 to perform routine interlock checks.

<u>817-SRC</u>

- The GWTS was shut down from January 1 to January 8, 2007 and from January 11 to January 29, 2007 to prevent freeze damage.

<u>817-PRX</u>

- The GWTS was shut down from January 1 to January 29, 2007 to prevent freeze damage.
- The GWTS was shut down on March 1, 2007 to repair a sanitary seal on the injection well that was damaged as a result of pressure buildup in the well. It was restarted on March 5, 2007 to collect monthly samples, and was then shut down for the remainder of the semester for well field expansion work that included adding an additional injection well and extraction well.

<u>829-SRC</u>

- The GWTS was shut down for most of the reporting period awaiting a new extraction pump. The pump was replaced June 13, 2007, however, the solar batteries were found to be dead. The batteries were replaced on June 18, 2007 and the facility was restarted on June 26, 2007. However, due to the low ground water yield, no water was available at the effluent port to collect start-up samples by the end of the first semester.

2.4.1.3. HEPA OU Compliance Summary

The 815-SRC, 815-DSB, 817-SRC, 817-PRX, and 829-SRC GWTSs operated in compliance with the Substantive Requirements for Wastewater Discharge. At 815-PRX GWTS, as discussed above, the daily maximum and monthly median discharge limits for VOCs were exceeded in March due to the glue related problem at the facility.

2.4.1.4. HEPA OU Facility Sampling Plan Evaluation and Modifications

The HEPA OU facility sampling and analysis plans comply with CMP monitoring requirements. The sampling and analysis plans are presented in Table 2.4-10. The only modifications made to the plan during the reporting period included missed influent and effluent monitoring from the 829-SRC facility due to non-operational issues discussed in Section 2.4.1.2, and additional monitoring at 815-PRX to insure all glue related compounds were removed.

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; thirty-two required analyses were not performed because there was insufficient water in the wells to collect the samples and four required analyses were not performed because of pump failure. 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 Tpsg and $Tnsc_{1b}$ (Building 829 area) HSUs as presented in Figures 2.4-2, 2.4-4 and 2.4-6.

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 is present in the $Tnbs_2$ HSU. Minor amounts of total VOCs, perchlorate, and nitrate contamination are present in perched ground water in the $Tnsc_{1b}$ HSU beneath the former Building 829 HE Burn Pit and Waste Accumulation Area, located in the northwest portion of the HE Process Area. Some TCE, RDX, and perchlorate have been detected in the Tpsg sands and gravels of the Tpsg-Tps HSU in the vicinity of Building 815. No contamination has been detected in the Tps portion of the Tpsg-Tps HSU, or the upper and lower $Tnbs_1$ HSUs in the HEPA OU.

Total VOC concentration data are contoured for $Tnbs_2$ and posted for Tpsg and $Tnsc_{1b}$ based on data collected during the first semester 2007 and are presented in Figures 2.4-3 2.4-5, and 2.4-7. Concentration maps for the secondary COCs will be presented in the 2007 annual report. For collocated wells, the highest concentration was used for contouring.

2.4.3.2.1. Total VOC Contaminant Concentrations and Distribution

During the first semester 2007, VOCs were detected in ground water samples from $Tnbs_2$ wells at concentrations ranging from below the reporting limit of 0.5 μg/L to 52 μg/L (February 2007) in well W-818-11, located upgradient of 815-PRX treatment facility and downgradient of the 815-SRC treatment facility. Due to the fact that the $Tnbs_2$ total VOC plume is detached from its source at Building 815, the 815-PRX extraction wellfield captures the highest concentrations in this plume. Although total VOC concentrations did not decrease significantly at the influent to 815-PRX during first semester 2007, these concentrations have decreased from their historical maximum of 53 μg/L in 2002. 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 plume has much the same shape and extent as in previous years, however the lateral extent appears larger due to the detection of VOC contamination in recently installed well W-830-2216, located upgradient of the 830-DISS GWTS. This contamination likely comes from Building 832 Canyon OU sources. This well was connected as an extraction well to 830-DISS in June 2007.

During this reporting period, trace VOC concentrations were detected above the 0.5 μg/L reporting limit in samples from guard wells W-815-2110 and W-815-2111, located near the site boundary. VOCs were not detected in samples taken from any of the other onsite or offsite guard wells for the HEPA. VOCs were detected in offsite water-supply well, GALLO1, in two samples at concentrations of 0.53 μg/L (January 2007) and 0.6 μg/L (February 2007). The 817-PRX and 815-DSB facilities were installed to prevent further migration of VOCs near the site boundary. Continuous operation of the 815-DSB facility during 2006 and first semester 2007 appears to be mitigating further migration of VOCs downgradient of this facility. VOC concentrations are monitored closely in the site boundary area. If VOC concentrations continue to be detected, modifications to the remedial design in the form of increased pumping of existing extraction wells, conversion of monitoring wells to extraction wells, or installation of new extraction wells will be considered.

In the first semester 2007, VOC samples were not collected from 829-SRC ($Tnsc_{1b}$) extraction well, W-829-06 due to pump failure. 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).

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 2007, VOCs were detected in samples from Tpsg-Tps wells at concentrations ranging from below the reporting limit to 58 μg/L (W-817-03A, January 2007). VOC concentrations in this well have decreased from a maximum of 152 μg/L in 1987. A ground water extraction well, W-817-2318, was installed near W-817-03A and was connected to the 817-PRX GWTS. Extraction is scheduled to begin during second semester 2007. VOCs were also detected in a sample from Building 815 source area Tpsg-Tps well W-815-05 at a concentration of 7.1 μg/L (January 2007). Other 815 source area Tpsg-Tps wells, W-815-01 and W-815-03, have been dry since 1999 and 2001, respectively. Tpsg-Tps well W-35C-05, located near the site boundary, remains below the 0.5 μg/L reporting limit.

During first semester 2007, total VOCs were detected in samples from Qal/WBR guard well W-880-02 at concentrations of 0.62 μg/L (January 2007) and 0.56 μg/L (April 2007). This well and well W-4AS have historically had sporadic trace detections of VOCs. 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.

2.4.3.2.2. RDX Contaminant Concentrations and Distribution

During the first semester of 2007, RDX was detected in ground water samples from $Tnbs_2$ wells at concentrations ranging from <1 μg/L to a maximum of 69 μg/L (January 2007) in 815-SRC extraction well, W-815-04. Overall, RDX concentrations in the $Tnbs_2$ HSU have decreased from an historical maximum of 204 μg/L (July 1992) in 817-SRC extraction well W-817-01 to 39 μg/L (January 2007). RDX decreases rapidly downgradient to below the 0.6 μg/L Preliminary Remediation Goal (PRG) just northwest of well W-818-08. Although the maximum concentration of RDX continues to decrease, the extent of RDX contamination in the $Tnbs_2$ HSU remains essentially the same as shown in previous reports. RDX was not detected in any of the $Tnbs_2$ guard wells or in any of the Tpsg and $Tnsc_{1b}$ wells in first semester 2007.

2.4.3.2.3. Perchlorate Contaminant Concentrations and Distribution

During first semester 2007, perchlorate was detected in ground water samples from $Tnbs_2$ wells at concentrations ranging from <4 μg/L to a maximum of 35 μg/L (January 2007) in 817-SRC extraction well, W-817-01. Perchlorate concentrations detected in samples from the $Tnbs_2$ HSU have decreased from an historical maximum of 50 μg/L (February 1998) in well W-817-01. Perchlorate was not detected in any of the $Tnbs_2$ guard wells in 2006. Perchlorate was detected in offsite water-supply well, GALLO1, at a concentration of 11 μg/L (March 2007). Subsequent samples have been below the reporting limit and the 11 μg/L is considered to be a false positive.

During first semester 2007, perchlorate was not detected in ground water samples taken from $Tnsc_{1b}$ well W-829-1940. Extraction well W-829-06 was not sampled due to a pump failure. For reference, concentrations ranged from 11 μg/L (April 2006) in 829-SRC extraction well W-829-06 to 5.4 μg/L (March 2006) 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 ground water samples from Tpsg wells ranging from below the reporting limit to 12 μg/L in W-817-03A (January 2007). Perchlorate was not detected in any Qal/WBR wells during the reporting period.

2.4.3.2.4. Nitrate Contaminant Concentrations and Distribution

During the first semester 2007, nitrate concentrations in samples from the $Tnbs_2$ HSU ranged from <0.1 mg/L in the vicinity of the Site 300 boundary to a maximum of 140 mg/L (January 2007) in well, W-809-02. Nitrate was not detected above the 45 mg/L MCL in any of the $Tnbs_2$ guard wells during this reporting period.

The maximum nitrate concentration detected in a sample during first semester 2007 from the $Tnsc_{1b}$ HSU was 26 mg/L in well W-829-1940 (March 2007).

The first semester 2007 maximum nitrate concentration (640 mg/L, February 2007) in the HEPA OU occurs in Tpsg-Tps well W-6CS. The elevated nitrate in this area appears to be restricted to this well. All other nearby wells screened in this HSU have significantly lower nitrate concentrations by one to two orders-of-magnitude. All Qal/WBR wells have nitrate concentrations below the 45 mg/L MCL.

The nitrate concentrations detected in groundwater during the first semester of 2007 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 $Tnbs_2$ is anoxic and under confined conditions. Nitrate concentrations are significantly lower than the 45 mg/L MCL in all wells near the site 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 2.4-4 and 2.4-5, the existing extraction wellfield captures the highest concentrations in the VOC plume in the vicinity of wells W-818-08 and W-818-09 (815-PRX) and captures the leading edge of the plume near the site boundary (815-DSB). Some lateral migration of the plume appears to be occurring downgradient of the 817-PRX facility. Because 817-PRX was recently installed in September 2005 and extraction well W-817-04 is a low yield well that operates intermittently, there has not been sufficient time to fully determine the effectiveness of the 817-PRX facility to mitigate migration of the leading edge of the VOC plume upgradient of water-supply well GALLO1**.**

Although the overall extent of the primary and secondary COC plumes in the HEPA have not changed significantly, VOC and RDX concentrations within the plume interiors continue to decline from their historical maximums. These trends are due to a combination of natural attenuation mechanisms and remediation efforts in the source and proximal areas of this OU. RDX concentrations continue to exhibit decreasing trends since monitoring for this COC began in 1985. The 815-SRC extraction wells, W-815-02 and W-815-04, have the highest RDX concentrations in this OU and increased pumping in these wells should result in significant decreases in RDX in the Building 815 source area. Perchlorate concentrations in the $Tnbs_2$ HSU have remained essentially unchanged since 1998 when monitoring for this COC began. The 817-SRC (W-817-01) and 817-PRX (W-817-03 and W-817-04) extraction wells have the highest perchlorate concentrations in this OU. Extraction well W-817-04 was not pumping for most of the first semester 2007 due to pump failure. The well is back online and with the increased pumping at this well and W-817-03 the maximum perchlorate concentrations should begin to decline.

Continued full-time operation of the 815-DSB facility, increased extraction from W-818-08 (815-PRX), the addition of extraction well (W-815-04) at 815-SRC, the initiation of ground water injection at wells W-815-1918, W-814-2134, W-817-2109, and W-829-08, and full operation of 817-PRX 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. Close monitoring of VOC concentrations in the site boundary area will continue. If VOC concentrations continue to be detected, modifications to the remedial design in the form of increased pumping of existing extraction wells, conversion of monitoring wells to extraction wells, or installation of new extraction wells will be considered.

2.4.3.4. HEPA OU Remedy Performance Issues

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

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, 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; fourteen required analyses were not performed because there was insufficient water in the wells to collect the samples and three required analyses were not performed because a bent casing prevented sample collection. 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 are presented in Figures 2.5-2 and 2.5-3, respectively.

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. Perchlorate also exists in ground water. These constituents have been identified within the Qal/WBR and $Tnbs_1$/$Tnbs_0$ HSUs. The distribution of tritium in each HSU, based on data collected during the first semester 2007 is contoured on Figures 2.5-4 and 2.5-5, respectively. Maps showing posted values for uranium activity/atom ratio, nitrate concentration, and perchlorate concentration within the two HSUs will be presented in the 2007 annual report.

2.5.2.1.1. Tritium Contaminant Concentrations and Distribution

The maximum first semester 2007 tritium activity in ground water within the OU was 66,800 ± 6,700 pCi/L (June 2007) in a sample collected from well NC7-70, screened in both the Qal/WBR and $Tnbs_1$/$Tnbs_0$ bedrock HSUs located about 50 ft downgradient (east) of the Building 850 Firing Table. The highest tritium activities in ground water in the OU continue to be located immediately downgradient of the tritium source at the Building 850 Firing Table and continue to decline from the historical maximum of 566,000 pCi/L in 1985. The extent of the 20,000 pCi/L MCL ground water tritium activity contour in both the Qal/WBR and $Tnbs_1/Tnbs_0$ bedrock HSUs in Doall Ravine also continues to diminish.

Ground water tritium activities generally continue to decline or are below historic highs in most portions of the Building 850 plume. For example, in Elk Ravine and south of the Pit 2 Landfill, maximum tritium activities in ground water have been gradually decreasing since 2004. 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.

While the extent of tritium in ground water with activities above 400 pCi/L remains fairly stable, the extent of tritium with activities above the 100 pCi/L detection limit has increased from last year northeast of Pit 1 and in the vicinity of Building 801. The extent of the 100 pCi/L tritium plume contour northeast of Pit 1 has increased slightly as activities in ground water samples from wells W-865-2005 and W-865-2121 increased from background activities (<100 pCi/L) in 2006 to 243 ± 62 pCi/L and 161 ± 58 pCi/L in June 2007, respectively. In 2007, the extent of the tritium plume with activities above 100 pCi/L has also increased near Building 801 due to recent tritium activity measurements slightly in excess of background (Figure 2.5-5). Tritium activities in the June 2007 samples from wells K8-01 and K8-02B were 217 ± 101 pCi/L and 410 ± 70 pCi/L, respectively. Because these activities are only slightly in excess of background, and the lower bound for the error bars associated with the K8-01 sample measurement places the sample result within background ranges, future ground water tritium activity measurements will determine whether the extent of tritium is actually increasing in this area.

Because the lower bound of the error bars for the tritium analysis for the April 2007 sample from upgradient Pit 7 Complex well W-PIT7-1860 (148 ± 56 pCi/L) falls within background range, this well was not included within the 100 pCi/L contours on Figure 2.5-5.

2.5.2.1.2. Uranium Contaminant Concentrations and Distribution

Uranium was not detected above the 20 pCi/L State drinking water MCL in Building 850 OU ground water during the first semester 2007. However, atom ratios indicative of depleted uranium were identified in ground water samples collected from several wells completed in the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs in the Building 850 area during the semester. 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 2007 total uranium activity in the OU was 18 pCi/L (February and June 2007) in ground water samples from well NC7-28, located immediately downgradient of Building 850. The historic maximum uranium activity in the OU is 19 pCi/L in 2006 ground water samples from well NC7-28. The $^{235}U/^{238}U$ atom ratios measured in samples from well NC7-28 indicate the presence of depleted uranium. The distribution of uranium within the Qal/WBR and $Tnbs_1/Tnbs_0$ HSUs extends downgradient about 1,200 and 700 ft, respectively, from the Building 850 source area and has not changed from recent years.

Depleted uranium has also been detected in $Tnbs_1/Tnbs_0$ HSU ground water collected from wells NC2-05 and NC2-06A, located immediately north of the Building 802 area. The $^{235}U/^{238}U$ atom ratios in samples from these wells indicate that the vast majority of the uranium is natural in origin. The maximum total uranium activity detected in this area during the first semester

2007 was 4.3 pCi/L (NC2-05, June 2007). The historical maximum total uranium activity in this area was 12.1 pCi/L in the May 2005 sample from well NC2-05. The distribution of uranium in this area has not changed in recent years.

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.

2.5.2.1.3. Nitrate Contaminant Concentrations and Distribution

The maximum first semester 2007 nitrate concentration detected in ground water was 180 mg/L (NC7-29, June 2007). Well NC7-29 is completed in the $Tnbs_1$/$Tnbs_0$ HSU. Six other first semester water samples from wells scattered throughout the OU exceeded the 45 mg/L MCL.

The previous historic maximum nitrate concentration is 140 mg/L, detected in 2005 and 2006 at well NC7-29. Historical ground water data indicate that ground water nitrate concentrations in the two HSUs are limited in extent and relatively stable. Overall, the distribution and concentrations of nitrate in ground water are generally similar to those observed in previous years.

2.5.2.1.4. Perchlorate Contaminant Concentrations and Distribution

Perchlorate was first detected in ground water at Building 850 in 2003. Recent monitoring data indicate the presence of perchlorate in Building 850 ground water at concentrations exceeding the 6 μg/L Public Health Goal (PHG). The maximum first semester 2007 perchlorate concentration detected in a ground water sample was 71 μg/L (NC7-28, February 2007). This well is completed in Qal/WBR and $Tnbs_1$/$Tnbs_0$ HSUs and is immediately downgradient of Building 850. The historic maximum perchlorate concentration in the OU was 75.2 µg/L (NC7-28, May 2005). 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. Overall, the distribution and concentrations of perchlorate in ground water in both HSUs are nearly identical to those observed in 2006.

2.5.2.2. Building 850 OU Remediation Optimization Evaluation

DOE/LLNL plan to conduct an *in situ* bioremediation treatability study to address perchlorate in the Building 850 ground water.

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 contours in both HSUs 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 and a decreasing source term) continues to be effective in reducing tritium activities in ground water. In general, ground water tritium activities continue to decline or are below historic highs throughout the Building 850 plume except northeast of Pit 1 and near Building 801. Future ground water tritium analyses from wells in the southeast portion of the Building 850 area will determine whether tritium activities are increasing above background near Building 801.

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

2.5.2.3. Building 850 OU Remedy Performance Issues

There were no issues that affect the performance of the cleanup remedy for the Building 850 OU during this reporting period. The remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

2.6. Building 854 (B854) OU6

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

Three GWTSs currently operate in the Building 854 OU; Building 854-Source (854-SRC) Building 854-Proximal (854-PRX), and Building 854-Distal (854-DIS). An SVE system also operates at 854-SRC.

The 854-SRC GWTS treats ground water for VOCs and perchlorate and began operation in December 1999. Ground water extraction was expanded in September 2007 from one well, W-854-02 extracting at a flow rate of approximately 1 gpm to include W-854-18A, W-854-17, and W-854-2218 extracting at an approximate combined flow rate of 2.5 to 3.0 gpm. The current GWTS configuration includes a particulate filtration system, two ion-exchange columns containing SR-7 resin connected in series for perchlorate removal, and three aqueous-phase GACs connected in series for VOC removal. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses.

An SVE system began operation at the 854-SRC in November 2005. Soil vapor is extracted from W-854-1834 at an approximate flow rate of 53 scfm. This is an on-going treatability test to evaluate SVE mass removal at the Building 854 source area.

The 854-PRX GWTS treats ground water for VOCs, nitrate, and perchlorate and began operation in November 2000. Ground water is extracted at an approximate flow rate of 1 gpm from well W-854-03 located southeast of the Building 854 complex. The GWTS configuration includes two ion-exchange columns containing SR-7 resin connected in series for perchlorate removal, three aqueous-phase GACs connected in series for VOC removal, and above ground containerized wetland biotreatment for nitrate removal prior to being discharged into an infiltration trench.

The 854-DIS GWTS treats ground water for VOCs and perchlorate and began operation in July 2007. Ground water is extracted at an approximate flow rate of 1.2 gpm from well W-854-2139. The current GWTS configuration includes two SR-7 ion-exchange resin columns connected in series for perchlorate treatment followed by three aqueous-phase GACs connected in series for VOC removal prior to being discharged into an infiltration trench.

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

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

2.6.1.1. Building 854 OU Facility Performance Assessment

The monthly ground water discharge volumes and rates and operational hours are summarized in Tables 2.6-1 through 2.6-3. The total volume of ground water treated and 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 2.6-4 and 2.6-5. The pH measurement results are presented in Appendix A.

2.6.1.2. Building 854 OU Operations and Maintenance Issues

Continuous operations of the 854-SRC, 854-PRX, and 854-DIS were interrupted by the following routine maintenance activities and equipment failures during the reporting period:

<u>854-SRC</u>

- The GWTS extraction wells W-854-2218 and -18A were off from January 9 to February 7, 2007 to repair electrical components.
- The SVE system was shut down on January 17, 2007 to evaluate VOC rebound in soil vapor. It was restarted on April 4, 2007 and run for two days to collect rebound samples, and was then again shut down for the remainder of the semester. Sufficient rebound was observed to justify adding site power. The SVE system will be re-started during the second semester.

<u>854-PRX</u>

- The GWTS was shutdown from January 1 to February 7, 2007 to prevent freeze damage and for hydraulic testing of the facility's extraction well.
- The GWTS was shut down from February 21 to March 5, 2007 and again on March 28, 2007 for drawdown tests.
- The GWTS was shut down from April 18 until May 14, 2007 to repair the acetate injection system.
- The GWTS was shutdown on May 17, 2007 due to a detection of nitrate above the 45 mg/L effluent limitation and was restarted on June 5, 2007. The ion exchange resins were moved in front of the GAC.
- The GWTS was shut down from June 8, 2007 due to an effluent detection of perchlorate. Recirculation of the extracted water through ion-exchange resin was conducted for the

remainder of the semester to remove all perchlorate that had accumulated in the biotreatment tanks.

854-DIS

- The GWTS was shut down from January 1 to January 29, 2007 to prevent freeze damage.

2.6.1.3. Building 854 OU Compliance Summary

The 854-DIS and 854-SRC GWTSs operated in compliance with the Substantive Requirements for Wastewater Discharge. The 854-SRC SVE system operated in compliance with the San Joaquin Valley Unified Air Pollution Control District permit limitations. As discussed in Section 2.6.1.2, nitrate and perchlorate were detected above the maximum daily and monthly median discharge limits at the 854-PRX GWTS. Nitrate was detected in an effluent sample collected on May 15, 2007 at a concentration of 47 mg/L. The discharge of nitrate was discovered to be due to insufficient acetate concentrations to drive biological nitrate reduction. The SR7 ion-exchange resin eventually became saturated with nitrate, and released nitrate as perchlorate was adsorbed. This necessitated moving the SR7 to the primary position in the treatment train, and increasing the acetate injection rates to reduce the nitrate concentrations to below the discharge limits. Unfortunately, due to insufficient biological activity in the biotreatment units to remove perchlorate, perchlorate had been accumulating in these treatment units. Following restart of the system, perchlorate was detected in an effluent sample collected on June 6, 2007 at a concentration of 18 μg/L. The system was again shut down and all extracted water recirculated through the ion-exchange units until all perchlorate had been removed.

2.6.1.4. Building 854 OU Facility Sampling Plan Evaluation and Modifications

The Building 854 OU facility sampling and analysis plans comply with CMP monitoring requirements. The sampling and analysis plans are presented in Table 2.6-6. The only modifications made to the plans included no monthly effluent monitoring conducted at 854-DIS and 854-PRX in January because the treatment systems were shut down for freeze protection and additional monitoring conducted at 854-PRX to evaluate the nitrate and perchlorate concentrations.

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: nineteen required analyses were not performed because there was insufficient water in the wells to collect the samples. The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.6-7. This table also delineates and explains deviations from the sampling plan and indicates any additions made to the CMP.

A ground water potentiometric surface map for the $Tnbs_1/Tnsc_0$ HSU is presented in Figure 2.6-2.

2.6.3. Building 854 OU Remediation Progress Analysis

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

2.6.3.1. Building 854 OU Mass Removal

The monthly ground water mass removal estimates are summarized in Tables 2.6-8 through 2.6-10. The 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. These constituents have been identified primarily in the $Tnbs_1/Tnsc_0$ HSU. Total VOC isoconcentration data for the $Tnbs_1/Tnsc_0$ HSU based on data collected during the first semester 2007 are contoured and presented in Figure 2.6-3. Isoconcentration contour maps for the secondary COCs will be presented in the 2007 annual report.

2.6.3.2.1. Total VOC Contaminant Concentrations and Distribution

The maximum first semester 2007 concentration of total VOCs in $Tnbs_1/Tnsc_0$ HSU ground water was 150 μg/L (W-854-02, April 2007). TCE comprises all of the VOCs observed in ground water at Building 854, except for cis-1,2-DCE that is detected in well W-854-2139 (0.65 μg/L, April 2007). Overall, total VOC concentrations in Building 854 ground water have decreased from an historical pre-remediation maximum of 2,900 μg/L in 1997. 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. 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. While the extent of total VOCs in Building 854 ground water with concentrations above the 0.5 μg/L reporting limit 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 area, (2) the extent of the northern VOC plume with concentrations greater than 10 μg/L has decreased, and (3) the extent of the southern VOC plume with concentrations greater than 5 μg/L has decreased significantly in size.

2.6.3.2.2. Perchlorate Contaminant Concentrations and Distribution

The maximum first semester 2007 perchlorate concentration detected in a ground water sample was 20 µg/L (W-854-1823, May 2007). The previous historical maximum concentration of 27 µg/L was detected in 2003. Overall, the distribution and concentrations of perchlorate in ground water in ground water are nearly identical to those observed last year.

2.6.3.2.3. Nitrate Contaminant Concentrations and Distribution

During the first semester 2007, nitrate was detected above the 45 mg/L MCL in ground water samples from three wells completed in the $Tnbs_1/Tnsc_0$ HSU; W-854-02, W-854-03, and W-854-09 at concentrations of 51 mg/L, 46 mg/L, and 56 mg/L, respectively. Nitrate concentrations the $Tnbs_1/Tnsc_0$ HSU have continued to decrease from an historical maximum concentration of 180 mg/L in 1996. Nitrate was also detected above the 45 mg/L MCL in samples collected from well W-854-14 (260 mg/L, May 2007) and well W-854-05 (60 mg/L, May 2007). These wells are completed in localized water-bearing zones within $Tnbs_1$ and Qal-$Tnbs_1$ stratigraphic units, respectively. Ground water samples collected from these wells in 2006 contained similar nitrate concentrations to this semester's. Elevated nitrate in ground water may arise from 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, this could be the result of the ongoing contribution of nitrate from natural sources in the Neroly Formation bedrock.

2.6.3.3. Building 854 OU Remediation Optimization Evaluation

During September 2006, three $Tnbs_1/Tnsc_0$ HSU extraction wells (W-854-17, W-854-18A, and W-854-2218) were added to the 854-SRC facility to increase hydraulic capture and mass removal at this source area. Well W-854-2218 is now the most productive well connected to 854-SRC. The influent flow rate increased from 1.2 gpm to approximately 2.5 to 3 gpm as a result of the expanded wellfield. During the entire calendar year 2006, 595,000 gallons of water were extracted and treated at 854-SRC resulting in the removal of 200 g of VOCs, 13 g on perchlorate, and 110 kg of nitrate. During the first 6 months of 2007, with the enhanced extraction rate, 720,000 gallons of water were extracted and treated resulting in the removal of 200 g of VOCs, 7.2 g of perchlorate and 130 kg of nitrate. The effects of expansion of the wellfield with regard to hydraulic capture and long term cleanup will be evaluated and reported in future CMRs.

A soil vapor rebound test at 854-SRC began in early 2007. Pumping was suspended at SVE well W-854-1834 from January 24, 2007 to April 4, 2007. A sample collected from W-854-1834 on January 9, 2007, prior to suspending pumping, contained 1.2 $ppm_{v/v}$ of TCE. From April 4 to April 5, 2007, vapor was extracted from well W-854-1834 and influent concentrations of VOCs were monitored. The initial measured vapor TCE concentration upon commencing pumping was 2.1 $ppm_{v/v.}$ TCE concentrations stabilized in the 1.0 to 1.3 $ppm_{v/v}$ range, indicating that TCE vapor concentrations in the source area had not rebounded during suspension of pumping. Soil vapor extraction and treatment continues at 854-SRC.

Enhanced pumping of extraction well W-854-03 at 854-PRX began in early 2007. Preliminary results had indicated that there was no drawdown at a discharge rate of 1.4 gpm, suggesting that greater extraction and ground water treatment could be performed to increase total VOC mass removal from ground water. On April 30, 2007, the discharge rate was increased to 5 gpm for 6 hours, resulting in an approximate drawdown of 1 ft. There is still sufficient available drawdown to increase the discharge rate further to enhance ground water extraction and treatment. During the second semester of 2007, a dedicated electrical utility line will be run to the 854-PRX facility to power the submersible pump in extraction well W-854-03 on a continuous basis.

2.6.3.4. Building 854 OU Remedy Performance Issues

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

2.7. 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.

Three GWTSs and two SVE systems operate in the Building 832 Canyon OU: Building 832-Source (832-SRC), Building 830-Source (830-SRC), and Building 830-Distal South (830-DISS). The 832-SRC and 830-SRC facilities extract and treat both ground water and soil vapor, while the 830-DISS facility extracts and treats ground water only. Modification to the 830-DISS GWTS took place during the first semester as described below. The original 830-PRXN extraction well, W-830-57 was connected to 830-SRC as part of the 830 SRC expansion described in Section 2.7.1.5.

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 832-SRC GWTS treats ground water for VOCs and perchlorate, and soil vapor for VOCs. The GWTS and SVE began operation in September and October 1999, respectively. The 832-SRC extraction wellfield was expanded during 2006. Well W-832-25 was connected to the facility in July 2007. Ground water is extracted from wells W-832-01, W-832-10, W-832-11, W-832-12, W-832-15 and W-832-25 at an approximate combined flow rate of 0.5 gpm. Soil vapor is extracted from W-832-12 and W-832-15 at an approximate combined flow rate of approximately 3.0 scfm. The current GWTS configuration includes a Cuno filter for particulate filtration, two ion-exchange columns with SR-7 resin connected in series to remove perchlorate, and three aqueous-phase GAC units (also connected in series) to remove VOCs. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses. A positive displacement rotary lobe blower is used to create a vacuum at selected wellheads through a system of 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 830-SRC GWTS treats ground water for VOCs and perchlorate and soil vapor for VOCs. The GWTS and SVE began operation in February and May 2003, respectively. The 830-SRC extraction wellfield was expanded in 2006. Seven GWTS extraction wells (W-830-49, W-830-1829, W-830-2213, W-830-2214, W-830-57, W-830-60, and W-830-2215) were added to the original three (W-830-1807, W-830-19, and W-830-59). The expansion well testing began during 2006. The tests were completed and the expanded wellfield was in operation during the first semester 2007. The current GWTS configuration includes a Cuno filter for particulate filtration, two ion-exchange columns with SR-7 resin connected in series to remove perchlorate, and three aqueous-phase GAC units (also connected in series) to remove VOCs. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses. The B830-SRC SVE was also expanded in 2006. Soil vapor is extracted from wells W-830-1807 and W-830-49 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 830-DISS GWTS treated ground water for VOCs, perchlorate, and nitrate from July 2000 until June 2007 when the facility was modified to cease surface discharge at the request of the RWQCB. Until modified, the GWTS extracted approximately 1 gpm of ground water from three wells (W-830-51, W-830-52, and W-830-53) using natural artesian pressure. The GWTS configuration consisted of a Cuno filter for particulate filtration, two aqueous-phase GAC units in series to remove VOCs, two ion-exchange columns with SR-7 resin (also connected in series) to remove perchlorate, and three bioreactor units for nitrate reduction. These units were open-container wetland bioreactors containing microorganisms that use nitrate during cellular respiration. Acetic acid was added to the process stream as a carbon source. Treatment system effluent was discharged via a storm drain that discharges to the Corral Hollow alluvium. After modification in June 2007, a fourth well, W-830-2216, was added to the extraction well field. Extracted ground water flows through ion-exchange canisters to remove perchlorate at the 830-DISS location. The water is then piped to the Central GSA GWTS for VOC removal. Nitrate-bearing treated effluent is then discharged via a misting tower over the landscape for uptake and utilization of the nitrate by indigenous grasses. This expansion was a fiscal year 2007 milestone.

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

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

2.7.1.1. Building 832 Canyon OU Facility Performance Assessment

The monthly ground water and soil vapor discharge volumes, rates, and operational hours are summarized in Tables 2.7-1 through 2.7-3. The total volume of ground water and vapor extracted and treated and mass removed during the reporting period are presented in Table Summ-1. The cumulative volume of ground water and soil vapor treated and discharged and mass removed are summarized in Table Summ-2.

Analytical results for influent and effluent samples are shown in Tables 2.7-4 and 2.7-5. The pH measurement results are presented in Appendix A.

2.7.1.2. Building 832 Canyon OU Operations and Maintenance Issues

Continuous operations of 832-SRC, 830-SRC, and 830-DISS were interrupted by the following routine maintenance activities and equipment failures:

<u>832-SRC</u>

- The GWTS was shut down from January 11 to January 29, 2007 to prevent freeze damage. Only extraction wells W-832-12 and -15 were restarted initially, the other extraction wells were brought back on-line on February 8, 2007.
- The GWTS was again shut down from February 16 to February 21, 2007 to repair level sensor wiring.
- The SVE system was shut down during the same periods as the GWTS.

<u>830-SRC</u>

- The GWTS was shut down for most of January, while the SVE system was offline all month. This was due to repair of freeze damage and to prevent further damage. The GWTS was operated for seven days during the later part of the month to test various expansion wells.
- The facility was shut down from February 1 to February 13, 2007 while the wellfield test data were evaluated. The facility was restarted on February 13, 2007 to collect monthly facility compliance samples, but was again shut down due to flow meter problems and

piping issues. The SVE system remained off-line all month awaiting the arrival and installation of a heat exchanger damaged during the freeze.

- The GWTS was operated for only one day in March to check pipeline repairs and for monthly compliance sampling. The SVE system remained off-line the entire month, while all freeze damage repair work was completed.
- The GWTS was restarted on April 2, 2007, but operated sporadically for the remainder of the month (13 days of total operations) due to pipeline pressure problems. The system was shutdown from April 12 to April 18, 2007 to evaluate a perchlorate detection in the effluent. This was found to be laboratory error. The SVE system was operated on days when the GWTS operated.

830-DISS

- The GWTS was non-operational for the majority of the reporting period for completion of the pipeline to Central GSA and well field expansion, as described above.

2.7.1.3. Building 832 Canyon OU Compliance Summary

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

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

The Building 832 Canyon OU treatment facility sampling and analysis plans comply with CMP monitoring requirements. The sampling and analysis plan is presented in Table 2.7-6. The only modifications made to the plan during the reporting period included no influent and effluent monitoring at 830-DISS until June 26, 2007 due to construction activities, increased facility monitoring at 830-SRC as part of the well field expansion start-up sampling, and lack of facility monitoring in January at 832-SRC due to freeze protection shutdown.

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

The 832-SRC extraction wellfield was modified during 2006 with the addition of one extraction well, W-832-25. This is a low-yield, $Tnsc_{1a}$ HSU well located downgradient of the Building 832 source area that contains total VOCs in the 50 μg/L to 100 μg/L range and perchlorate in the 8 μg/L to 12 μg/L range. The performance of this well is discussed in Section 2.7.3.3.

At the 830-SRC, a series of hydraulic tests were initiated during the second semester 2006 and were ongoing through the first semester of 2007. The tests involved wells completed in all contaminated bedrock HSUs associated with this source area, including $Tnsc_{1b}$ wells W-830-49, W-830-1829, and W-830-2213, $Tnsc_{1a}$ well W-830-2214 and Upper $Tnbs_1$wells W-830-57, W-830-60, and W-830-2215. The benefits of this wellfield expansion will continue to be evaluated throughout 2007 and are discussed in Section 2.7.3.3.

At the 830-DISS, a new extraction well, W-830-2216, was connected in June 2007. This is a $Tnbs_2$ HSU well located near the mouth of the Building 832 Canyon. During well development, this well yielded 1.5 gpm to 2 gpm. TCE concentrations in W-830-2216 range from 15 μg/L to

20 μg/L. Trace perchlorate concentrations (4.2 μg/L) are also detected in ground water from this well. The impact of this extraction well on hydraulic capture and mass removal will be evaluated in second semester 2007 and discussed in future CMRs in Section 2.7.3.3.

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-one required analyses were not performed because there was insufficient water in the wells to collect the samples and three required analyses were not collected due to treatment system construction activities. The sampling and analysis plan for ground water and surface water monitoring is presented in Table 2.7-7. This table explains deviations from the sampling plan and indicates any additions made to the CMP.

Ground water potentiometric surface data are posted for the Qal/WBR and $Tnsc_{1a}$ 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.

2.7.3. Building 832 Canyon OU Remediation Progress Analysis

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

2.7.3.1. Building 832 Canyon OU Mass Removal

The monthly ground water and soil vapor mass removal estimates are summarized in Tables 2.7-8 through 2.7-10. The 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 $Tnsc_{1a}$, $Tnsc_{1b}$ and Qal/WBR HSUs. Total VOCs have also been detected at low concentrations in the $Tnbs_2$ and Upper $Tnbs_1$ HSUs. 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. Post-only maps and isoconcentration contour maps for the secondary COCs will be presented in the 2007 annual report. For collocated wells, the highest concentration was used for contouring.

2.7.3.2.1. Total VOC Contaminant Concentrations and Distribution

The total VOC ground water concentrations in the Qal/WBR HSU during first semester 2007 ranged from <0.5 μg/L to a maximum of 3,300 μg/L (SVI-830-035, January 2007). Historically, samples from well SVI-830-035, located in the Building 830 source area, have contained the highest total VOC concentrations in this HSU and have decreased from a high of 10,000 μg/L (February 2003). The total VOC ground water concentrations in three other Qal/WBR wells located in the 830-SRC area exhibited significant decreasing trends during the first semester 2007. For example, the total VOC concentration detected in a sample from dual extraction well W-830-1807 was 1,600 μg/L in March 2007 and 250 μg/L in April 2007. A similar trend occurred in 2006. The rapid decline in total VOC concentrations in this vacuum-enhanced ground water extraction well can be correlated to the use of a more powerful blower beginning in

March 2006 that significantly increased the zone-of-influence and volume of extracted ground water. Soil vapor extraction was terminated in September 2006 while hydraulic testing was performed and was resumed during the first semester 2007. Total VOC concentrations in nearby wells SVI-830-031 and SVI-830-035 exhibited a similar trend over the same period. These wells are also screened in the Qal/WBR HSU.

Wells in the Building 832 source area are screened over both the Qal/WBR and $Tnsc_{1b}$ HSUs. During the first semester 2007 total VOC concentrations detected in samples from this source area ranged from 15 μg/L (W-832-15, February 2007) to 54 μg/L (W-832-12, February 2007). The highest historical total VOC concentration in the Building 832 source area in this HSU was detected in a sample from W-832-18 (1,800 μg/L, September 1998). This well has not been sampled since April 2005 due to insufficient water. The total VOC concentration at that time was 1.8 μg/L. A significant reduction in VOC concentrations has been achieved in the Building 832 source area since remediation began in 1999.

Qal/WBR wells located near the Site 300 boundary in the Building 832 Canyon OU generally contain very low to non-detectable concentrations of total VOCs. 1,1-DCE was detected in a sample (0.6 μg/L, February 2007) in site-boundary Qal/WBR guard well W-35B-01. This well has historically had sporadic, trace detections of 1,1-DCE. The source of these trace detections is not known. A subsequent sample in April 2007 was non-detect for 1,1-DCE. Nearby, upgradient guard well W-880-02 has never had a detection of 1,1-DCE and no VOCs were detected during the first semester 2007.

The total VOC ground water concentrations in the $Tnsc_{1b}$ HSU during first semester 2007 ranged from <0.5 μg/L to 4,200 μg/L (W-830-49, March 2007). Well W-830-49 has historically contained the highest total VOC concentrations (13,000 μg/L, March 2003) in this OU and was part of a series of hydraulic tests initiated at the 830-SRC in 2006 (see Section 2.7.3.3) to determine which wells would be used for the 830-SRC wellfield expansion. As continuous extraction from this well and the other 830-SRC expansion wells is maintained, it is expected that concentrations will decline and the extent of the 1000 μg/L plume will be reduced.

Building 832 source expansion wells, W-832-01, W-832-10, and W-832-11, located downgradient of the Building 832 source area, currently contain higher VOC concentrations than the upgradient 832-SRC extraction wells that are screened across both the Qal/WBR and $Tnsc_{1b}$ HSUs. During first semester 2007, total VOC concentrations in samples from these wells varied from 72 μg/L (W-832-10, February 2007) to 104 μg/L (W-832-01 and W-832-11, February 2007). Historically, the highest concentration in this area occurred in a sample from W-832-01 (447 μg/L, December 1996). Although well W-832-05 appears on contour maps for the $Tnsc_{1b}$ HSU, it was not used for contouring because W-832-05 has been impacted by surface water runoff and is slated for destruction. This well was not sampled during the reporting period.

VOCs were not detected above the 0.5 μg/L reporting limit in $Tnsc_{1b}$ guard wells W-4C, W-814-04, W-830-16, W-830-1730, W-830-1831, and W-880-03 during the first semester 2007. The leading edge of the $Tnsc_{1b}$ VOC plume at the 0.5 μg/L reporting limit remains within the boundaries of Site 300.

Total VOC ground water concentrations in the $Tnsc_{1a}$ HSU during first semester 2007 ranged from 32 μg/L (W-830-22, January 2007) to 600 μg/L (W-830-2214, January 2007). From 1997 to 2001, samples from W-830-25 contained the highest VOC concentration (4,500 μg/L, March 1997) in this HSU. In 2001, VOC concentrations began to decline in W-830-25 and

W-830-27 in response to active remediation upgradient at 832-SRC. Total VOC concentrations range from 460 μg/L to 600 μg/L in samples from recently installed well W-830-2214. This well was part of the 830-SRC hydraulic test series and continuous extraction will begin in second semester 2007. There are no $Tnsc_{1a}$ guard wells at this time. A site boundary guard well for this HSU is planned for installation during the later part of FY 2007. The monitoring of this guard well will be used to demonstrate the effectiveness of upgradient pumping at the 830-SRC facility.

The total VOC ground water concentrations in the Upper $Tnbs_1$ HSU during first semester 2007 ranged from 2.9 μg/L (W-830-1832, February 2007) to 39 μg/L (April 2007) in a sample from recently installed 830-SRC expansion well W-830-2215. Well W-830-2215 was included in the series of hydraulic tests initiated at 830-SRC to determine which extraction wells would be used for the extraction wellfield expansion. The highest historical VOC concentration in this HSU was 100 μg/L (W-830-28, June 1998). Total VOCs were not detected above the 0.5 μg/L reporting limit in guard wells W-830-20 and W-832-2112 during the first semester 2007.

The shape and extent of the Upper $Tnbs_1$ plume remain stable. Total VOC concentration trends in this HSU continue to be carefully monitored due to the potential influence of pumping at water-supply wells, Well 20 and Well 18. Pumping at the expanded 830-SRC should significantly reduce the total VOC concentrations in this HSU over the next few years.

2.7.3.2.2. Perchlorate Concentrations and Distribution

Perchlorate ground water concentrations in the Qal/WBR HSU during first semester 2007 ranged from below the reporting limit of 4 μg/L to 22 μg/L (February 2007) in 832-SRC extraction well W-832-13. This well is used to constrain plume concentrations in both the Qal/WBR and $Tnsc_{1b}$ HSUs due to the location of its screened interval across the two HSUs. The highest historical perchlorate concentration in this HSU was 51 μg/L (W-830-34, December 1998). The perchlorate concentration in this well is now below the reporting limit. Perchlorate was detected in a sample from W-830-1807 at a concentration of 4.3 μg/L (March 2007). Trace perchlorate has been sporadically detected in this well since early 2006. Perchlorate was not detected above the 4 μg/L reporting limit in guard wells W-35B-01 and W-880-02.

Perchlorate ground water concentrations in the $Tnsc_{1b}$ HSU ranged from below the reporting limit of 4 μg/L to 10 μg/L (February 2007) in a sample from 832-SRC extraction well W-832-10. Extraction well W-832-11 has historically contained the highest perchlorate concentration in this HSU (20 μg/L, September 2005). Perchlorate was not detected above the 4 μg/L reporting limit in guard wells W-4C, W-814-04, W-830-16, W-830-1730, W-830-1831, and W-880-03 during the first semester 2007.

Perchlorate ground water concentrations in the $Tnsc_{1a}$ HSU ranged from below the reporting limit of 4 μg/L to 10 μg/L (February 2007) in 832-SRC extraction well W-832-25. This well was connected to 832-SRC in July 2006 and has historically contained the highest perchlorate concentration in this HSU at 13 μg/L (February 1999).

Perchlorate was not detected above the reporting limit of 4 μg/L from any ground water samples taken from the Upper $Tnbs_1$ HSU during the reporting period.

2.7.3.2.3. Nitrate Concentrations and Distribution

In general, nitrate concentrations continue to exhibit high concentrations in the vicinity of the Building 832 and 830 source areas and remain low to below the reporting limit in the downgradient, deeper parts of all HSUs in this OU. Nitrate ground water concentrations detected in samples from the Qal/WBR HSU in first semester 2007 ranged from <1 mg/L (guard wells W-35B-01 and W-880-02, February and January 2007, respectively) to 110 mg/L (SVI-830-035, January 2007).

Nitrate ground water concentrations detected in samples from the $Tnsc_{1b}$ HSU ranged from <0.5 mg/L to 150 mg/L (W-830-49, March 2007). A sample from well W-830-49 contained the highest historical nitrate concentration in this HSU (501 mg/L, June 1998). Nitrate concentrations in the $Tnsc_{1b}$ guard wells range from <0.1 mg/L to 21.7 mg/L, well below the 45 mg/L MCL.

Nitrate ground water concentrations detected in samples from the $Tnsc_{1a}$ HSU ranged from <0.5 mg/L to 90 mg/L (W-832-25, February 2007). Nitrate ground water concentrations detected in samples from the Upper $Tnbs_1$ ranged from <0.1 mg/L to 14 mg/L (W-830-2215, January 2007).

Nitrate ground water concentrations in guard wells W-35B-01, W-880-02, W-830-20, and W-832-2112 were not detected above the reporting limit. The absence of detectable nitrate in these site boundary guard wells is consistent with the interpretation that nitrate is naturally attenuating *in situ*.

2.7.3.3. Building 832 Canyon OU Remediation Optimization Evaluation

A series of hydraulic tests were initiated at the 830-SRC facility during the second semester of 2006. The tests involved wells completed in all contaminated bedrock HSUs associated with this source area, including $Tnsc_{1b}$ wells W-830-49, W-830-1829, and W-830-2213, $Tnsc_{1a}$ well W-830-2214 and Upper $Tnbs_1$ wells W-830-57, W-830-60, and W-830-2215. Extraction from wells W-830-1829 and W-830-2213 was discontinued due to insufficient yield. Extraction was not initiated from W-830-57 because the long-term performance of this well is known from its history of extraction at the 830-PRXN facility. During each test, selected wells were pumped while drawdown was monitored in the pumping well and nearby observation wells. The observation wells include existing 830-SRC extraction wells W-830-1807, W-830-19, and W-830-59 and monitor wells $Tnsc_{1b}$ well W-830-21, $Tnsc_{1a}$ wells W-830-22 and W-830-27, and Upper $Tnbs_1$ wells W-830-18, W-830-28, and W-83-57. The main objectives of these tests were to determine well yield and the lateral and vertical hydraulic influence of selected wells under different pumping scenarios. The tests were completed in February 2007.

The hydraulic test results are described in the order that they were performed. The testing began with pumping at $Tnsc_{1b}$ well W-830-49 and did not result in drawdown at any of the observation wells. This is a low yield well that pumps cyclically for a few minutes and requires about 3 hours to recover. $Tnsc_{1a}$ well W-830-2214 maintained a flow rate of approximately 1.5 gpm for 3 days at a drawdown of 18 ft with recovery taking about 4 days. Nearby $Tnsc_{1b}$ well W-830-2213 went dry after 6 hours of pumping from W-830-2214. Nearby (300 ft) $Tnsc_{1a}$ well W-830-27 responded within 4 hours with a drawdown of 2.5 ft. All monitored Upper $Tnbs_1$ wells (W-830-18, W-830-28, W-830-57, W-830-60, W-830-2215) responded when either W-830-2215 or W-830-60 were pumped. W-830-2215 maintained a flow rate of 3 gpm with a drawdown of 3 ft. Well W-830-60 maintained a flow rate of 1.5 gpm with 2 ft of drawdown. The individual tests performed in the Upper $Tnbs_1$ wells were concluded before maximum drawdown was reached.

The expanded 830-SRC wellfield is designed to increase hydraulic capture and significantly increase mass removal, while minimizing any chance for contaminants to migrate to deeper HSUs. Damage from freeze conditions early in the semester along with back-pressure difficulties in the system prevented the full implementation of this expansion before the end of the first semester. When fully implemented, significant increase in hydraulic capture and mass removal will result from this wellfield expansion. Initial results show approximately an order-of-magnitude increase in flow and mass removal. The increase in flow to the 830-SRC treatment system may require the installation of one or two injection wells to facilitate the discharge of treated effluent. Injection of treated water upgradient of the 830 source area will help flush contaminants out of the source area, increase the hydraulic gradient toward the source area extraction wells, and increase their long-term yield.

Ground water yield is so low in the Building 832 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 and in the Site-Wide Remediation Evaluation Report (Ferry et al., 2006).

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 15 μg/L (February 2007). COC concentrations in the distal area have remained relatively constant.

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, Well 20. Increased pumping and hydraulic capture associated with the 830-SRC expansion when the wellfield is fully operational later this year, should prevent future trace detections in this well. 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 guard well during first semester 2007 were below reporting limits for all COCs, including total VOCs, nitrate, and perchlorate.

2.7.3.4. Building 832 Canyon OU Remedy Performance Issues

There were no issues that affect the performance of the cleanup remedy for the Building 832 Canyon OU during this reporting period. The remedy continues to be effective and protective of human health and the environment, and to make progress toward cleanup.

2.8. 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. A map showing the locations of monitor wells, ground water elevations, approximate ground water flow direction, perchlorate, nitrate, and total VOC concentrations in the $Tnbs_1$ HSU for the Building 801/Pit 8 Landfill area is presented in Figure 2.8-1.

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 reporting period, 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 2.8-1. This table delineates any additions made to the CMP.

During the first semester 2007, total VOCs were detected in ground water samples from wells in the Building 801/Pit 8 Landfill area at concentrations ranging from 1.5 μg/L (K8-02B, June 2007) to 6.2 μg/L (K8-01, June 2007). The K8-01 sample contained 4 µg/L of TCE and 2.2 µg/L of 1,2-DCA. Total VOC concentrations detected in ground water samples collected from wells downgradient of Building 801 have decreased from a historical maximum of 10 μg/L in 1990. TCE concentrations in ground water have been below the 5 μg/L MCL since 1992. Concentrations of 1,2-DCE remain above the 0.5 μg/L reporting limit.

During the first semester 2007, 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 2007, nitrate was detected in ground water samples from wells in the Building 801/Pit 8 Landfill area at concentrations ranging from 32 mg/L (K8-03B, June 2007) to 58 mg/L (K8-04, June 2007). Nitrate concentrations in samples from wells K8-01 and K8-04 were above the 45 mg/L MCL. Overall, nitrate concentrations in ground water at the Building 801/Pit 8 Landfill generally are similar to previous years.

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, ground water elevations and total VOC concentrations in the Tpsg HSU is presented in Figure 2.8-2.

During the reporting period, ground water monitoring was conducted in accordance with the CMP monitoring requirements with the following exceptions; eight required analyses were not performed because there was insufficient water in the wells to collect the samples. The sampling and analysis plan for ground water monitoring is presented in Table 2.8-2. This table delineates any additions made to the CMP.

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. When saturated, monitoring conducted from 1993 to 2007 has shown a decline in total VOC concentrations in Tpsg HSU ground water from an historical maximum concentration of 2,100 μg/L in 1992. During the first semester 2007, only one Tpsg well (W-833-12) contained sufficient water from which to collect a ground water sample. The samples contained 10 μg/L of total VOCs (all TCE).

One $Tnbs_1$ HSU well (W-833-30) contained sufficient water to collect a sample during the first semester 2007. VOCs have not been detected in 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 detected in samples collected from boreholes drilled in 1989. 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, ground water elevations, and approximate hydraulic gradient direction in the $Tnsc_0$ HSU are presented in Figure 2.8-3. The monitoring wells near the Pit 9 Landfill are screened in the lower Neroly Formation $Tnsc_0$ HSU.

During the reporting period, 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 2.8-3. This table delineates any additions made to the CMP.

HMX, nitrate, and perchlorate were not detected above reporting limits in ground water samples collected during the first semester 2007. There continues to be no contamination detected in ground water in the Building 845 and Pit 9 Landfill area.

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, ground water elevations, total uranium activities, and $^{235}U/^{238}U$ atom ratios are presented in Figure 2.8-4. Wells W-851-05, W-851-06, and W-851-07 are completed in the Tmss HSU. Well W-851-08 is completed in the overlying $Tnsc_0$ HSU.

During the reporting period, 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. This table delineates any additions made to the CMP.

Total uranium activities in ground water from Building 851 monitor wells during the first semester 2007 ranged from <0.63 pCi/L in the sample from well W-851-05 to 0.37 pCi/L in the sample from well W-851-08. The maximum total uranium activity of 0.37 pCi/L is only a fraction of the 20 pCi/L State 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 the first semester samples from wells W-851-06 and W-851-08 indicated the addition of some depleted uranium. The samples from wells W-851-05 and W-851-07 contained only natural uranium. Overall, uranium activity in ground water is similar to previous years and remains well below the Federal and State MCL.

During the first semester 2007, tritium activities were only detected above the 100 pCi/L reporting limit in a ground water sample from monitor well W-851-07 (199 ± 59 pCi/L, June 2007). This result is very slightly above background. A sample was inadvertently not collected from well W-851-08 for tritium analysis. Samples from wells W-851-05 and W-851-06 contained <100 pCi/L of tritium. The maximum tritium activity detected in Building 851 ground water was 3,790 pCi/L in late 1998. Until this semester, tritium had not been detected above the 100 pCi/L background level for 3 years.

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, and no unacceptable risk or hazard to human or ecological receptors has been identified. The Detection Monitoring Program is designed to detect any future releases of contaminants from these landfills. This section 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

3.1.1. Contaminant Detection Monitoring Results

During the reporting period, 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 Landfill is presented in Figure 2.5-1.

The ground water potentiometric surface maps that include the Pit 2 Landfill are presented in Figures 2.5-2 and 2.5-3. Depth to ground water within the $Tnbs_1/Tnbs_0$ HSU was measured at 50 to 55 ft beneath the Pit 2 Landfill.

A map of the first semester 2007 ground water tritium activity within the $Tnbs_1/Tnbs_0$ HSU and including the Pit 2 Landfill is presented in Figure 2.5-5. Tritium was detected below the 20,000 pCi/L MCL during the semester in samples from all four wells. The maximum first semester 2007 tritium activity within the $Tnbs_1/Tnbs_0$ HSU in the area immediately south of the Pit 2 landfill was 7,790 ± 850 pCi/L (NC2-08, June 2007). Tritium activities in this area continue to decline. The historic maximum activity was detected in the August 1986 sample from well K2-01C (49,100 pCi/L). The overall distribution of ground water tritium activities in the Pit 2 Landfill area appears to primarily be a result of transport of the Building 850 tritium plume into the Pit 2 Landfill area. Data indicate that tritium activities in ground water immediately downgradient of the landfill are decreasing and are currently a fraction of the historic maximum.

Uranium activities detected in $Tnbs_1/Tnbs_0$ HSU ground water samples from the Pit 2 Landfill monitor wells are all historically below the State MCL of 20 pCi/L. The maximum first semester 2007 uranium activity detected in a ground water sample from this area was 9.9 pCi/L (K2-01C, April 2007). The detection of depleted uranium in the ground water samples from wells K2-01C, W-PIT2-1934, and W-PIT2-1935 indicates 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 Landfill detection monitor wells have decreased from an historical maximum of 17.4 pCi/L in 2004.

During the first semester of 2007, perchlorate was detected in the June 2007 sample from $Tnbs_1/Tnbs_0$ HSU well NC2-08 at a concentration of 5.9 μg/L. During this semester and all of 2006, 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 2007 as part of the Detection Monitoring Program were detected in $Tnbs_1/Tnbs_0$ HSU ground water. None of the other chemicals monitored in ground water at the Pit 2 Landfill 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 modifications made to the plan.

3.1.3. Landfill Inspection Results

The Pit 2 Landfill was inspected twice during the first semester 2007. No problems were observed.

3.1.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring will be conducted during the second semester 2007.

3.1.5. Maintenance

If necessary, maintenance on the pit cover will be conducted during the second semester 2007.

3.2. Pit 8 Landfill

3.2.1. Contaminant Detection Monitoring Results

Ground water potentiometric surface elevations, nitrate, perchlorate, and total VOC concentrations in $Tnbs_1/Tnbs_0$ HSU ground water are presented in Figure 2.8-1. During the reporting period, ground water samples were collected from the Pit 8 Landfill monitoring wells K8-02B, K8-04, and K8-05 and analyzed for the CMP detection monitoring analytes.

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. The highest concentrations of total VOCs continue to be observed at upgradient wells K8-01 and K8-03B, where concentrations detected in samples collected during the first semester 2007 (June and April 2006) were 6.2 µg/L and 1.9 µg/L, respectively (Figure 2.8-1). However, VOC concentrations remain below their MCLs.

Nitrate was elevated above the 45 mg/L MCL in samples from two wells, K8-01 and K8-04, collected in June 2007, contained 49 mg/L and 58 mg/L, respectively.

Recent tritium activities measured in ground water samples from two of the four wells sampled in the Pit 8 area are slightly in excess of background (Figure 2.5-5). Tritium activities in the June 2007 samples from wells K8-01 and K8-02B were 217 ± 101 pCi/L and 410 ± 70 pCi/L, respectively. Because these activities are only slightly in excess of background, and the lower bound for the error bars associated with the K8-01 sample measurement places the sample result within background ranges, future ground water tritium activity measurements will determine whether the extent of tritium is actually increasing in this area. Previous sample results from wells K8-01, K8-02B, K8-03B, and K8-04 have historically been below the 100 pCi/L reporting limit.

No other constituents that were monitored during the first semester 2007 as part of the Detection Monitoring Program were detected in $Tnbs_1/Tnbs_0$ HSU ground water. None of the other chemicals monitored in ground water at the Pit 8 Landfill were detected above regulatory limits.

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. There were no modifications made to the plan.

3.2.3. Landfill Inspection Results

The Pit 8 Landfill was inspected twice during the first semester 2007. No problems were observed.

3.2.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring will be conducted during the second semester 2007.

3.2.5. Maintenance

If necessary, maintenance on the pit cover will be conducted during the second semester 2007.

3.3. Pit 9 Landfill

3.3.1. Contaminant Detection Monitoring Results

During the first semester 2007, ground water samples were collected from the four Pit 9 Landfill monitoring wells and analyzed for the CMP detection monitoring analytes. There were no detections of constituents of concern above background ranges in the Pit 9 Landfill area ground water samples.

A map that includes the locations of monitoring wells, Pit 9, ground water elevations is presented in Figure 2.8-3. During the first semester 2007, 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 modifications made to the plan.

3.3.3. Landfill Inspection Results

The Pit 9 Landfill was inspected twice during the first semester 2007. No problems were observed.

3.3.4. Annual Subsidence Monitoring Results

Annual subsidence monitoring will be conducted during the second semester 2007

3.3.5. Maintenance

If necessary, maintenance on the pit cover will be conducted during the second semester 2007.

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. Inhalation Risk Evaluation

The CMP 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 830
- Indoor Ambient Air in Building 833

The risk and hazard management is complete for a building when the estimated risk is below 10^{-6} and the hazard index is below 1 for two consecutive years. The risk and hazard management is complete and will no longer be evaluated for the following:

- Outdoor Ambient Air Near Building 834D (2003 and 2004)
- Outdoor Ambient Air Near Building 815 (2003 and 2004)
- Outdoor Ambient Air in Building 854F (2003 and 2004)

- Outdoor Ambient Air Near Building 830 (2003 and 2004)
- Indoor Ambient Air Near Building 832F (2003 and 2004, building demolished in 2005)
- Indoor Ambient Air in Building 854F (building demolished in 2005)
- Indoor Ambient Air in Building 854A (2005 and 2007)

Institutional controls, such as restricting access to or activities in areas of elevated risk, remained in place during 2007 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 were evaluated during the first semester 2007:

- 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 5 and 7 during first semester 2007, therefore no ambient air VOC sampling was performed. Springs 5 and 7 have been devoid of surface water or green hydrophilic vegetation since monitoring began in 2003. These springs will be monitored for the presence of surface water or green hydrophilic vegetation in 2008 and air samples will be collected if present.

Ambient air samples were collected at Spring 3 during the first semester 2007. The results are presented in Table 4-1. Three collocated samples were collected. Per the requirements of the CMP, the ambient air sample concentrations were compared to ambient air PRGs. TCE was detected in two of the three samples above the ambient air PRG. Freon 113, also known as 1,1,2-trichloro-1,2,2-trifluoroethane was detected in all three samples below the PRG. Methylene chloride was detected in one sample below the PRG. Freon 113 and methylene chloride are common laboratory contaminants. The reporting limit for PCE was above the PRG, however, since TCE was detected above the PRG, risk to onsite workers is still present and air monitoring will continue in 2008. No workers currently inhabit the area around Spring 3 except during semiannual sampling.

4.2. Ecological Risk and Hazard Management

4.2.1. Polychlorinated biphenyl (PCBs), Dioxins, and Furans in Surface Soil at 850

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 is being considered if necessary to evaluate the remedial options. Field surveys for the presence of important burrowing species such as Western burrowing owls and California tiger salamander are continuing in this area (Figure 4.2.1).

On October 18, 2004, one adult California tiger salamander was found near the West Observation Point approximately 500 meters from the Building 850 survey area. This observation is 941 meters from the nearest breeding pool (Ambrosino pool), which is located in the northwest corner of the site. Nighttime surveys for California tiger salamanders were conducted at the area surrounding the Ambrosino pool on February 15, 2005. Although these surveys did not include the Building 850 survey area, adult California tiger salamanders were observed within 1.5 kilometers (km) of Building 850 during these surveys.

During the winter and spring and fall of 2005, driving surveys of the bowl surrounding the Building 850 Firing Table were conducted (Figure 4.2.1). Adult Western burrowing owls were observed in the large bowl located approximately 900 meters north of the Building 850 survey area, but Western Burrowing Owl nesting was not verified near Building 850. A ground squirrel colony occupied the burrow systems located west of the firing table at Building 850. These burrows provide potential habitat for Western burrowing owls and California tiger salamanders. No other special status species were observed.

In 2007, a survey for California tiger salamanders was conducted on the slopes behind (west of) the Building 850 Firing Table on February 26, 2007. 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 (i.e. Ambrosino pool) 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 during that night.

In 2007, surveys for Western burrowing owl were performed on the slopes behind (west of) the Building 850 Firing Table and in the valley north of the building on March 23, April 23, May 30, and June 4, 2007. No burrowing owl pairs were observed in the area immediately west of Building 850 during the surveys. Five breeding pairs of owls were found occupying dens in the northern valley area. The closest owl pair to the facility was roughly 300 meters to the north-northeast.

Surveys for California tiger salamanders at the nearest breeding pool (Mitigation Pond), approximately 1000 meters to the northwest, were conducted on February 15, February 21, and March 29, 2007. Successful breeding attempts (presence of eggs and/or larvae) by tiger salamanders were recorded at the pool on each survey night.

California tiger salamanders have been observed up to 2 km from breeding pools (U.S. Fish and Wildlife Service, 2004). The Building 850 study area is located with 1200 meters of Ambrosino pool, a known breeding site for California tiger salamanders, and within 700 meters of the Mitigation Pond, a seasonal pool constructed in 2005, which has also been used for successful breeding. Although California tiger salamanders are known to move up to 2 km from breeding ponds, research conducted by Trenham (2001) suggests that most (95%) California tiger salamanders use breeding habitat within 173 meters of breeding ponds. Our survey results support this research. Although California tiger salamanders can utilize the Building 850 area as upland habitat, the largest concentration of California tiger salamanders is likely to be closer to breeding ponds.

Surveys for Western burrowing owls and California tiger salamanders will continue during 2008 in the area surrounding Building 850. These will include driving surveys, as well as surveys of the burrow systems located in the Building 850 survey area.

5. Data Management Program

The management of data collected during 2007 was subject to the standard Environmental Restoration Division (ERD) data management process and standard operating procedures (Goodrich and Wimborough, 2007). 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 first semester of 2007, the relational database that is used to maintain the data for CMR was further refined by the addition of more relational constraints. Additional verifications were added to the applications used to manage the sample planning and chain of custody tracking. Many other minor refinements were implemented to improve chain of custodies, data entry, and querying abilities. Existing standard operating procedures are being modified to reflect the changes necessitated by the normalization to the Oracle database.

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 in 2007 to take advantage of the normalized locations and added relational constraints in the new database. Since then, several tools have been refined to improve the creation of sampling plans, labels, and Chains of Custody and field tracking forms. Tools for tracking sampling and receipt of analytical data have also been improved. The documentation of the new procedures is in process.

6. Quality Assurance/Quality Control Program

LLNL conducted all compliance monitoring in accordance with the approved Quality Assurance Project Plan (QAPP) (Dibley, 1999) requirements for planning, performing, documenting, and verifying the quality of activities and data. The QAPP was prepared for

CERCLA compliance and ensures that the precision, accuracy, completeness, and representativeness of project data are known and are of acceptable quality. The QAPP is used in conjunction with the LLNL ERD Standard Operating Procedures (SOPs), Operations and Maintenance Manuals (O&Ms), workplans, Site Safety Plans, and the LLNL Environmental Protection Department Quality Assurance Management Plan.

Modifications to existing LLNL quality assurance/quality control (QA/QC) procedures, new QA/QC procedures that were implemented during this reporting period, self-assessments, quality issues and corrective actions, and analytical and field quality control are discussed in Sections 6.1 through 6.6.

6.1. Modifications to Existing Procedures

Chapter 5 of the LLNL Livermore Site and Site 300 Environmental Restoration Project Standard Operating Procedures is in the revision process, which mainly consists of data management procedures. To date, revisions have been made to SOP 5.1: Data Management Printed Analytical Result Receipt and Processing, SOP 5.3: Data Management Electronic Analytical Result Receipt and Processing for Sample and Analysis Data, SOP 5.4: Data Management Hand Entry of Analytical Results, SOP 5.10: Data Management Receipt and Processing of Lithologic Data by Electronic Transfer, and SOP 5.14: Issuing New Parameter Codes.

6.2. New Procedures

There were no new procedures written during this reporting period. Operations and Maintenance (O&M) Manuals: Volume VIII: O&M Manual for Treatment Facility at Building 830 (TF830), Volume XIII: O&M Manual for Miniature Treatment Units (MTUs), Granular Activated Carbon Treatment Unit (GTUs), and Solar Treatment Units (STUs) were approved and released. Volume XIV: O&M Manual for Vapor Treatment Facilities is in the review process.

6.3. Self-assessments

The Safety and Environmental Protection (SEP) Directorate, and the ERD perform formal and informal self-assessments on an annual or triennial frequency. These assessments are used to evaluate work activities to QA procedures; management practices, and the integration of Environmental Safety and Health (ES&H) programmatic requirements. External regulatory agencies also perform frequent walkabouts during ERD work activities. During this reporting period, there were a total of twelve 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). To date, all ERD work related issues and deficiencies have been successfully corrected and closed-out in the Issues Tacking System.

A newly developed assessment program titled, "QA/QC Program for Ground Water Sampling Activities" was implemented by the ERD in July 2007 to evaluate ground water sample collection activities. Routine ground water sample collection activities were assessed in April and May of 2007.

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 four QIFs were processed during this reporting period. The corrective actions suggested in three of the QIFs have been implemented and one QIF is still pending approval. The majority of the QIFs were generated to address analytical laboratory issues. One analytical laboratory issue in particular was false positives for perchlorate in treatment facility effluent samples. The analysis of perchlorate can become problematic when common anions such as chloride, sulfate, and bicarbonate cause interferences that may result in false positives for the analyte. As a corrective action, the contract analytical laboratory will automatically re-analyze any treatment facility effluent sample where perchlorate has been positively identified in an effort to alleviate the reporting of false positives.

6.5. Analytical Quality Control

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

6.6. Field Quality Control

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

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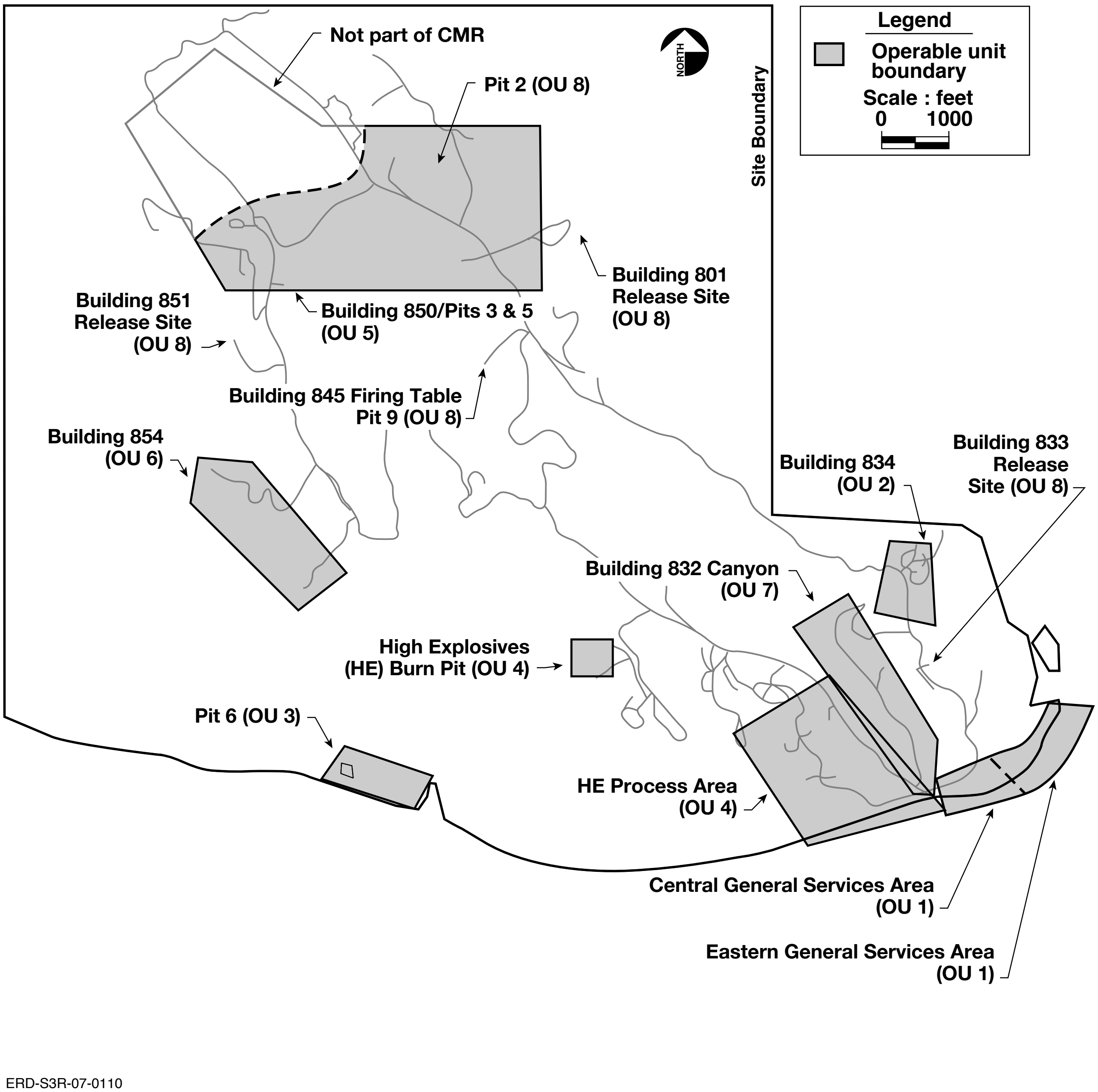

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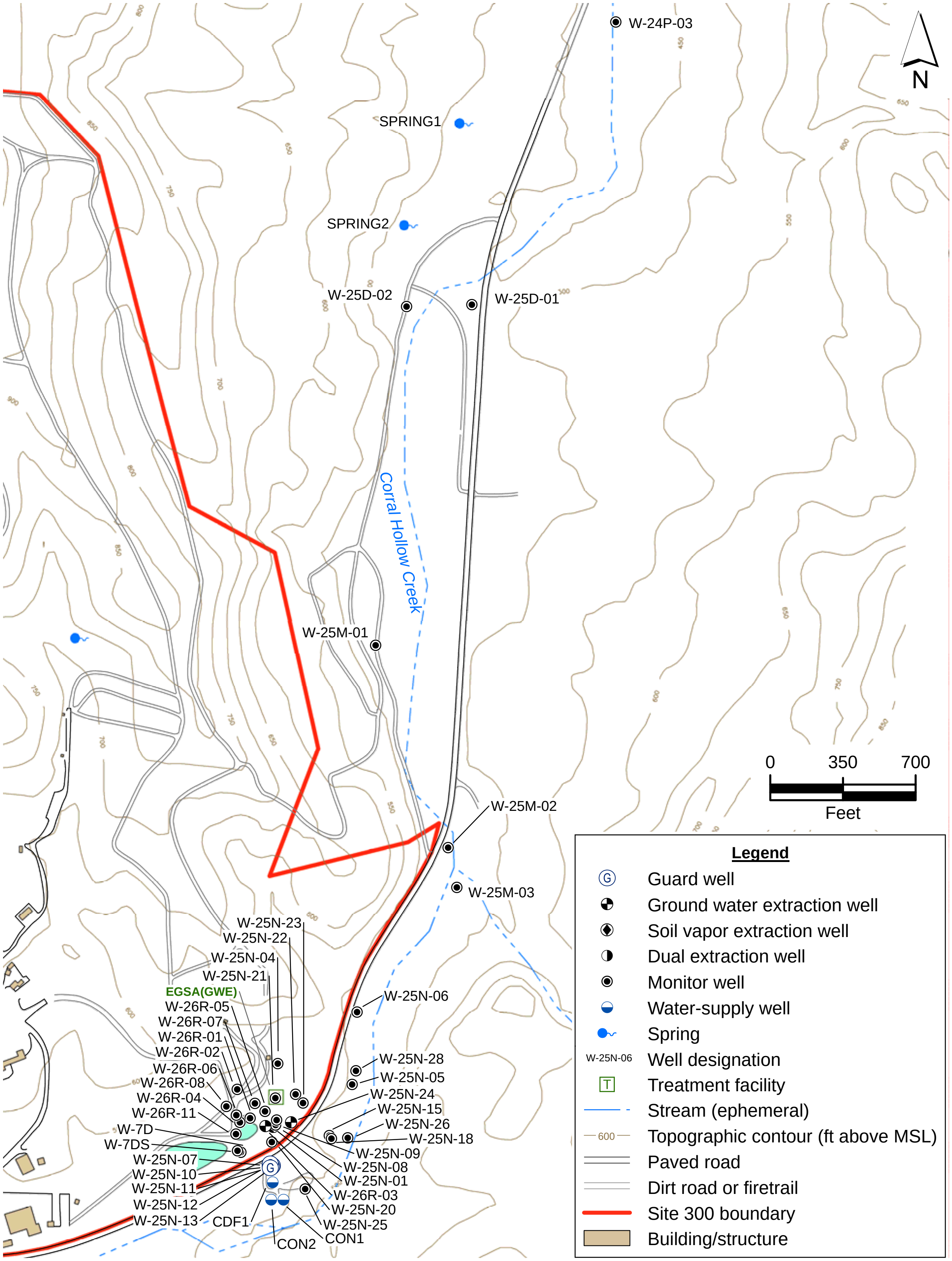

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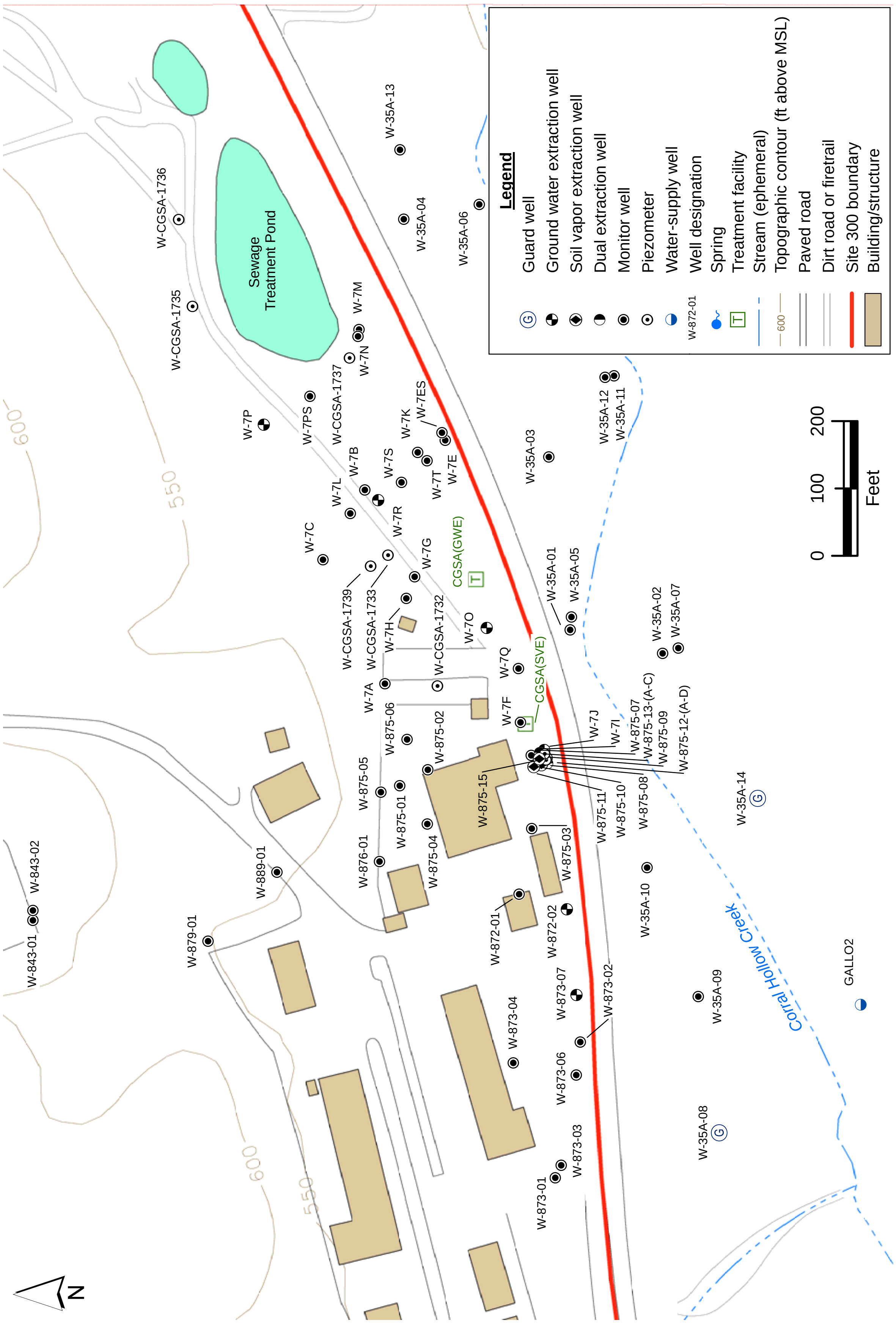

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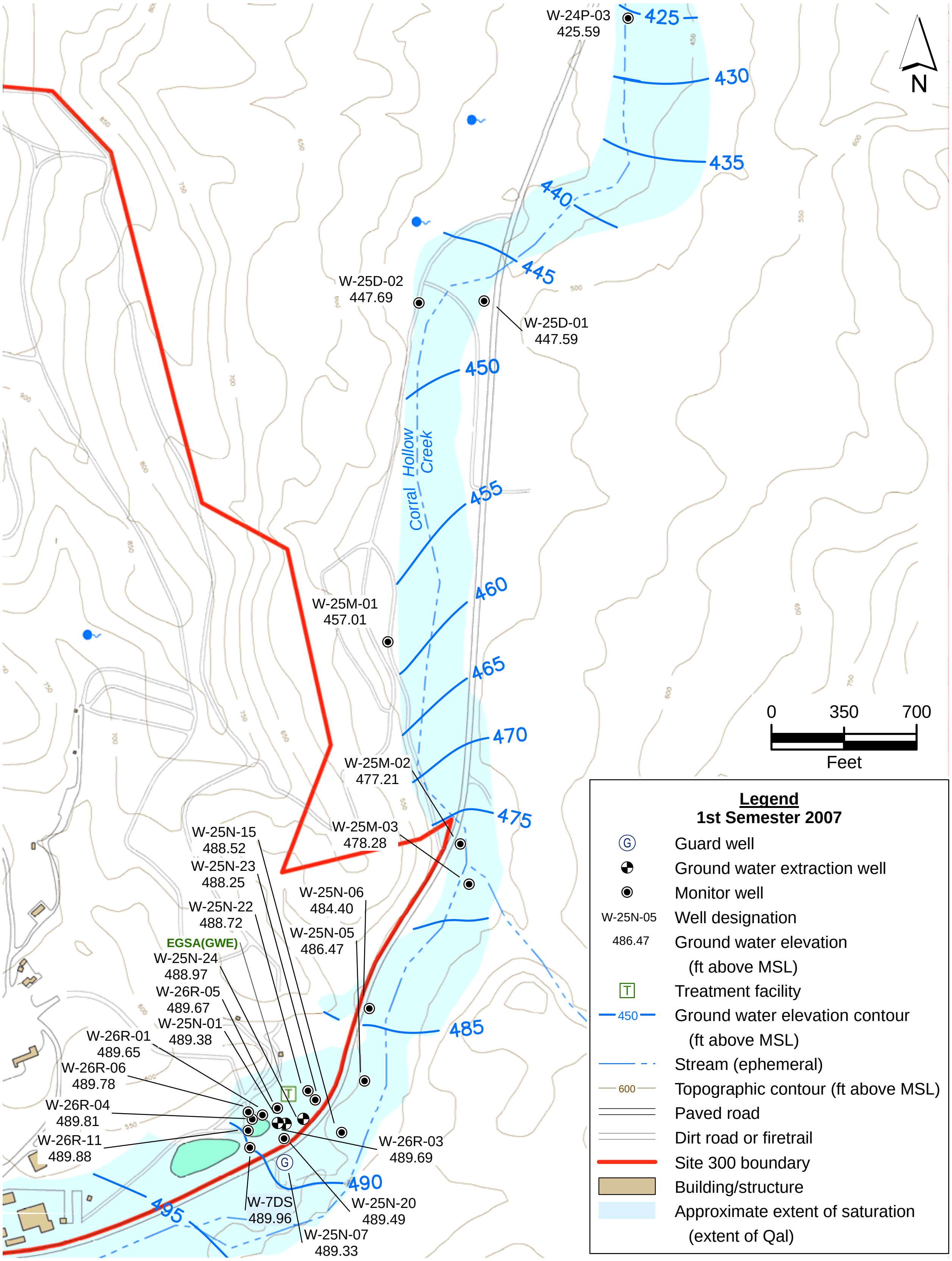

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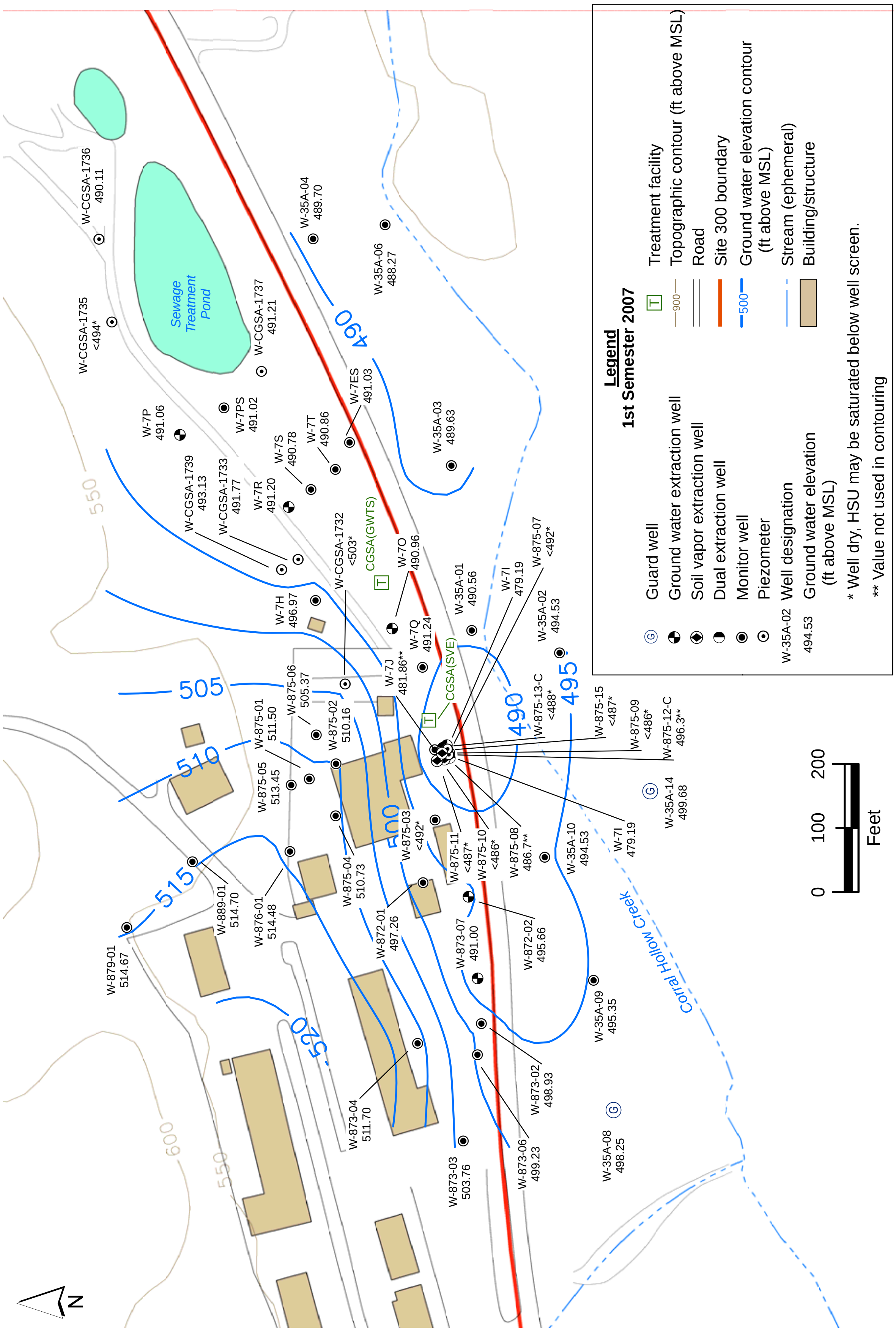

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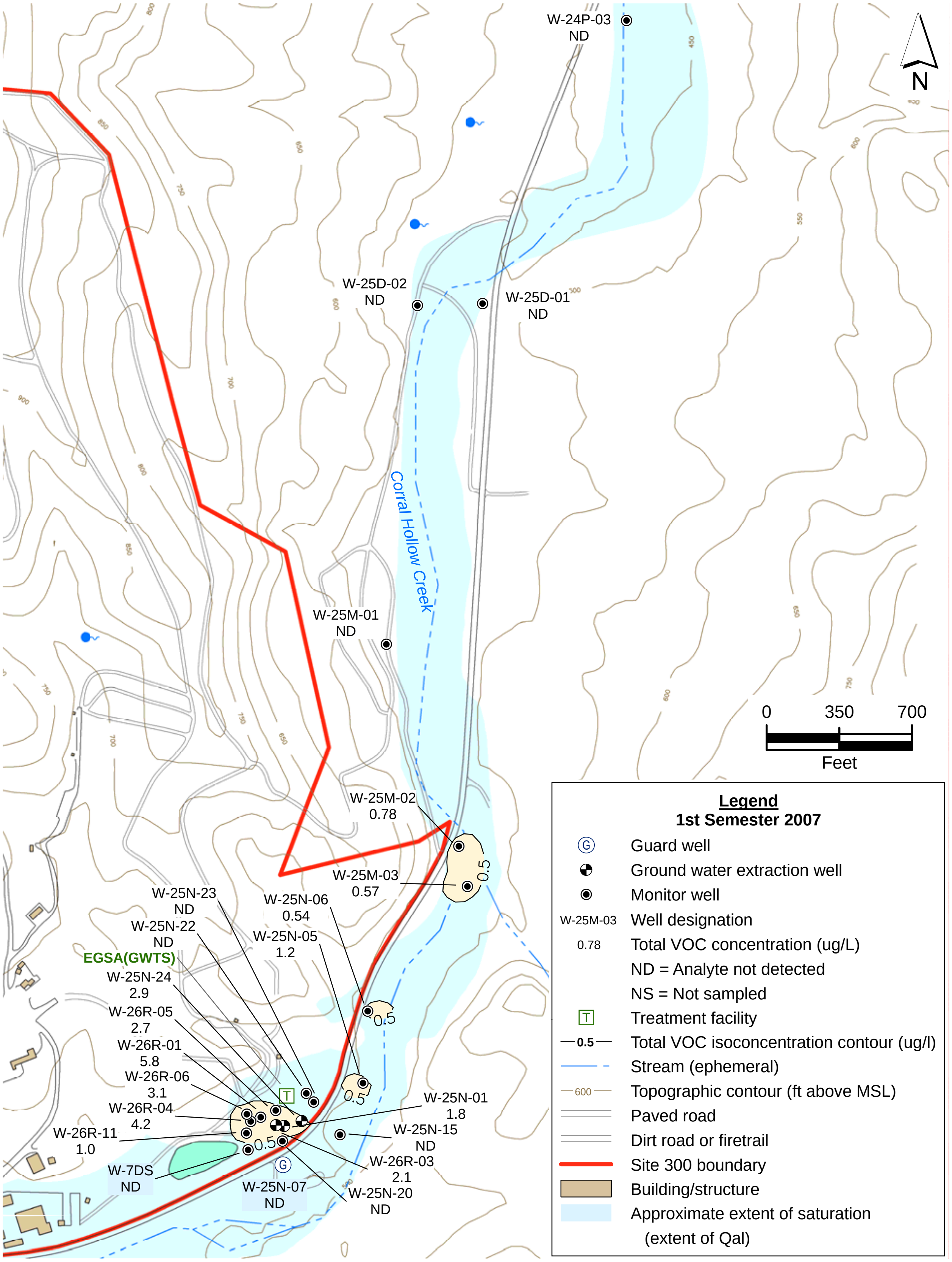

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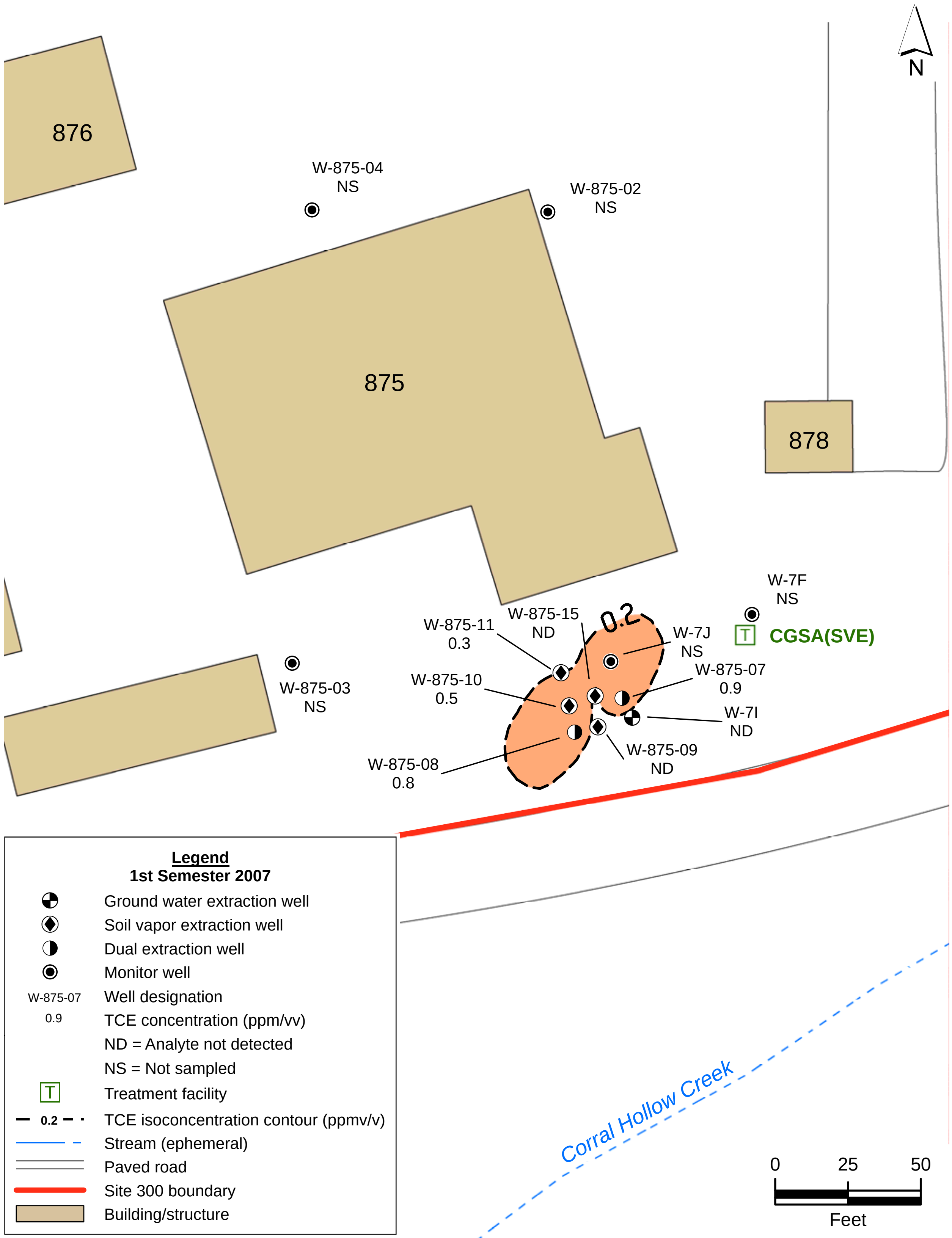

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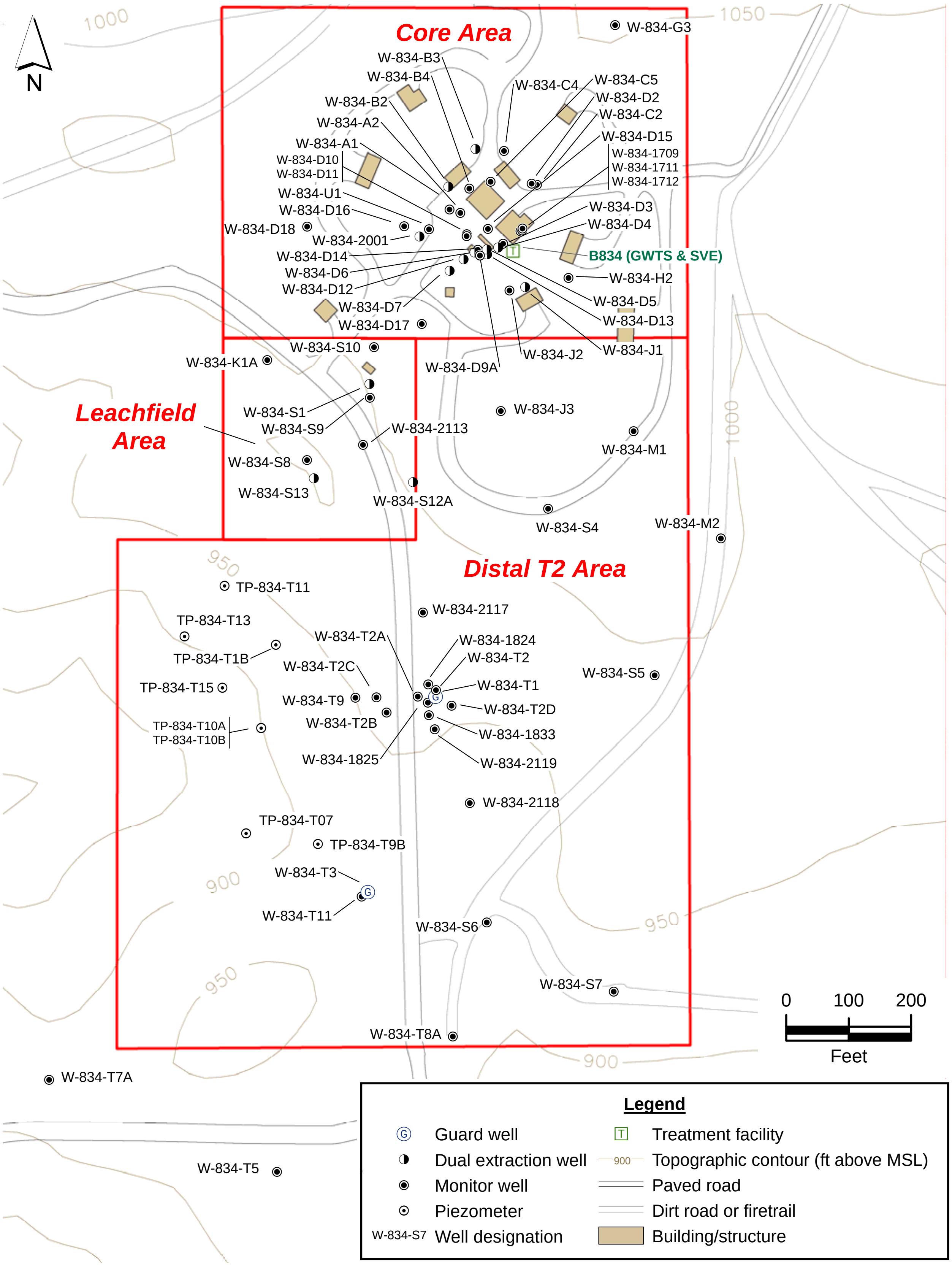

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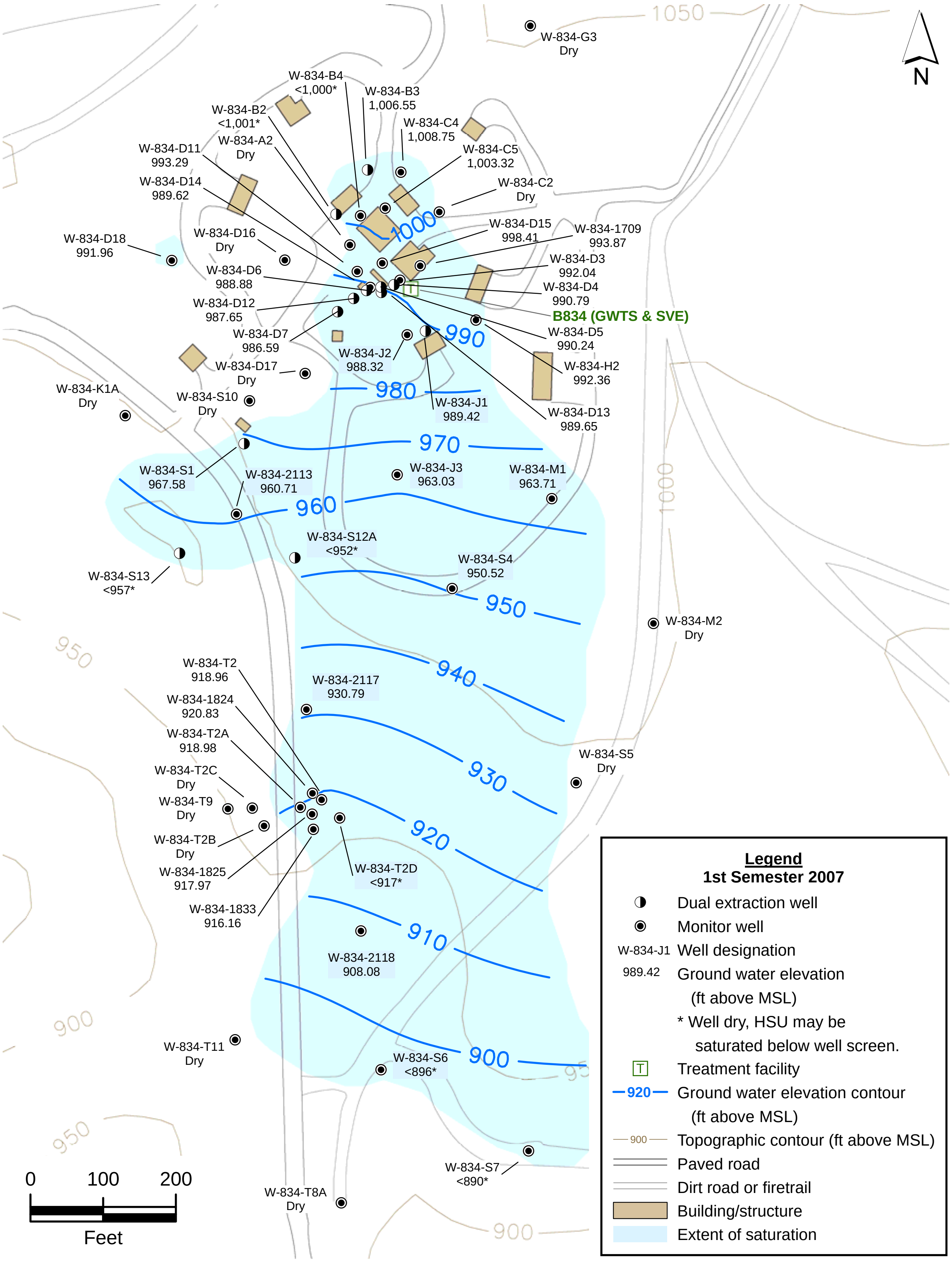

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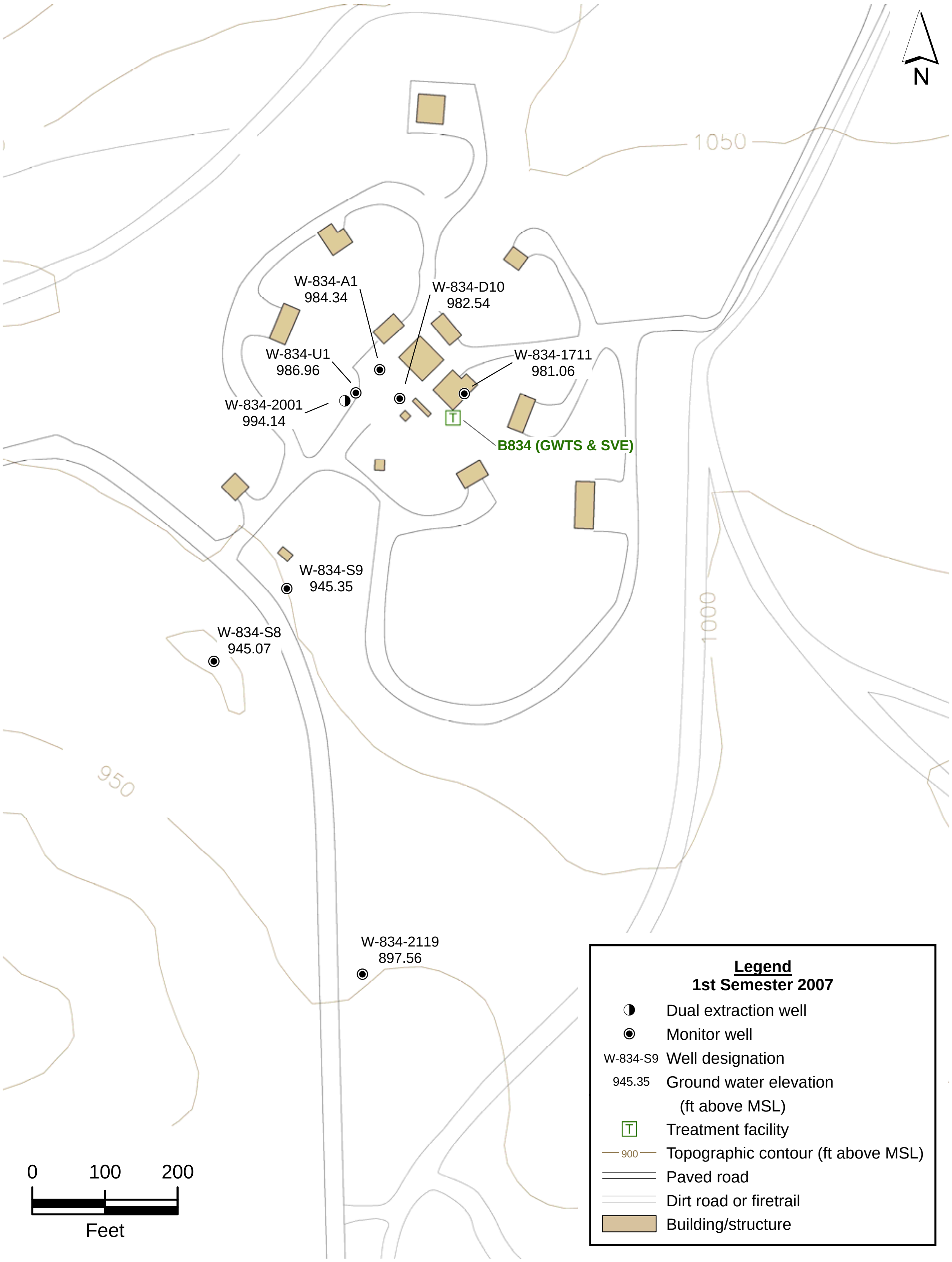

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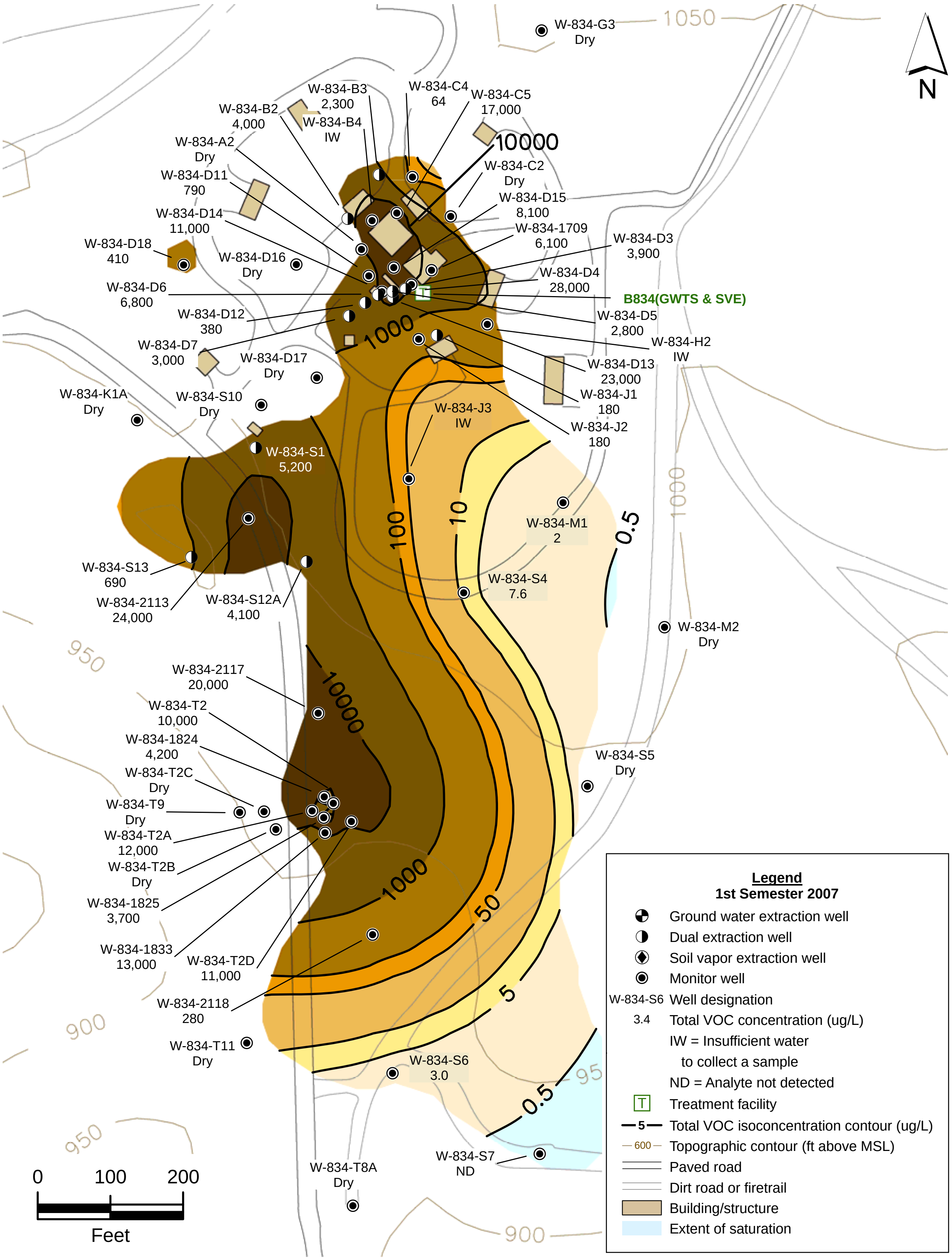

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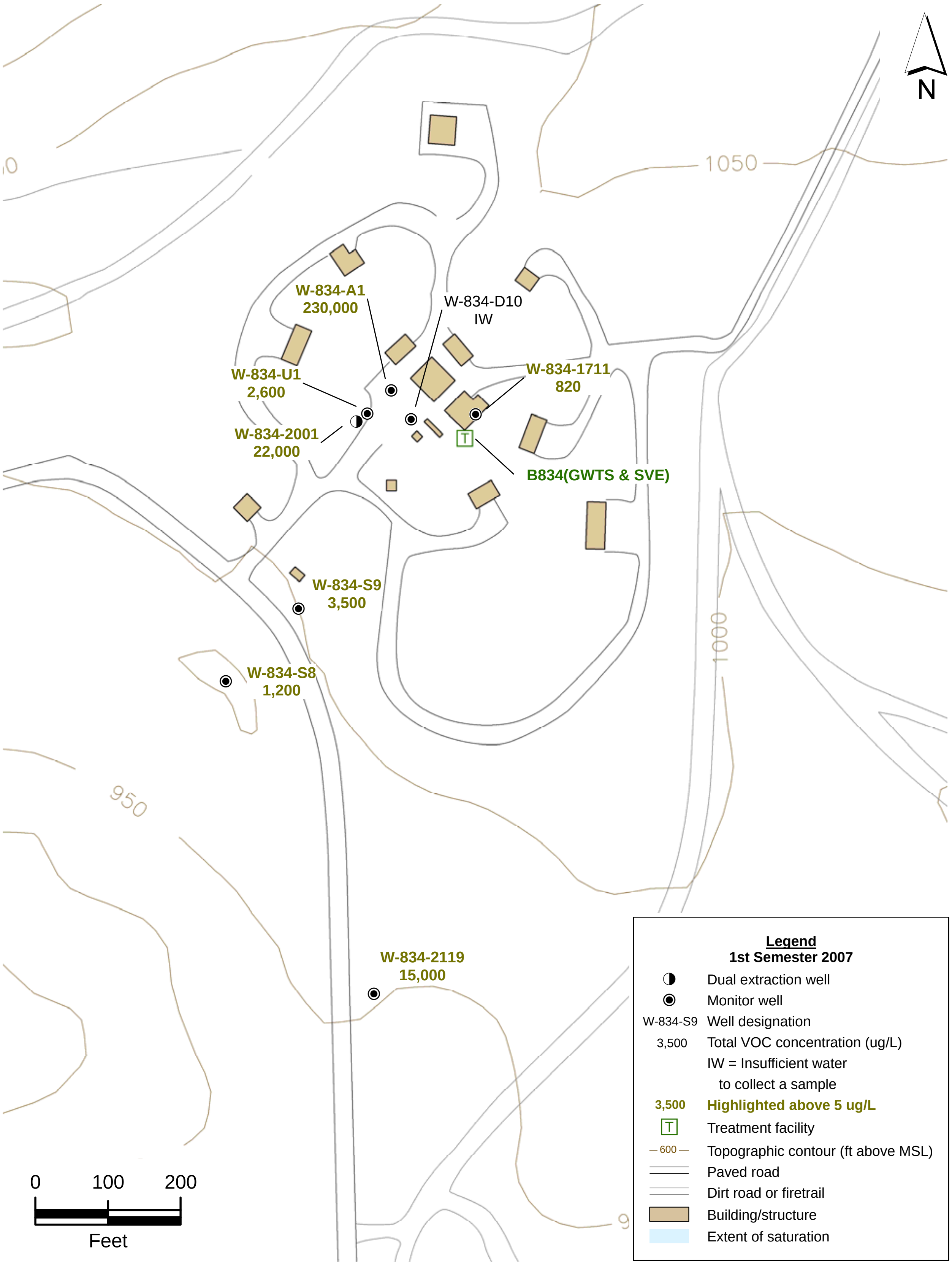

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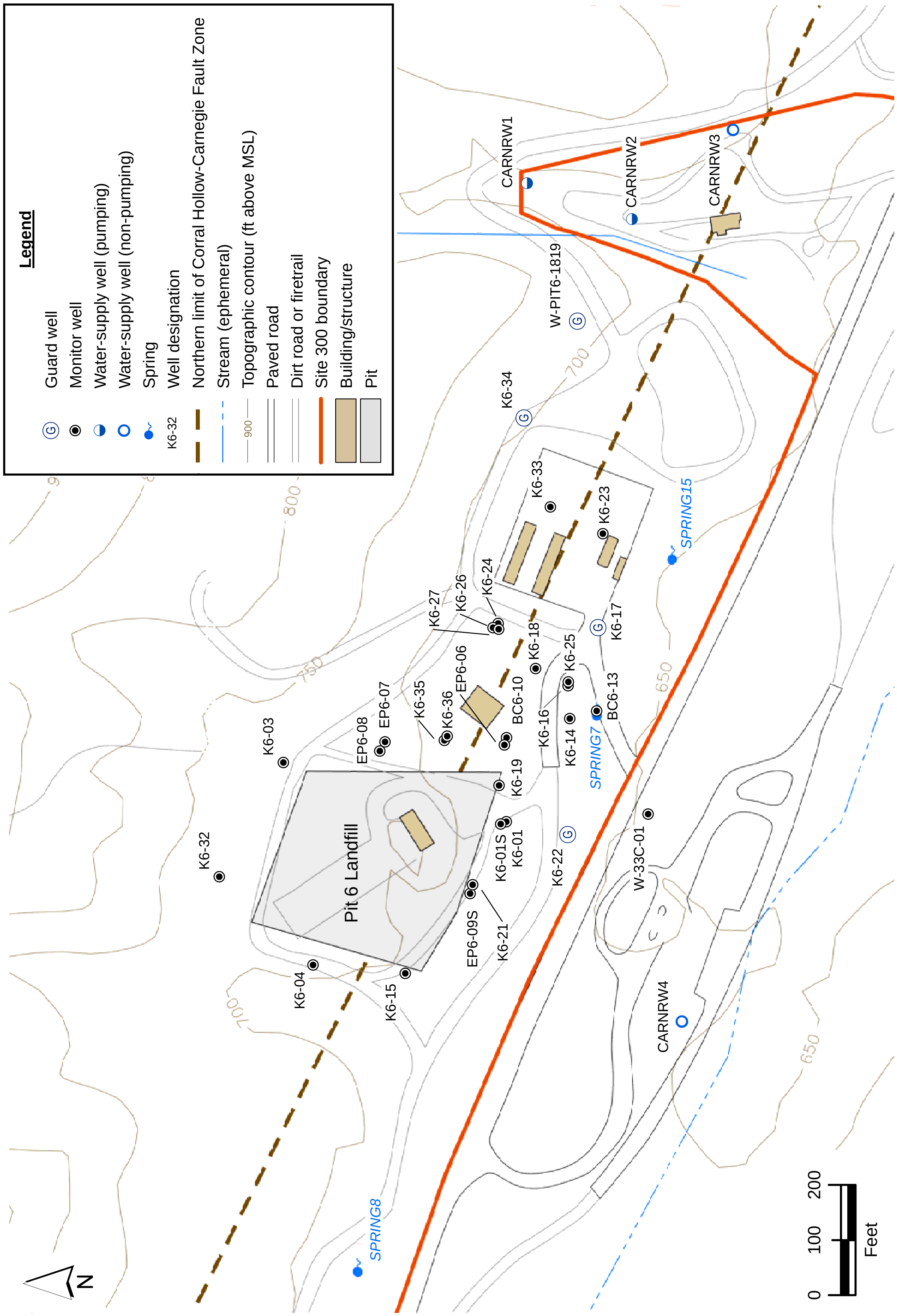

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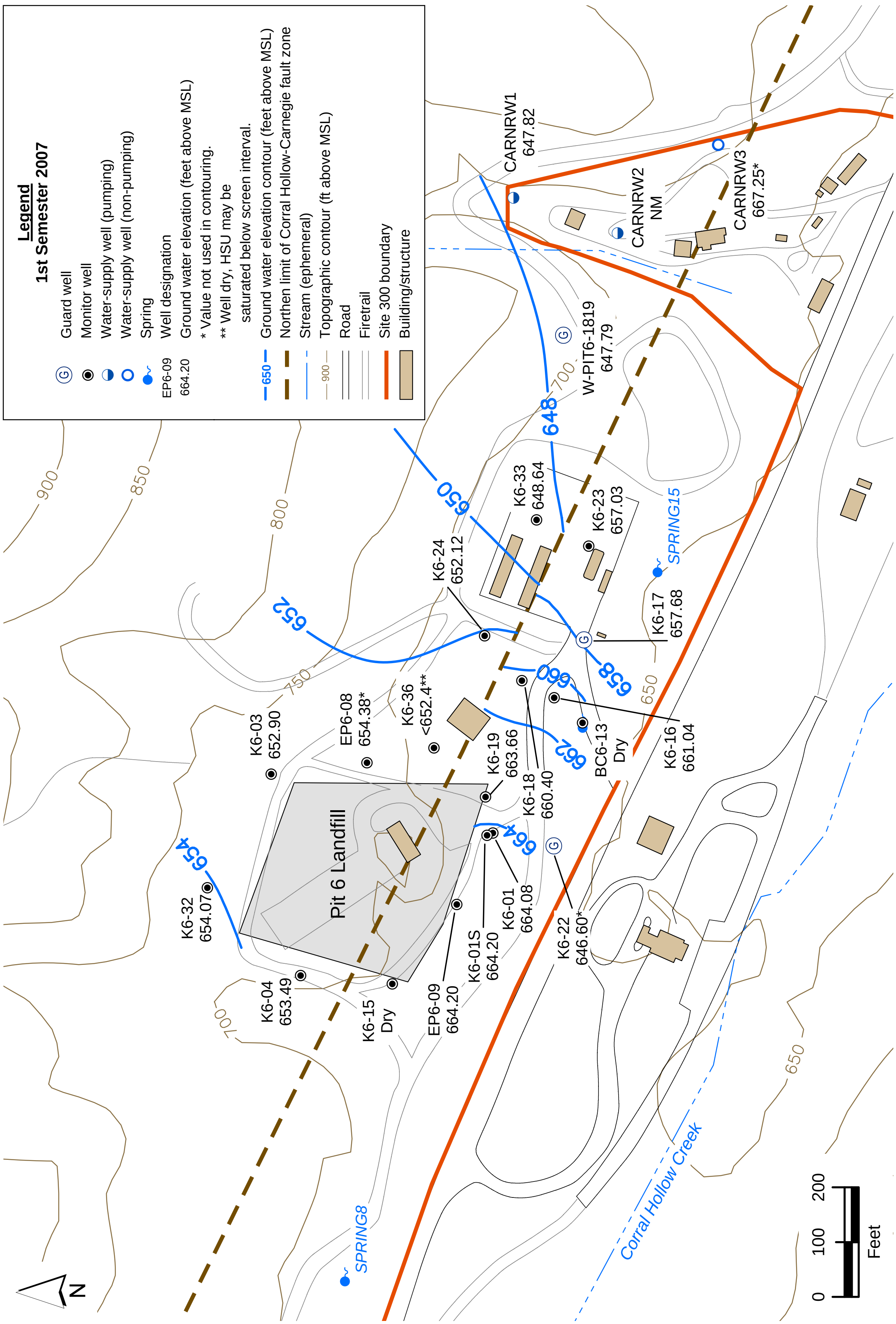

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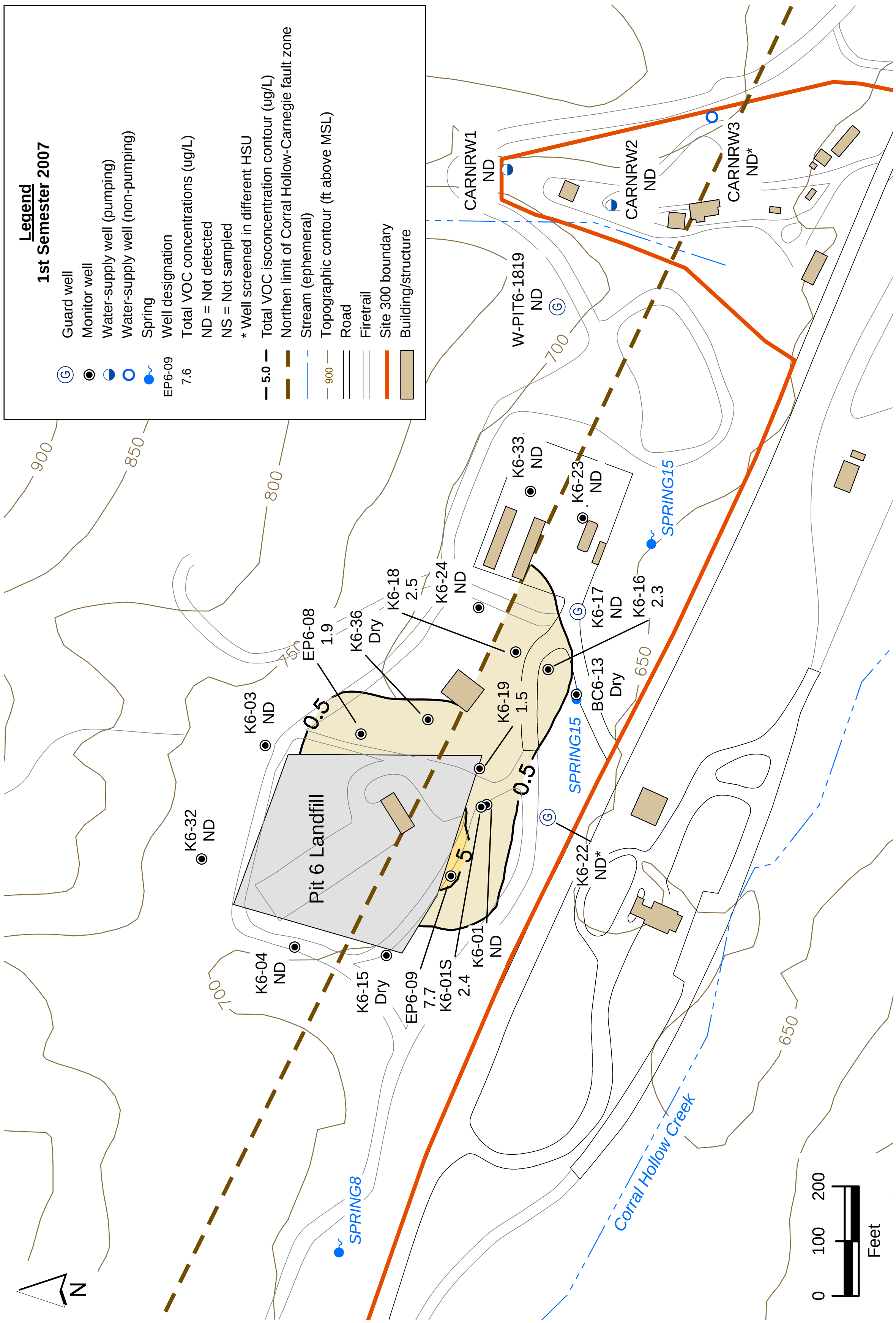

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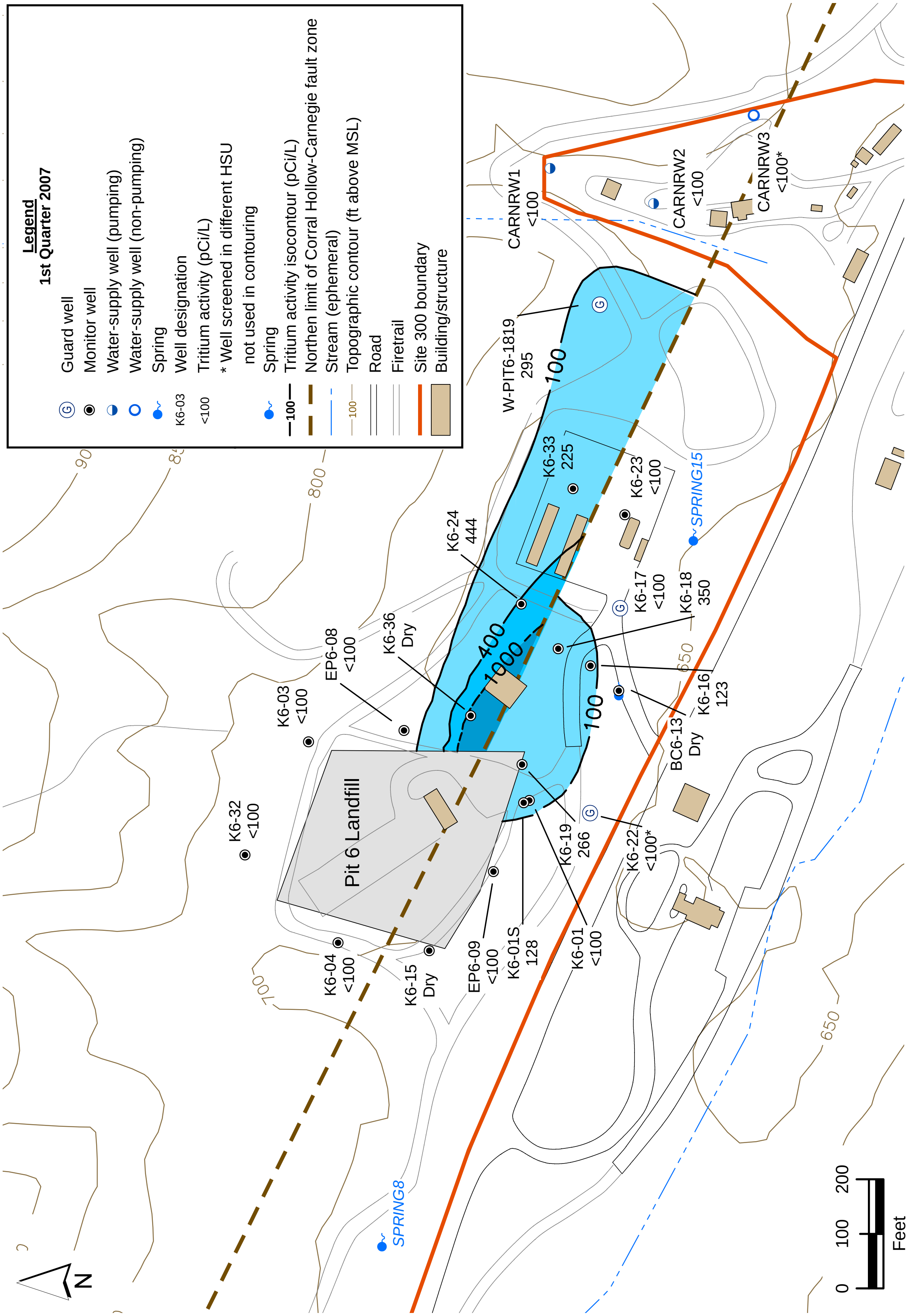

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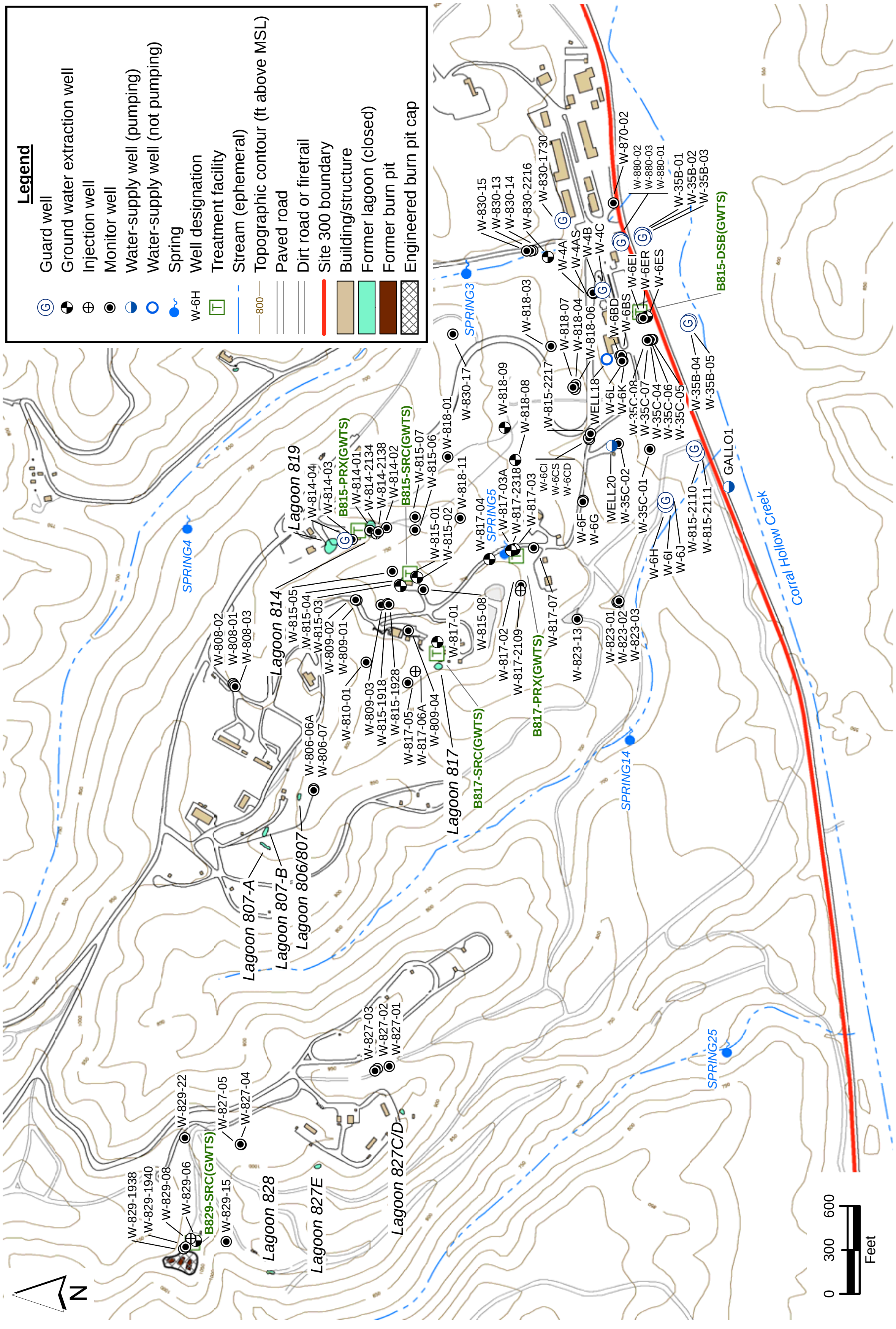

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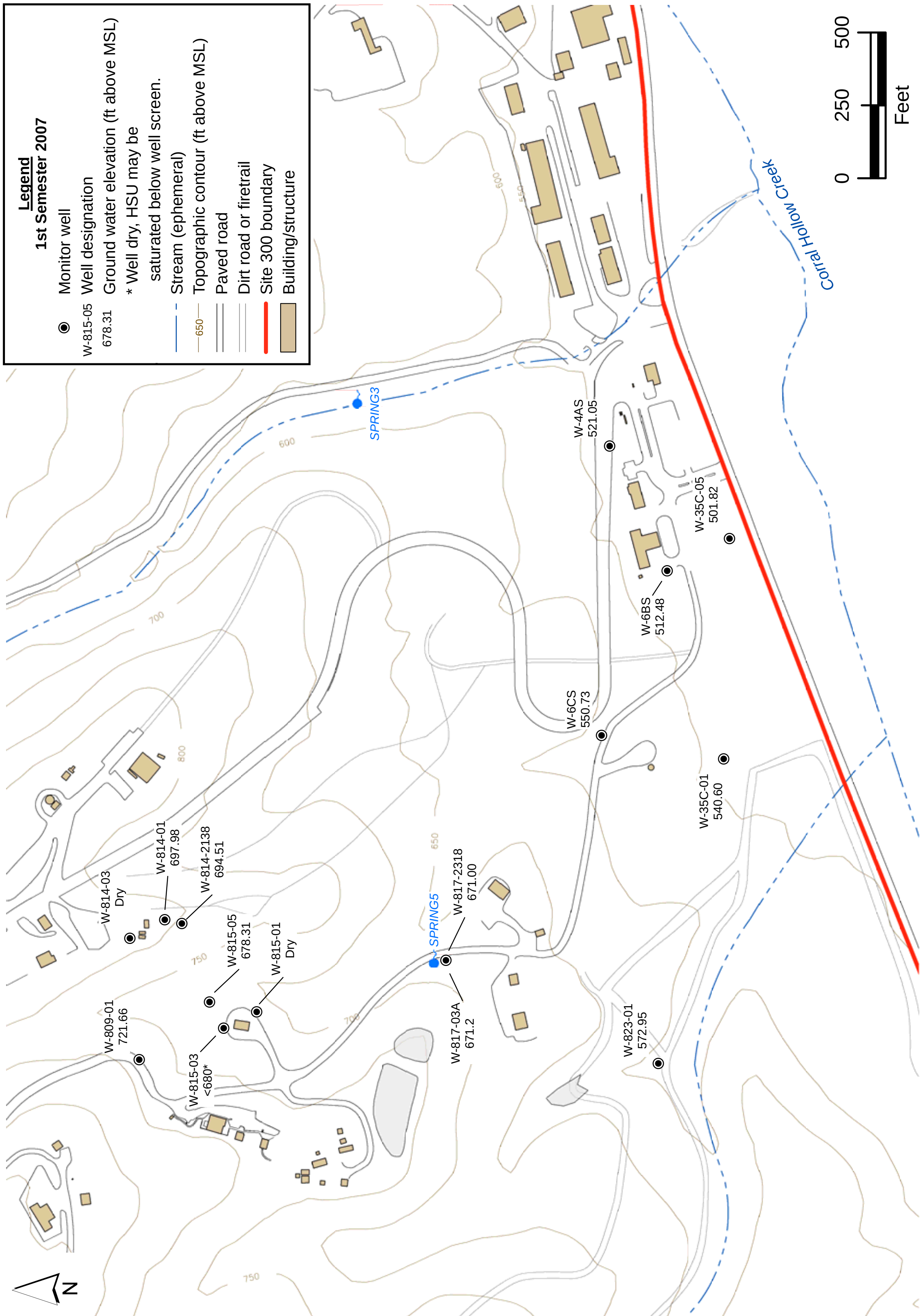

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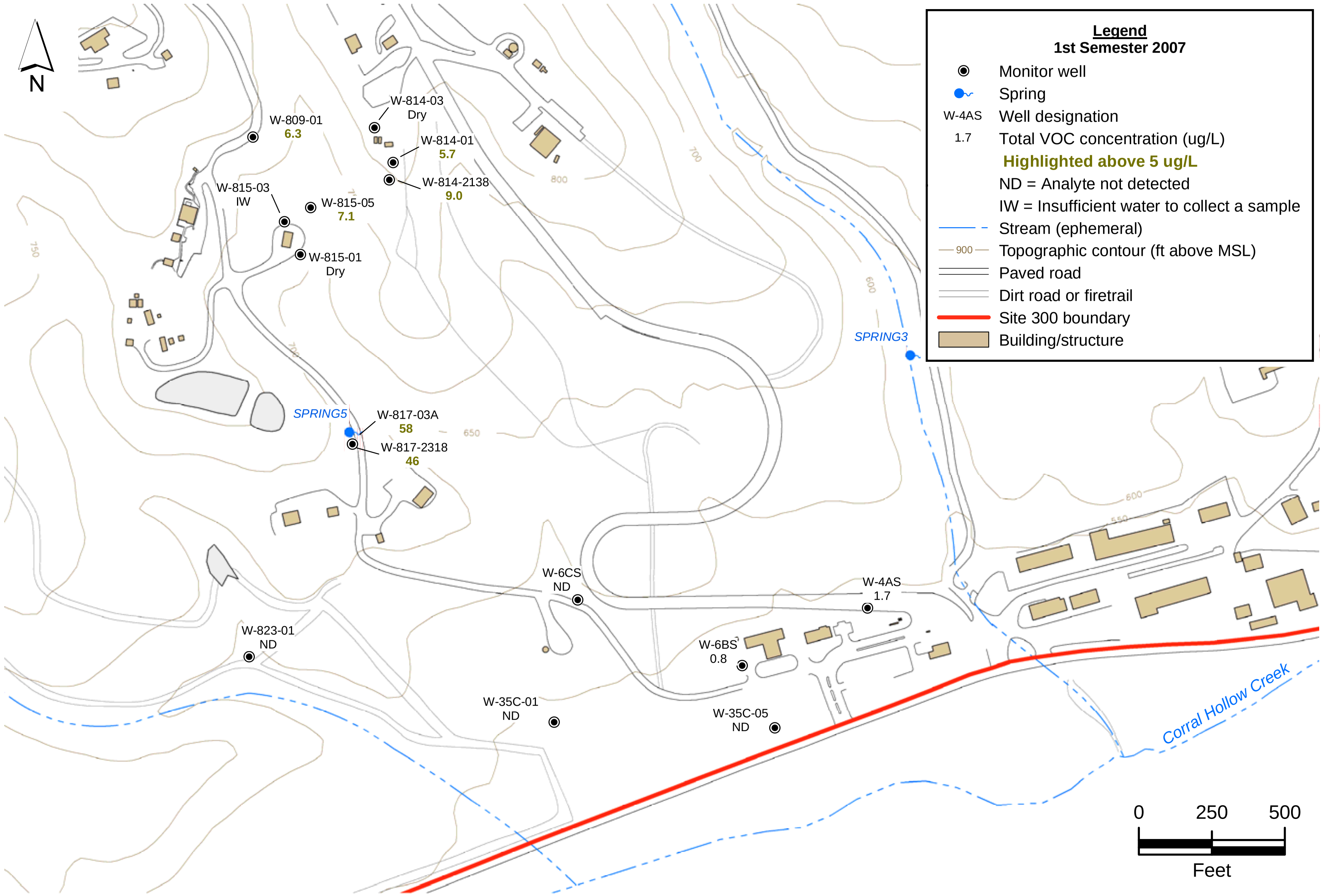

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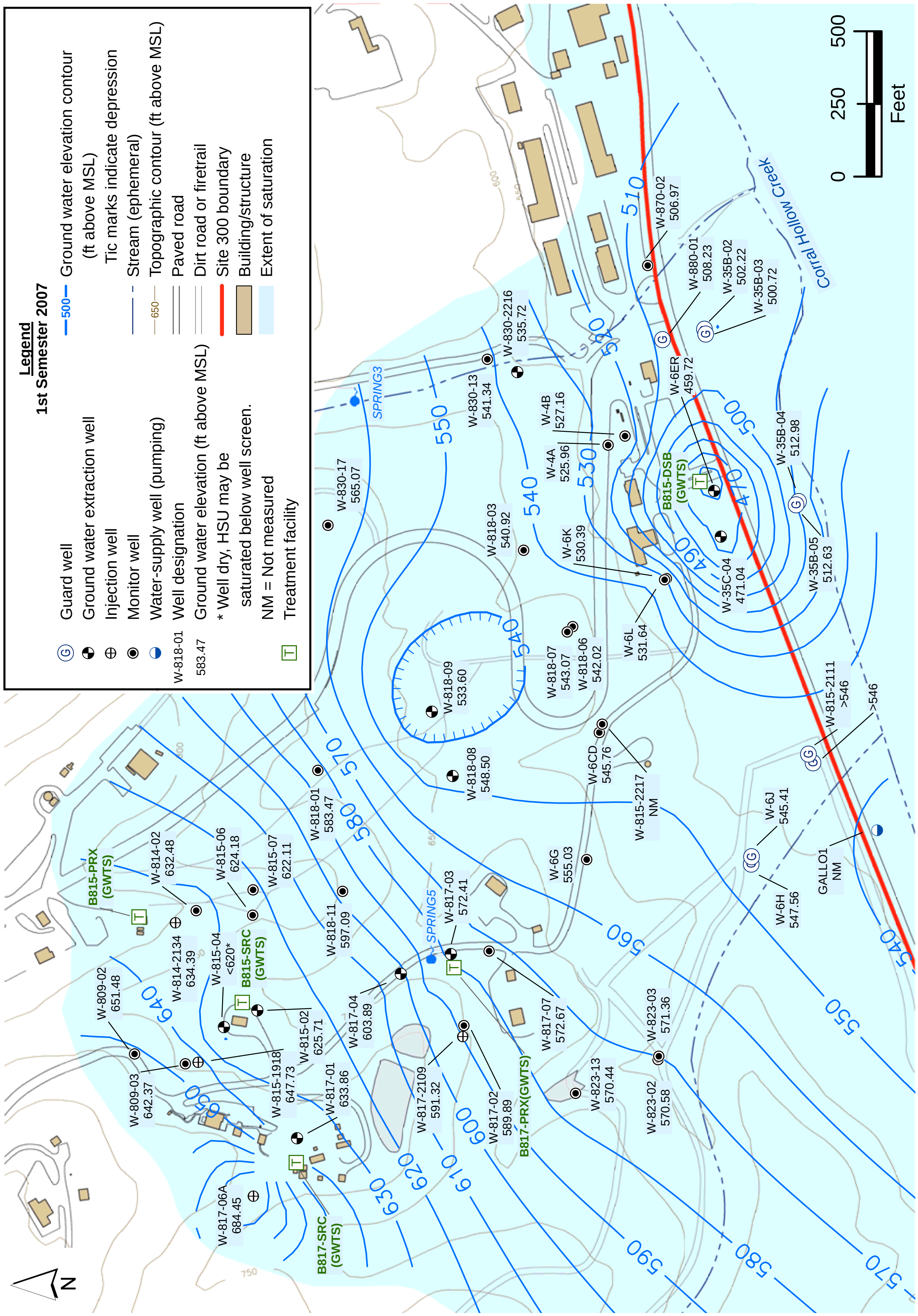

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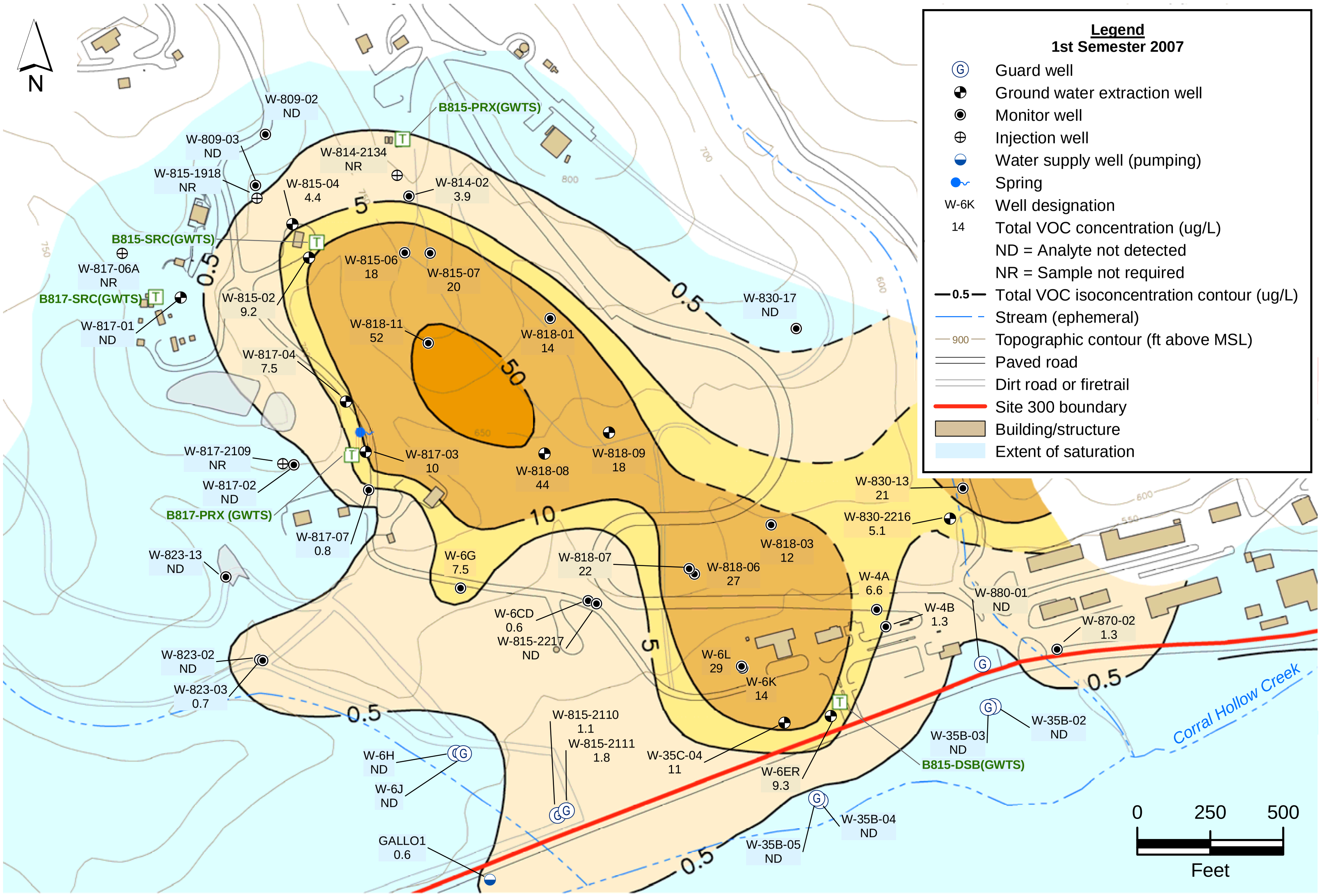

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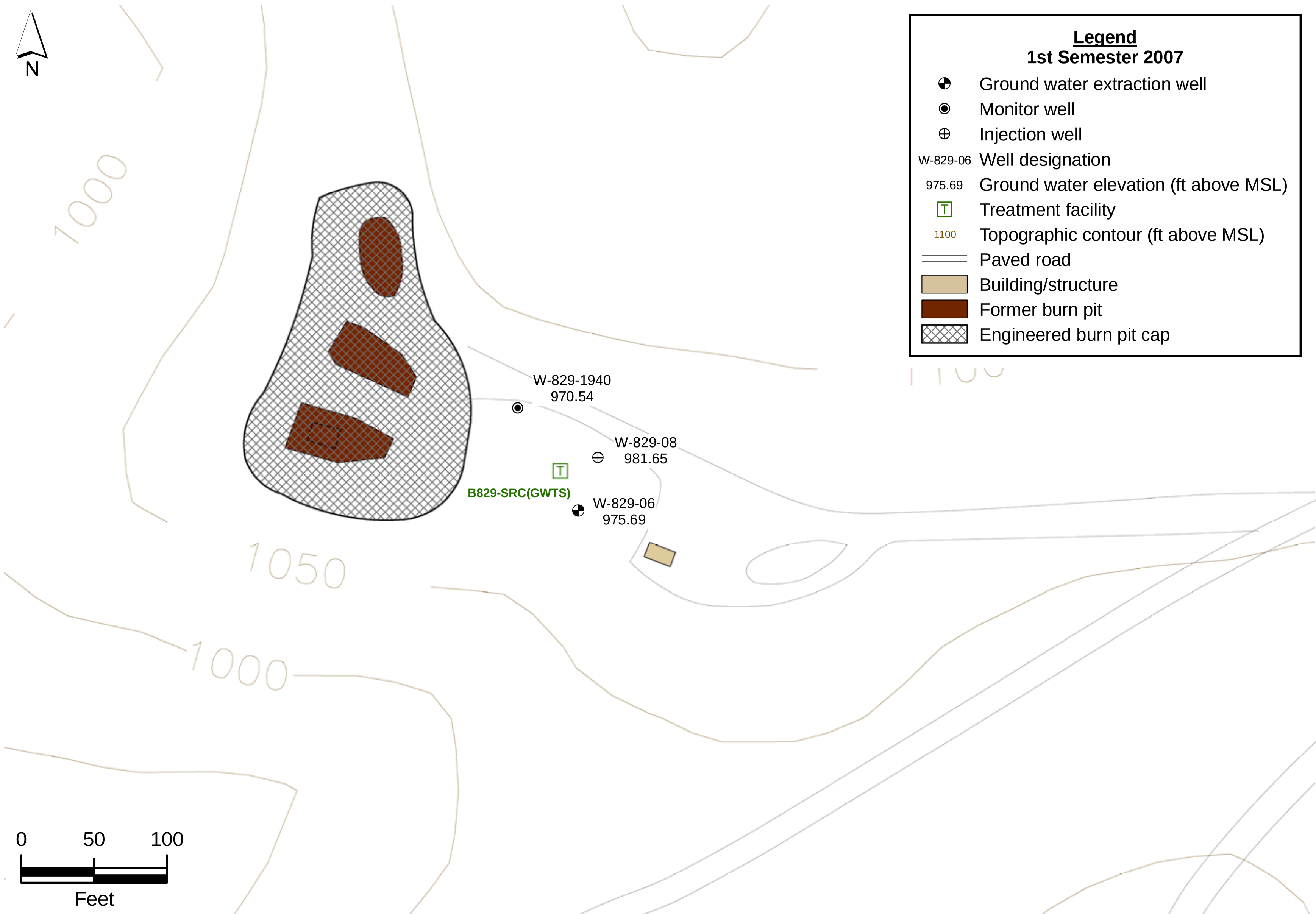

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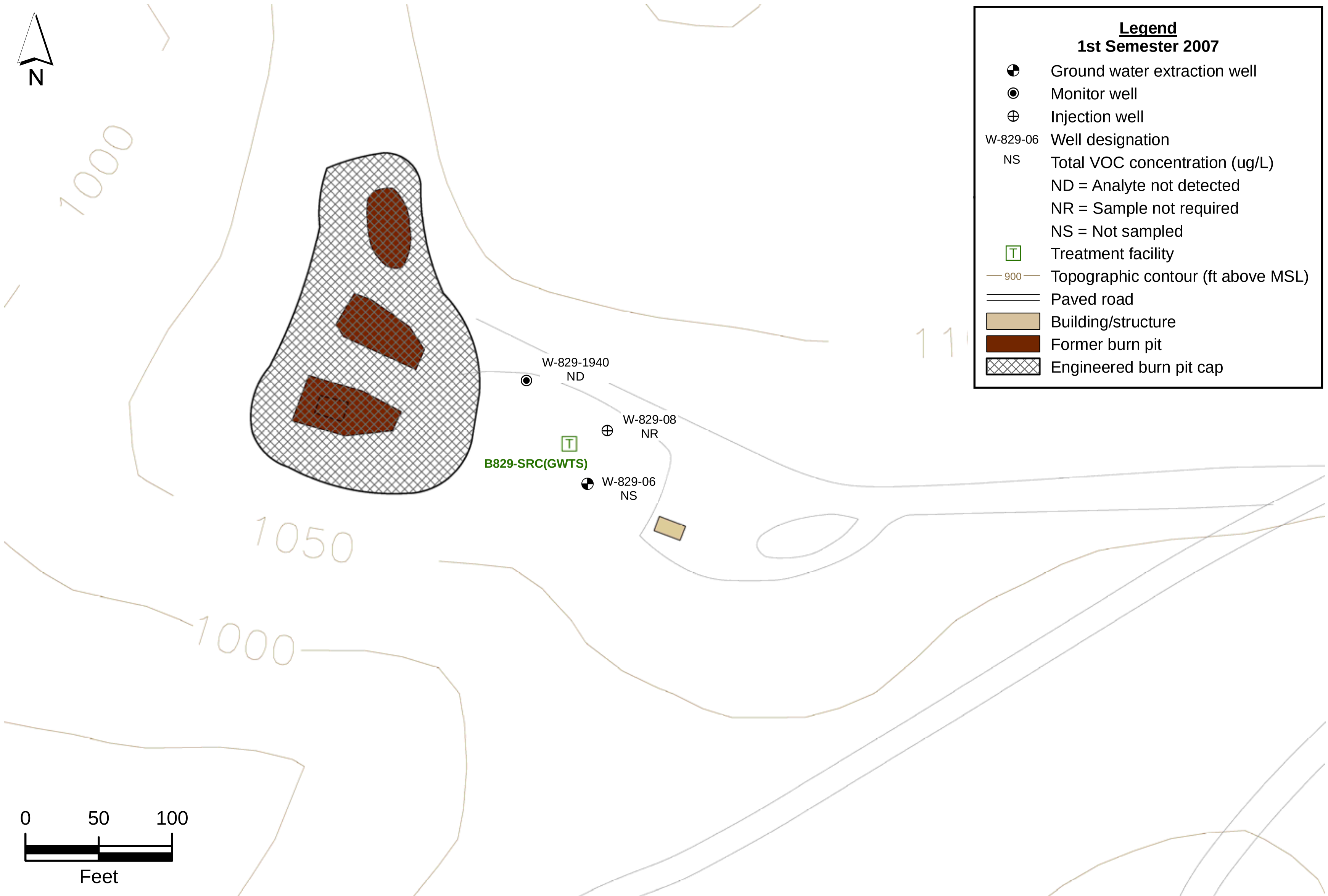

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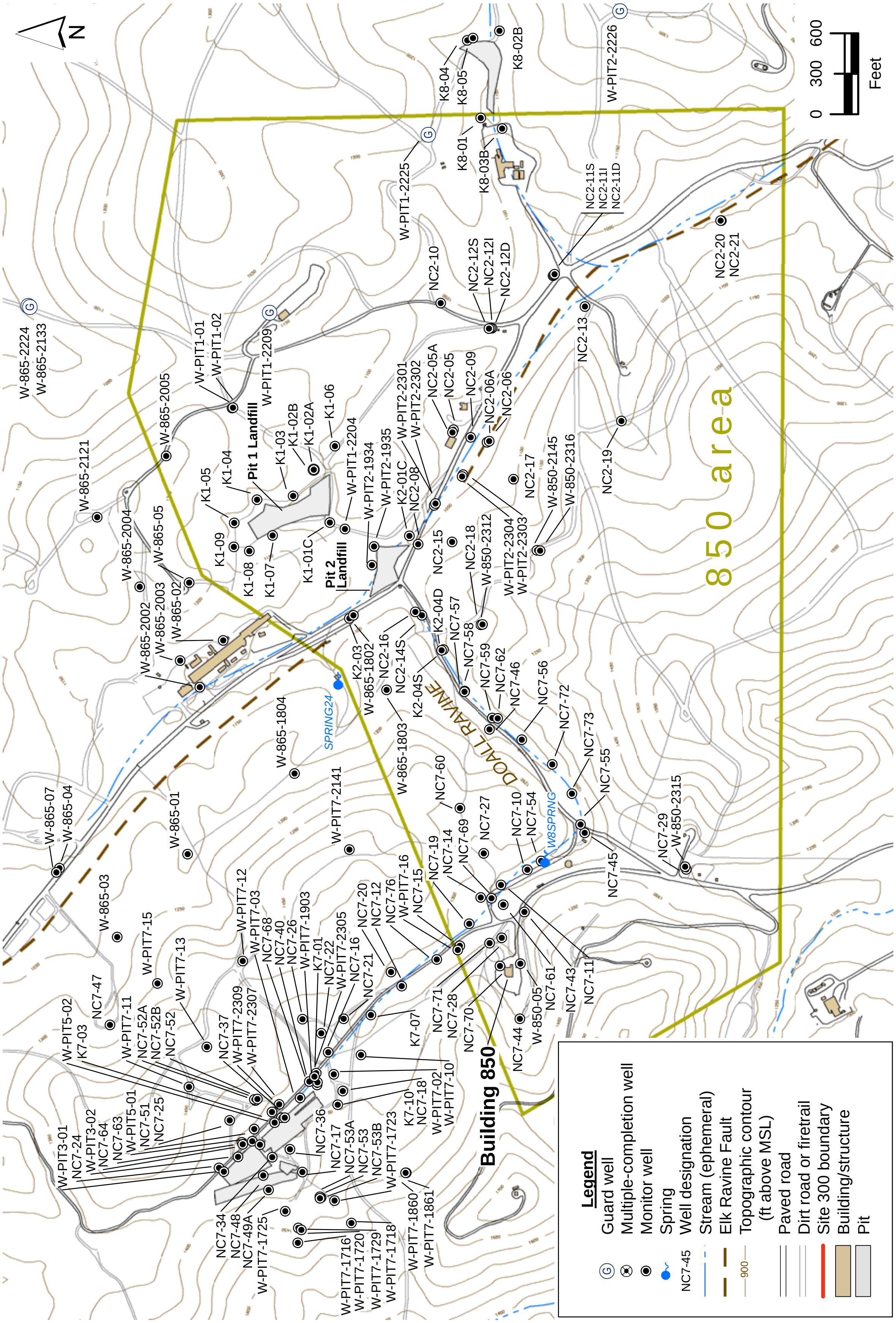

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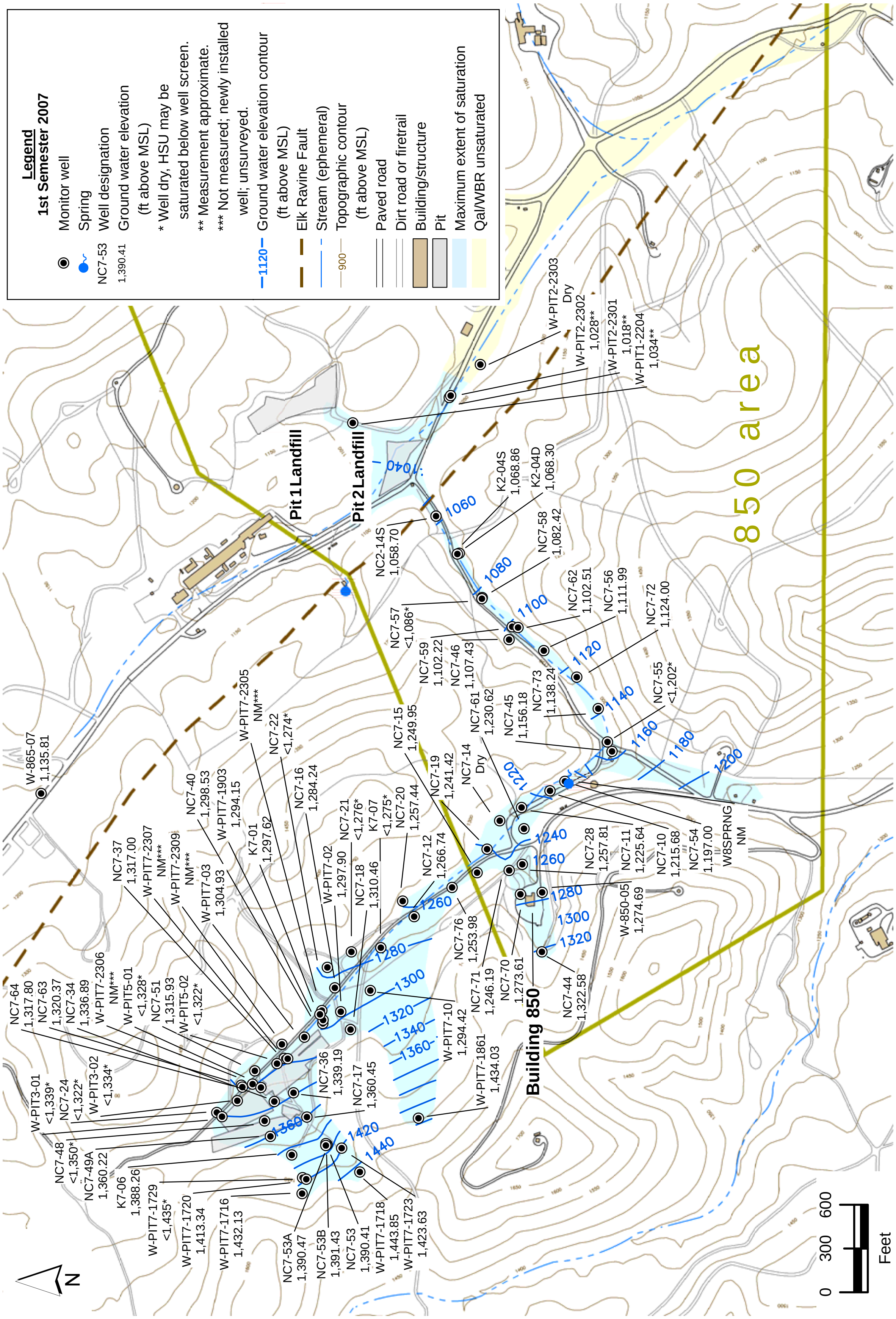

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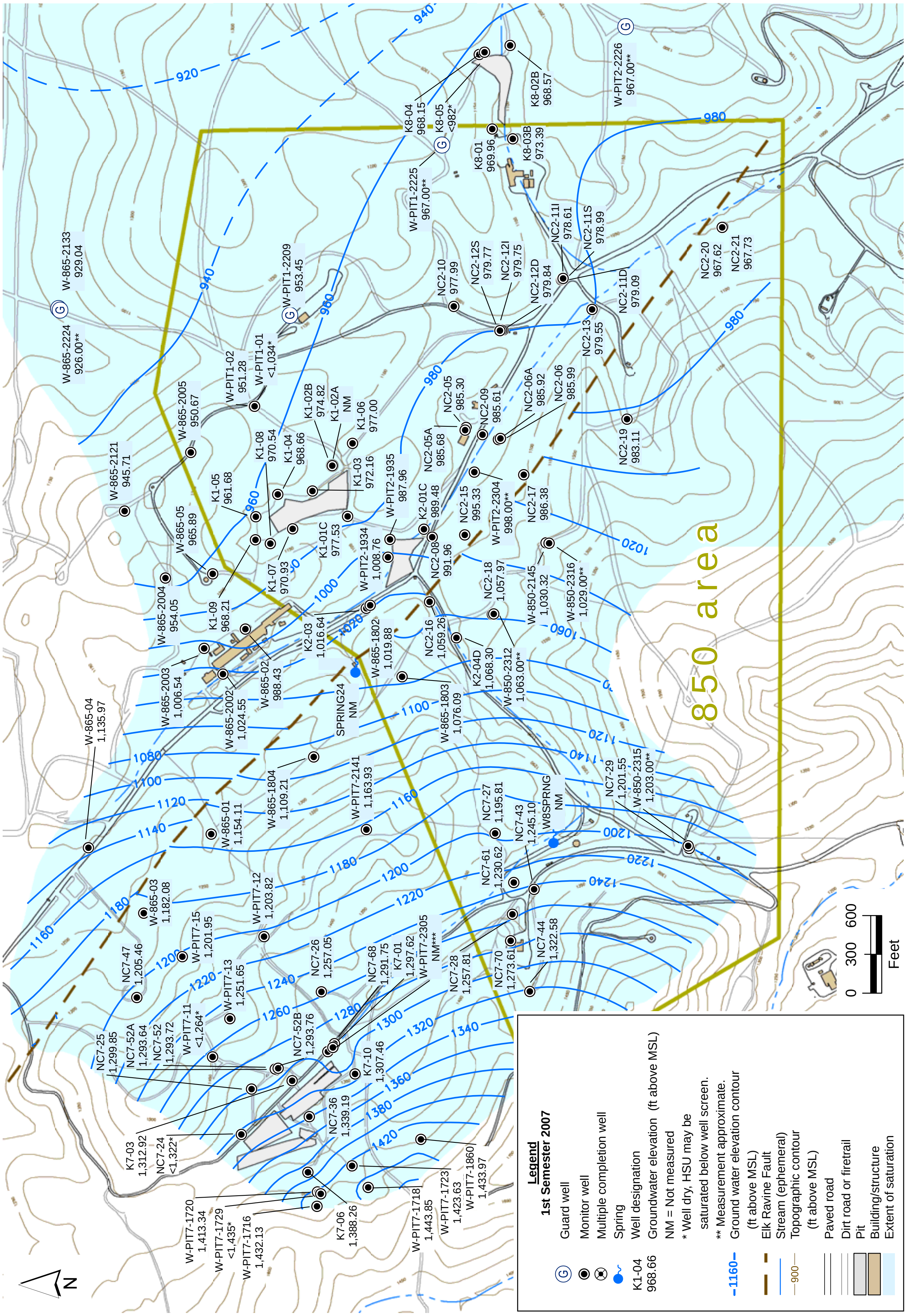

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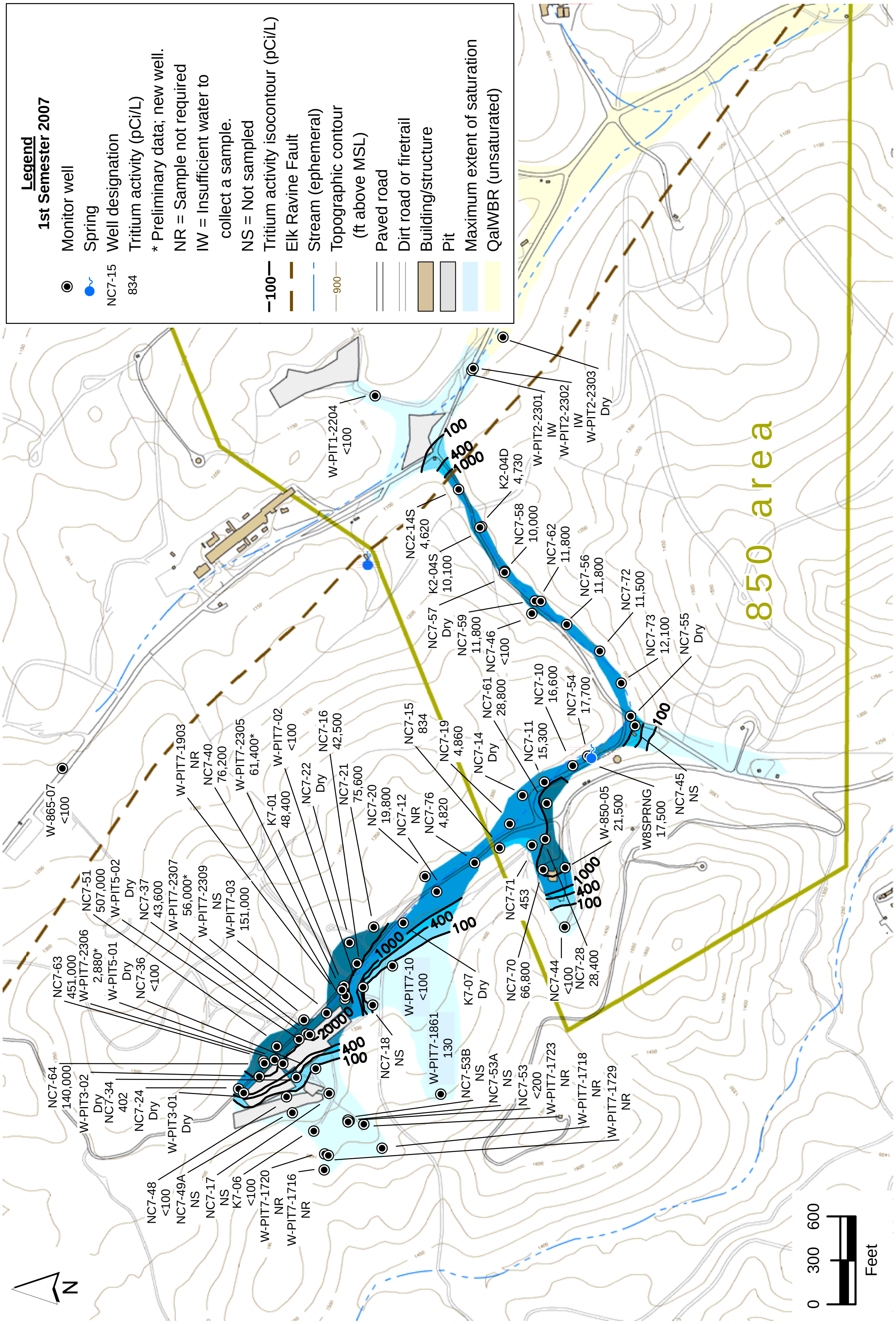

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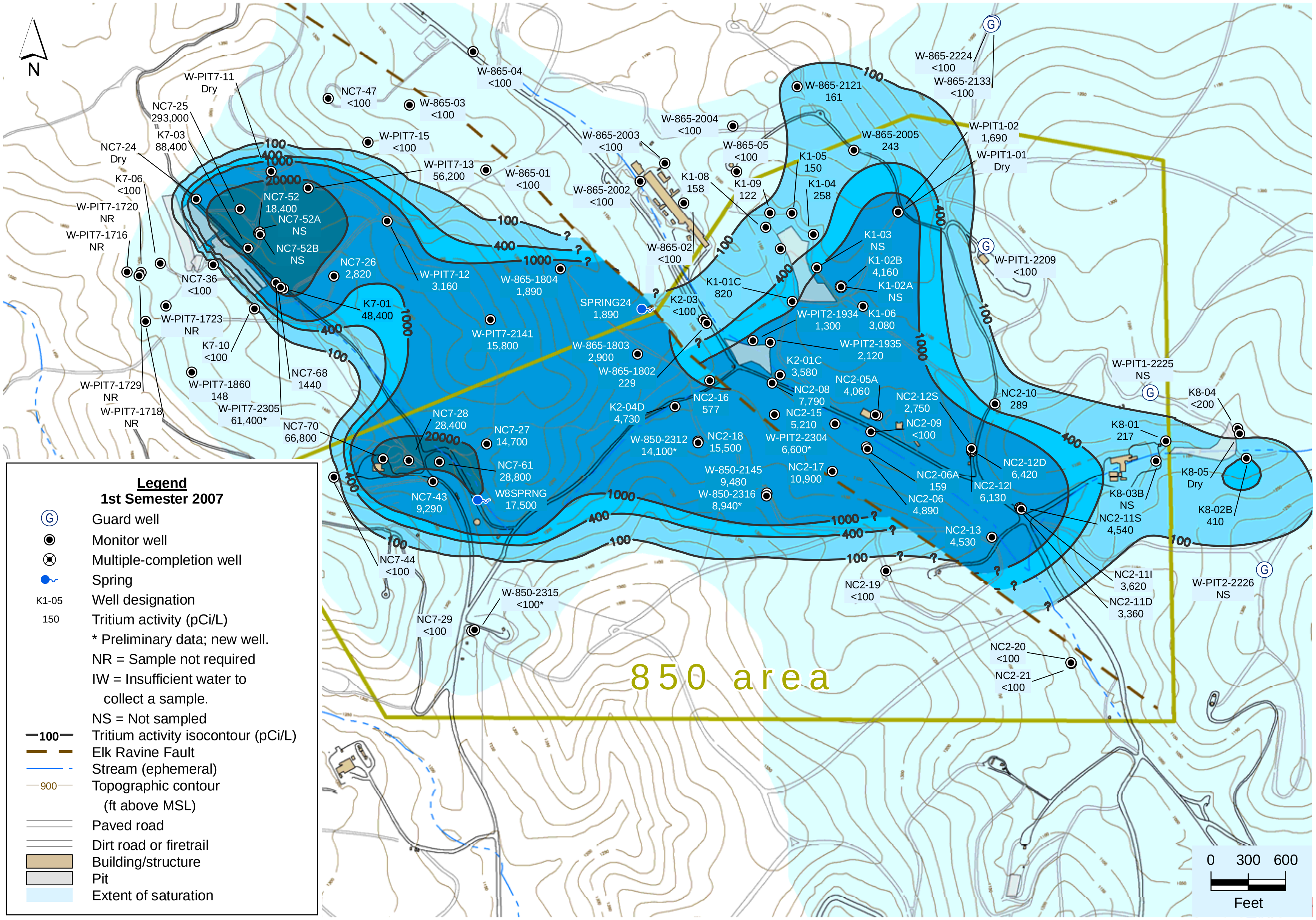

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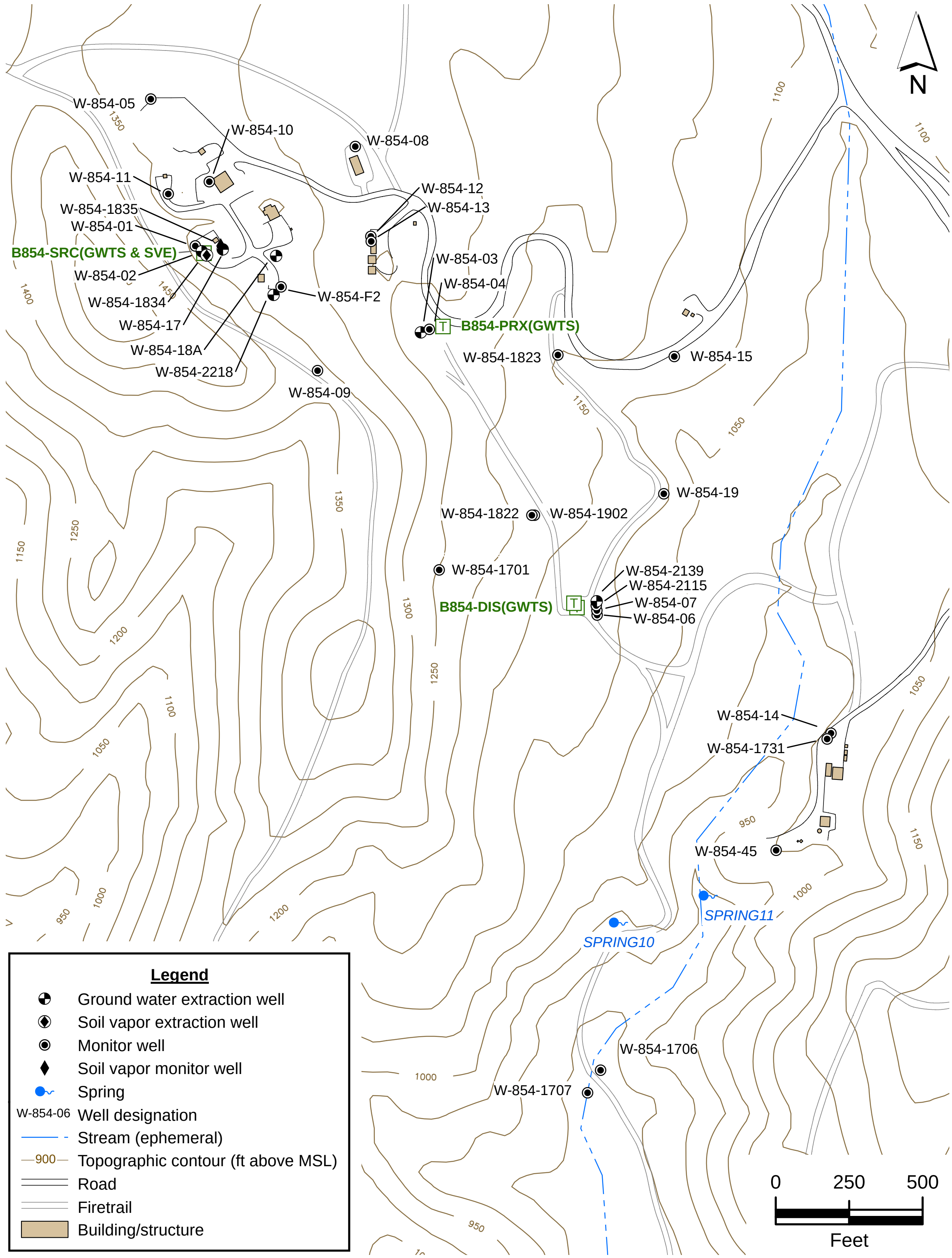

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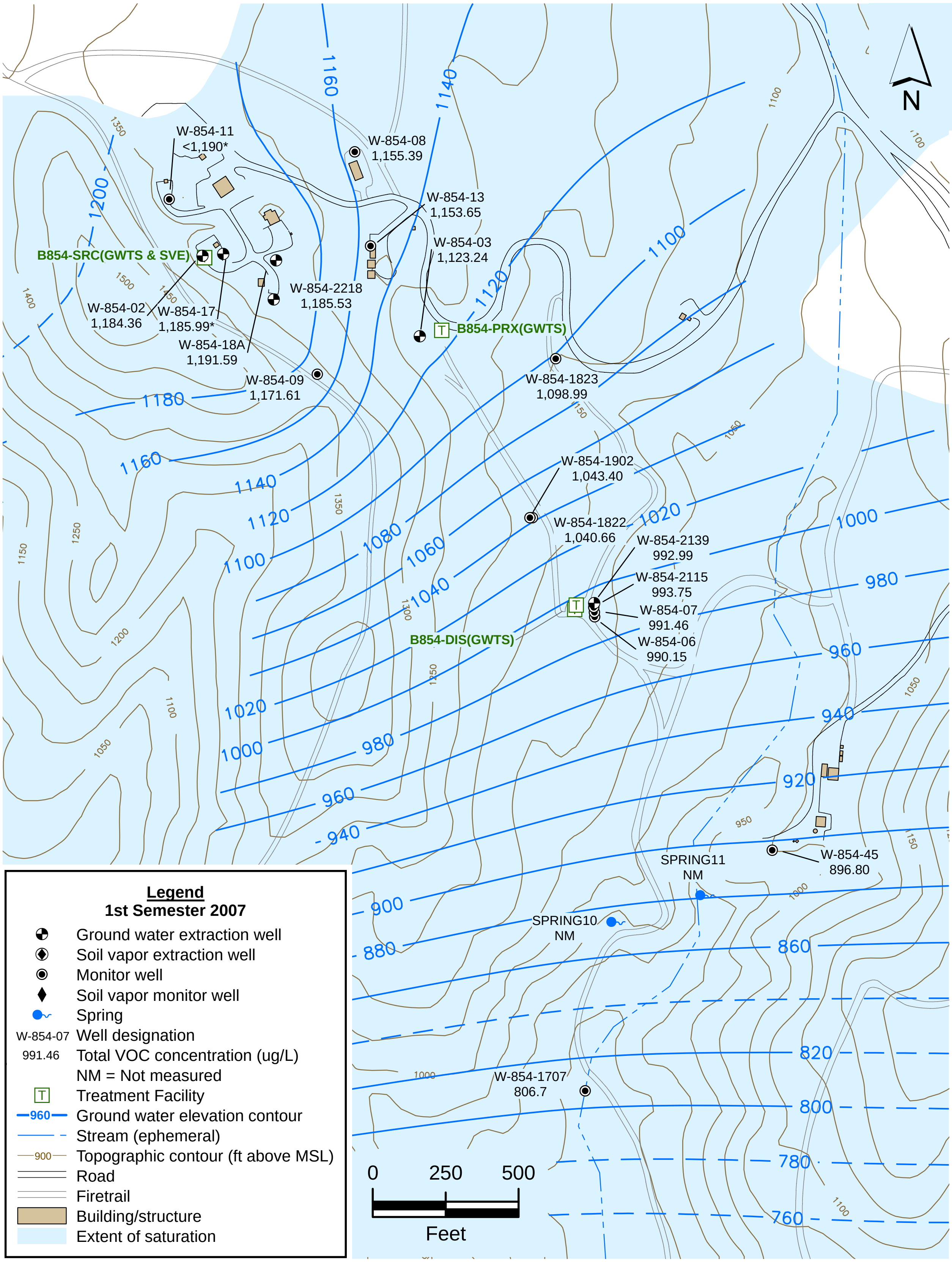

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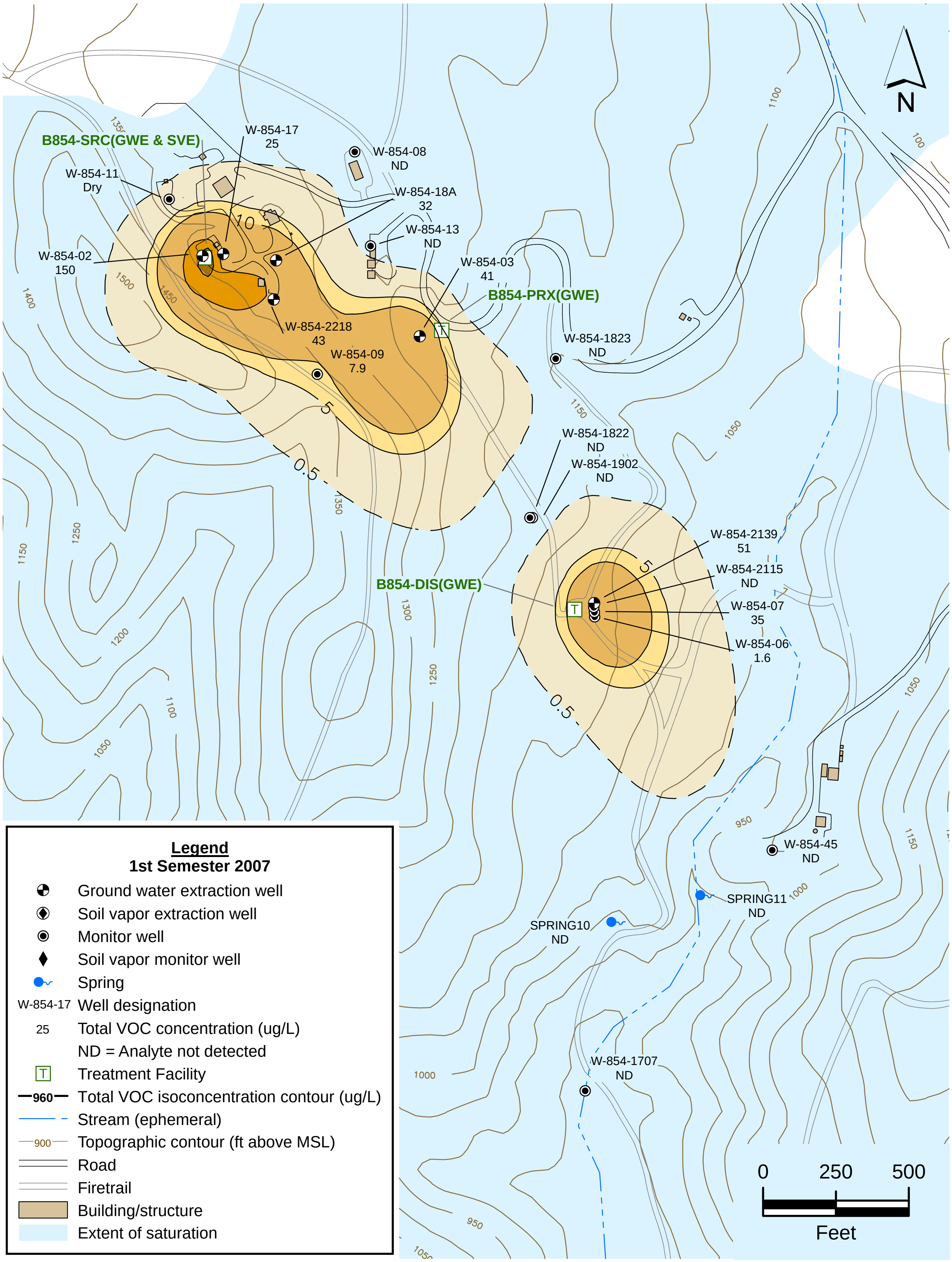

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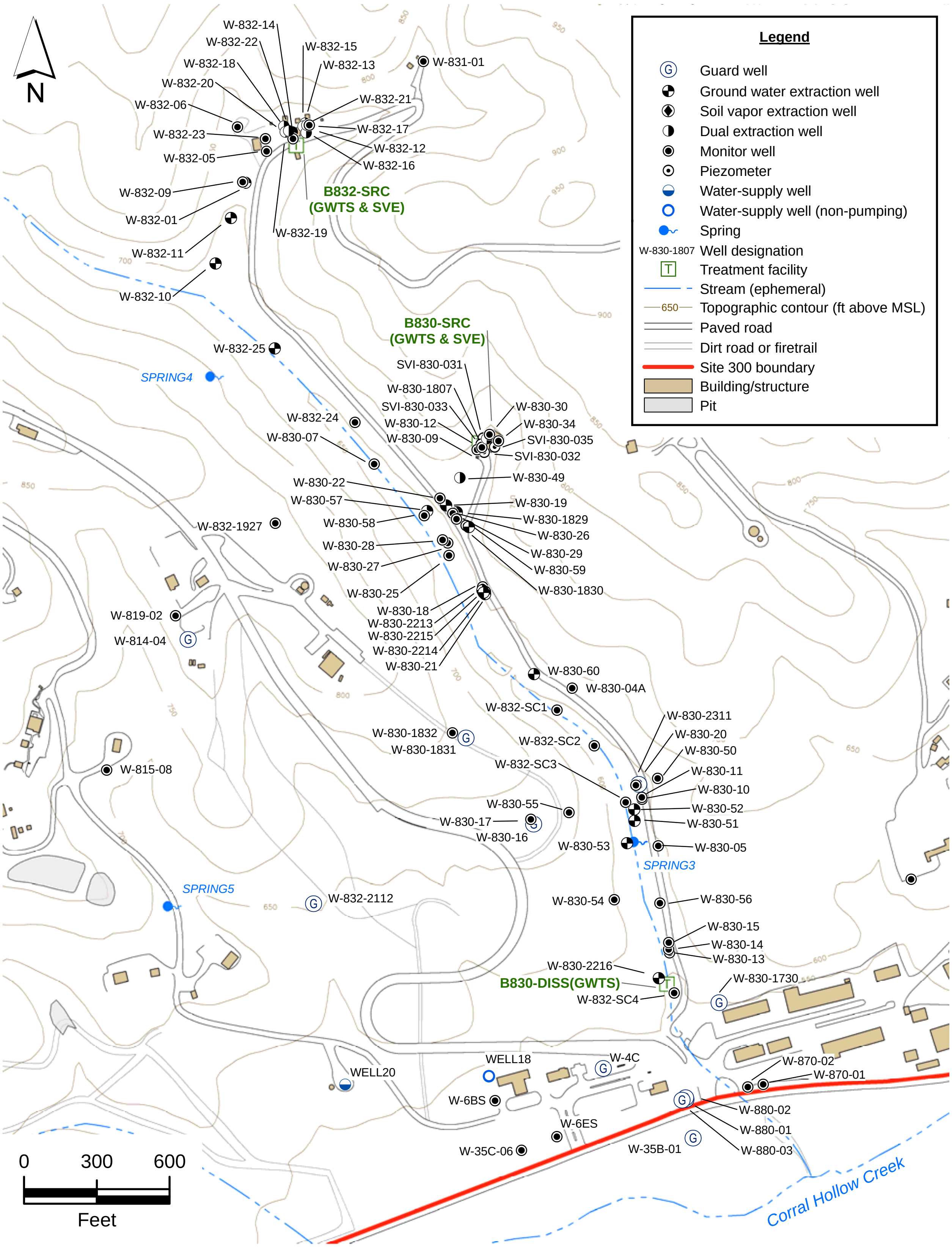

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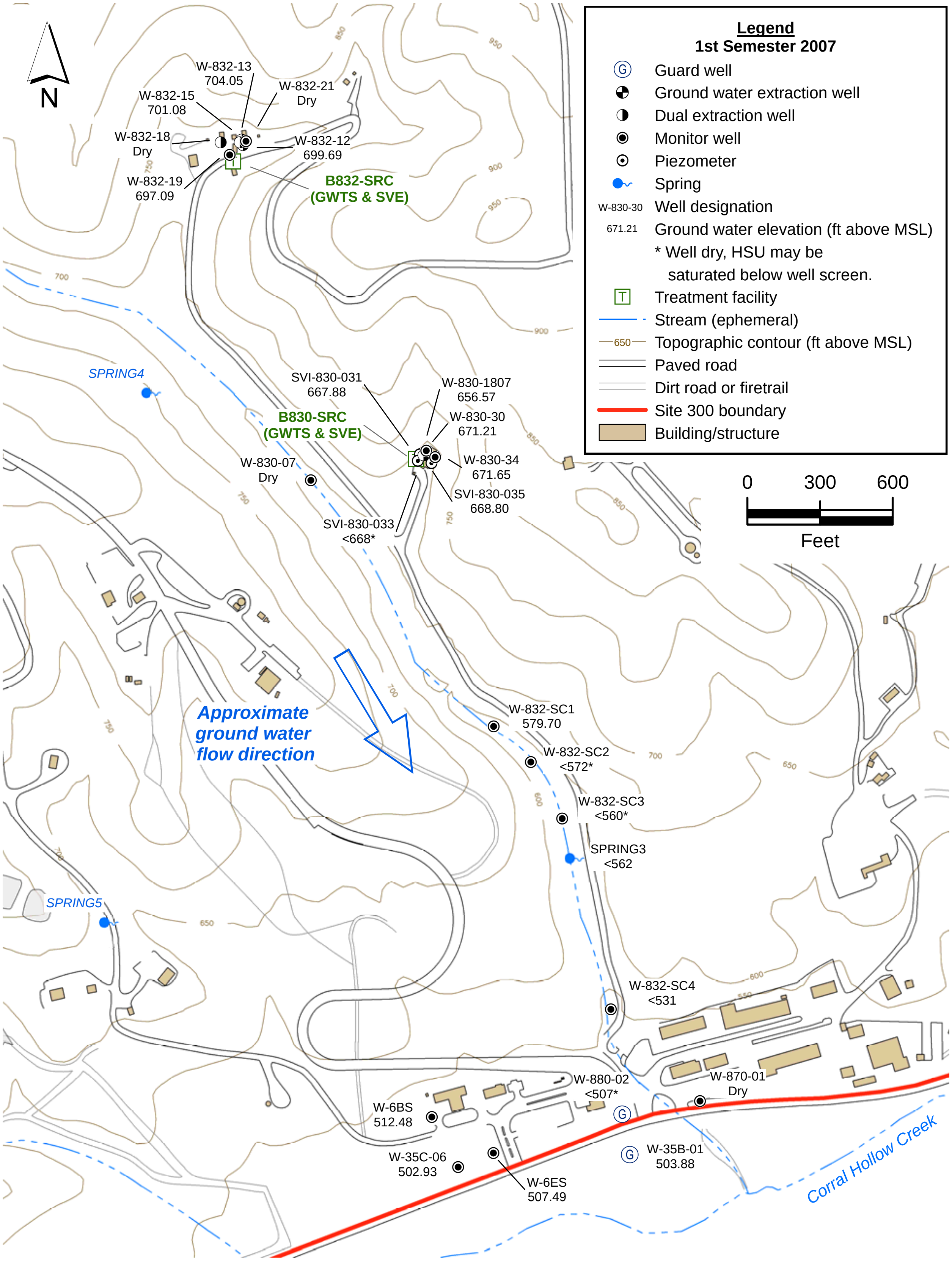

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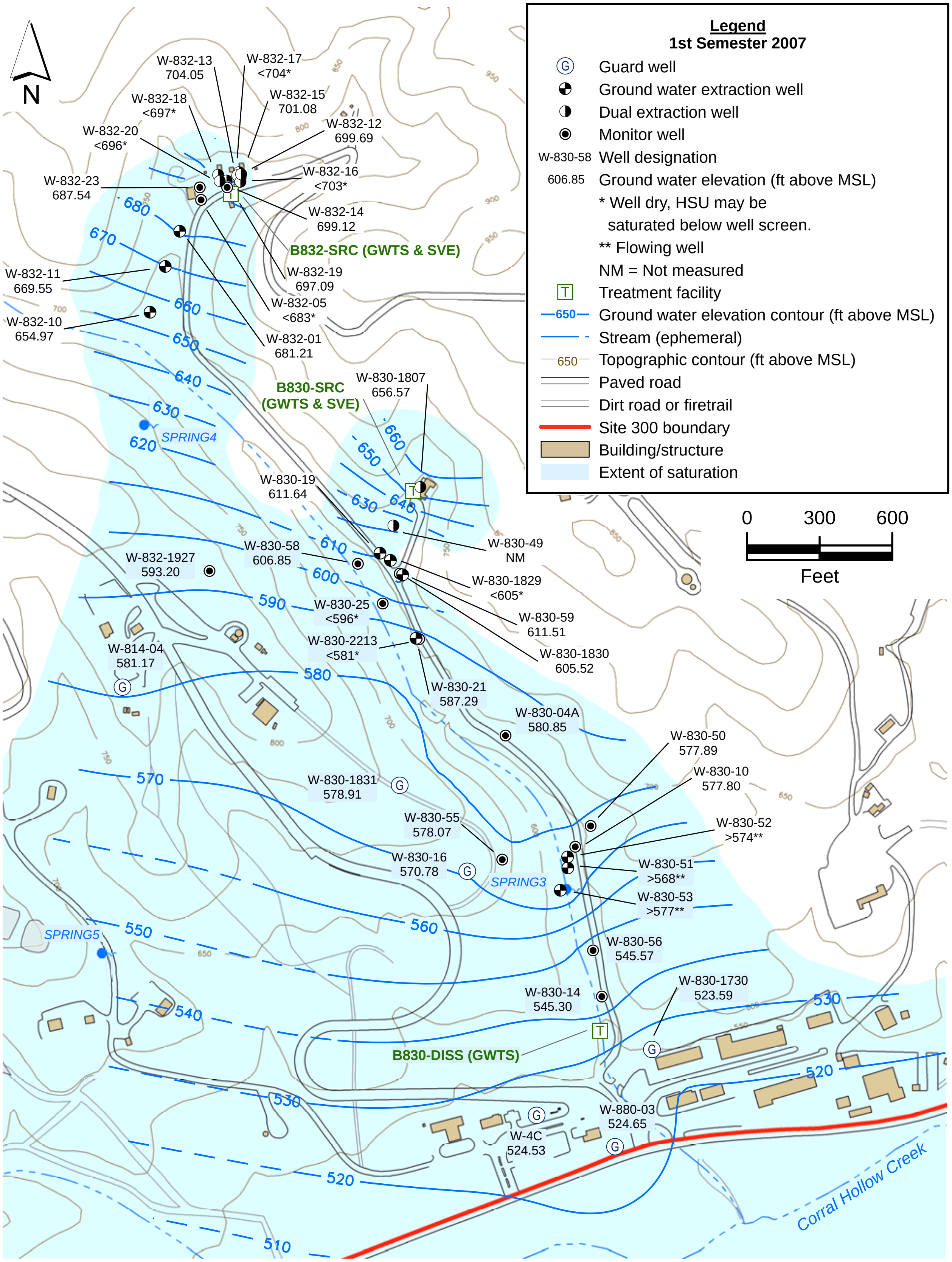

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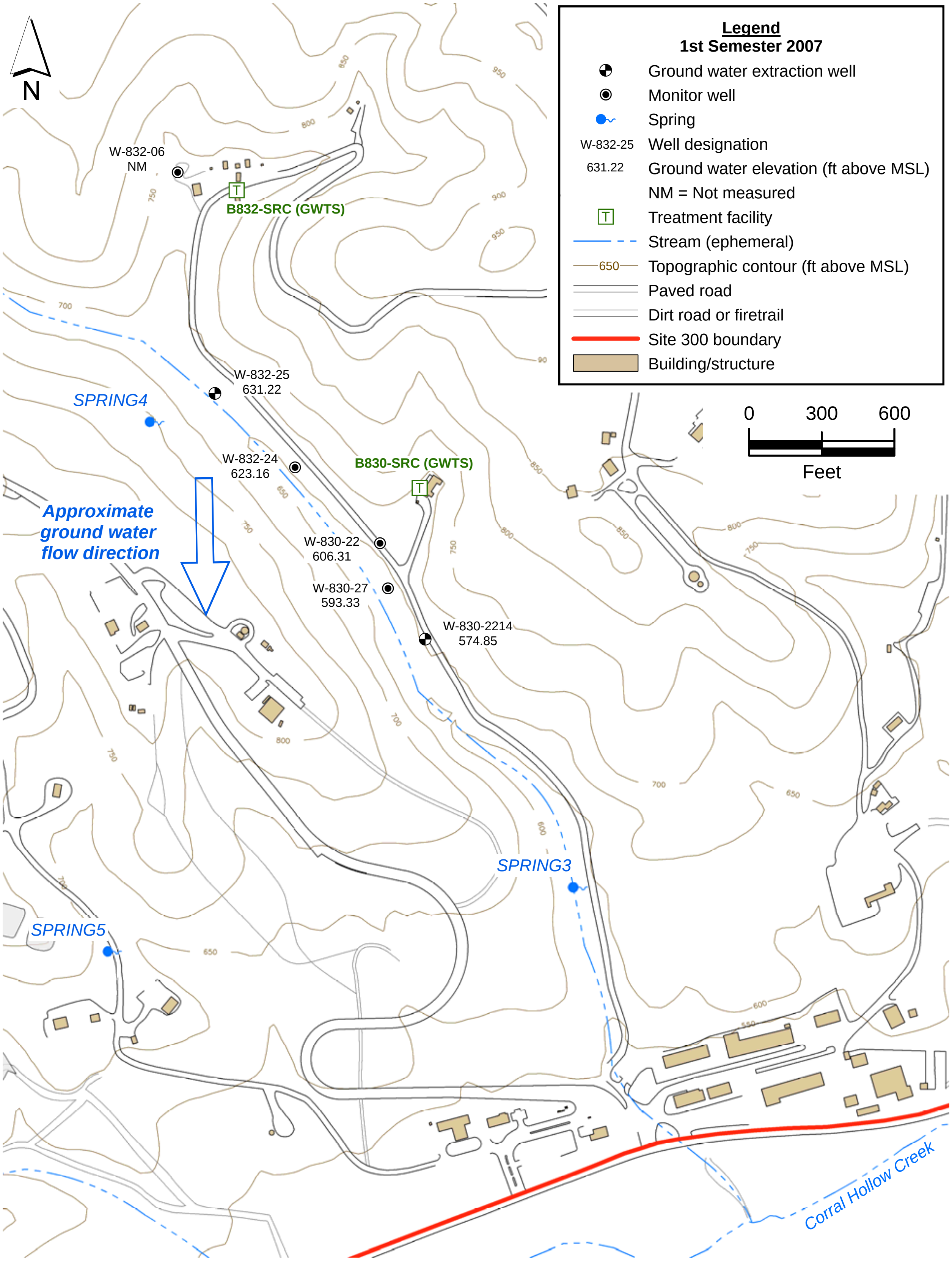

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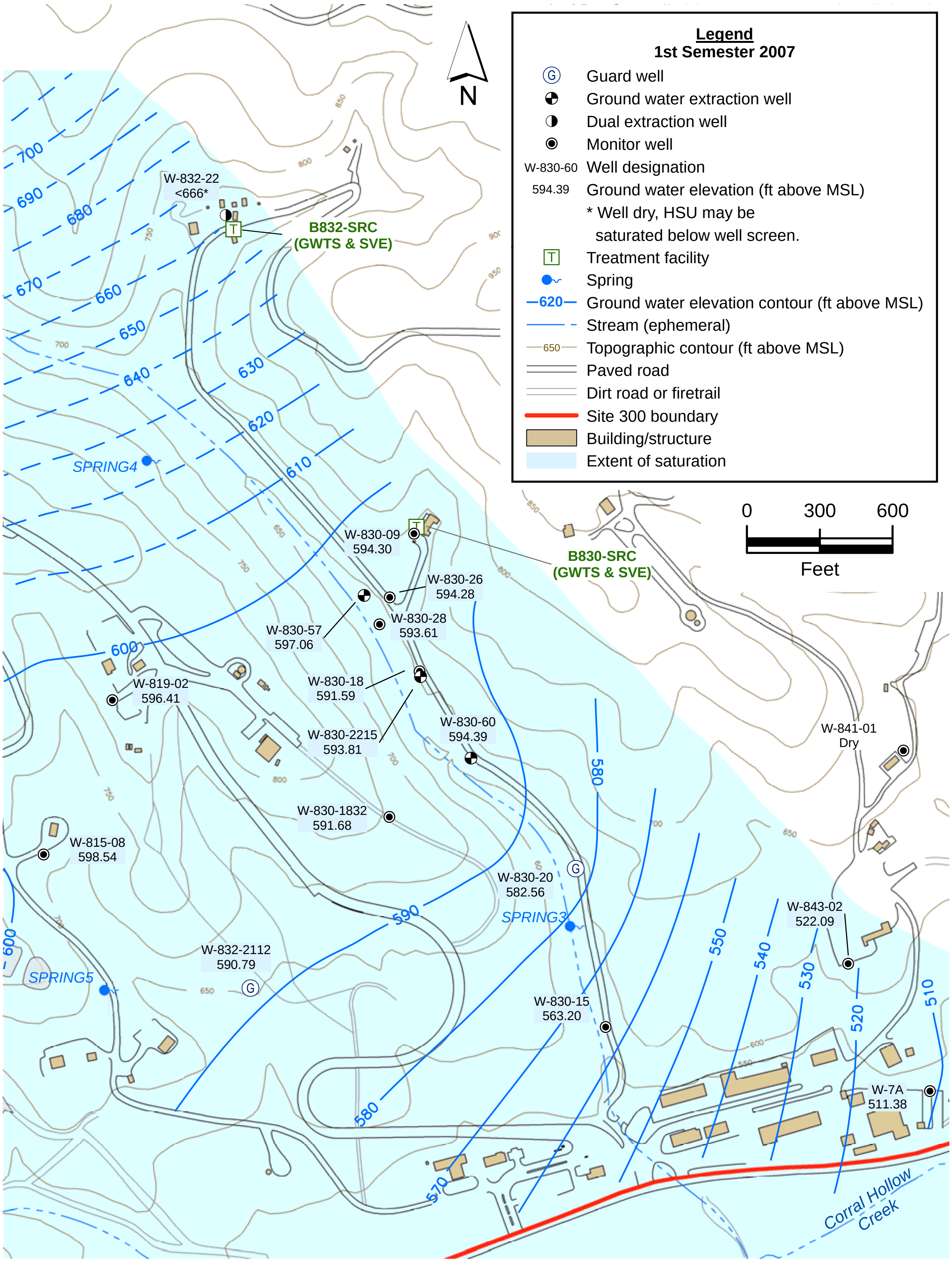

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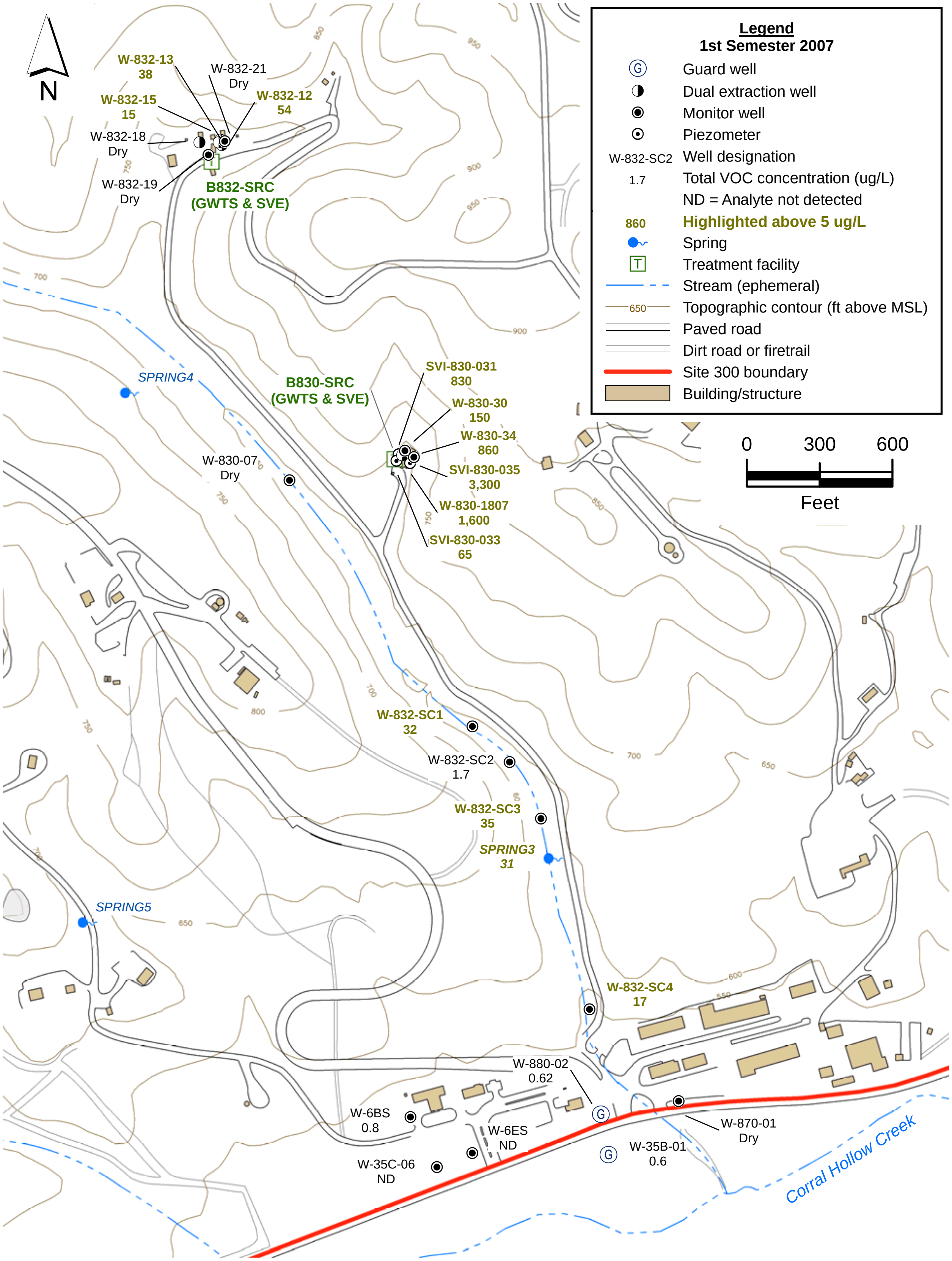

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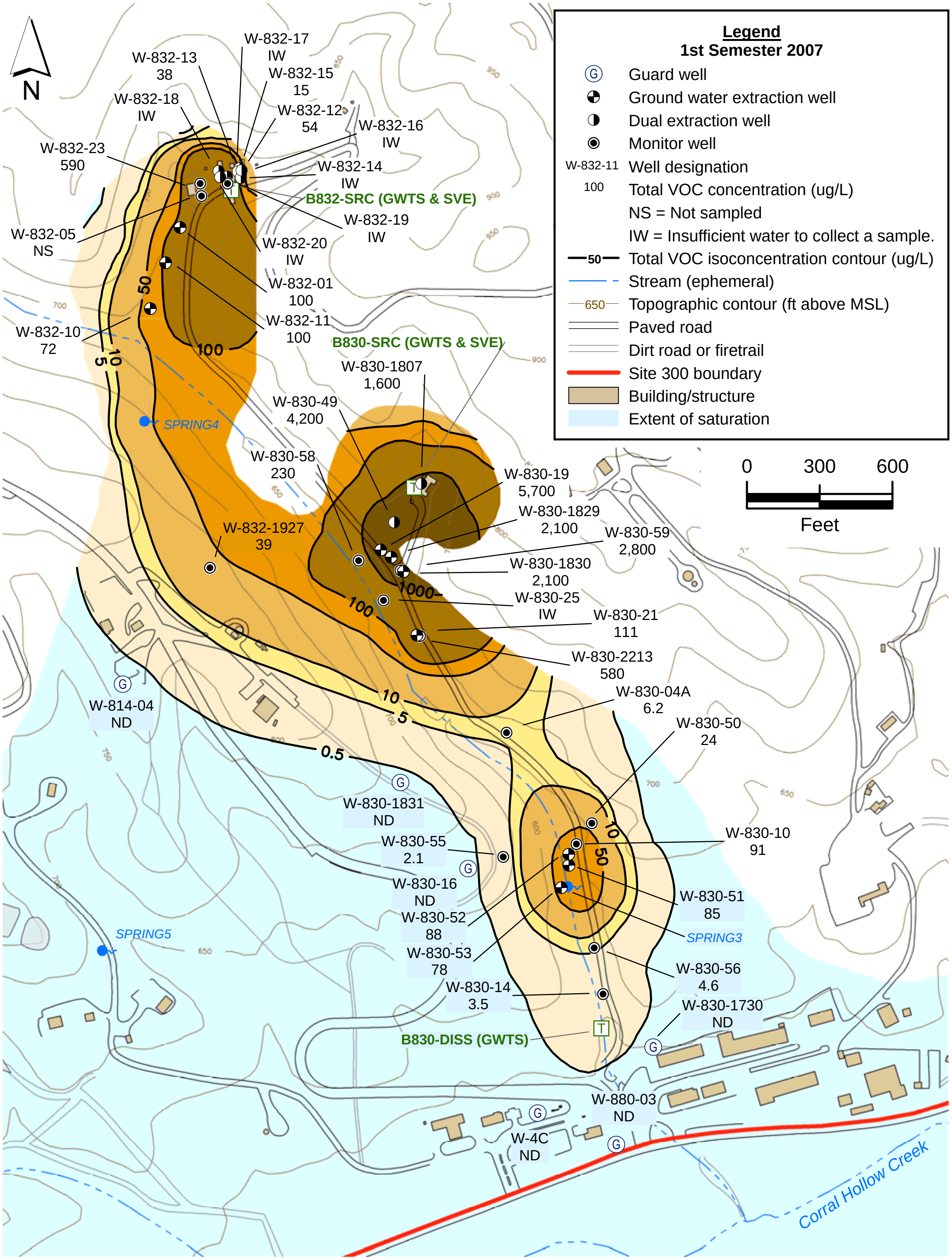

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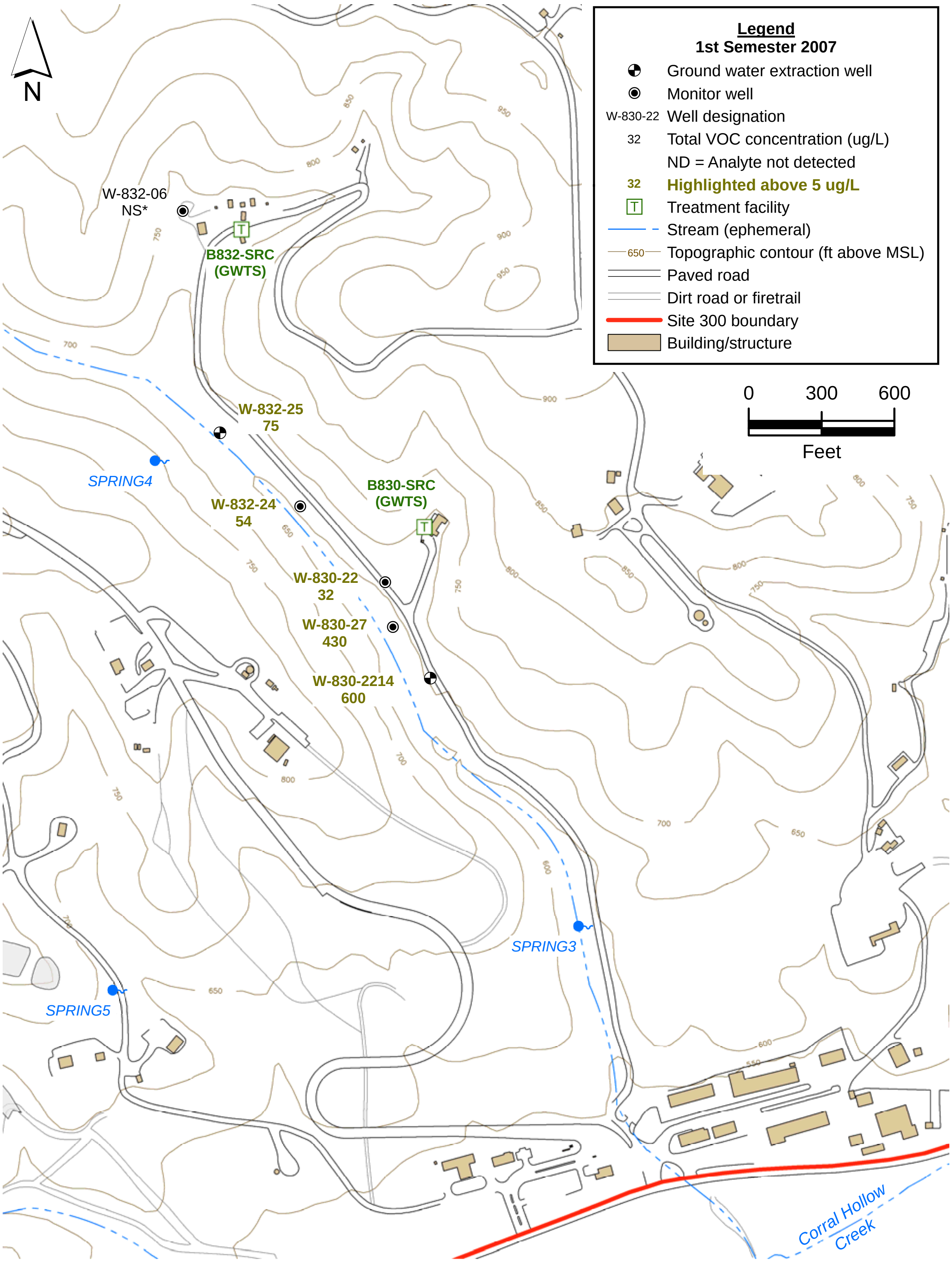

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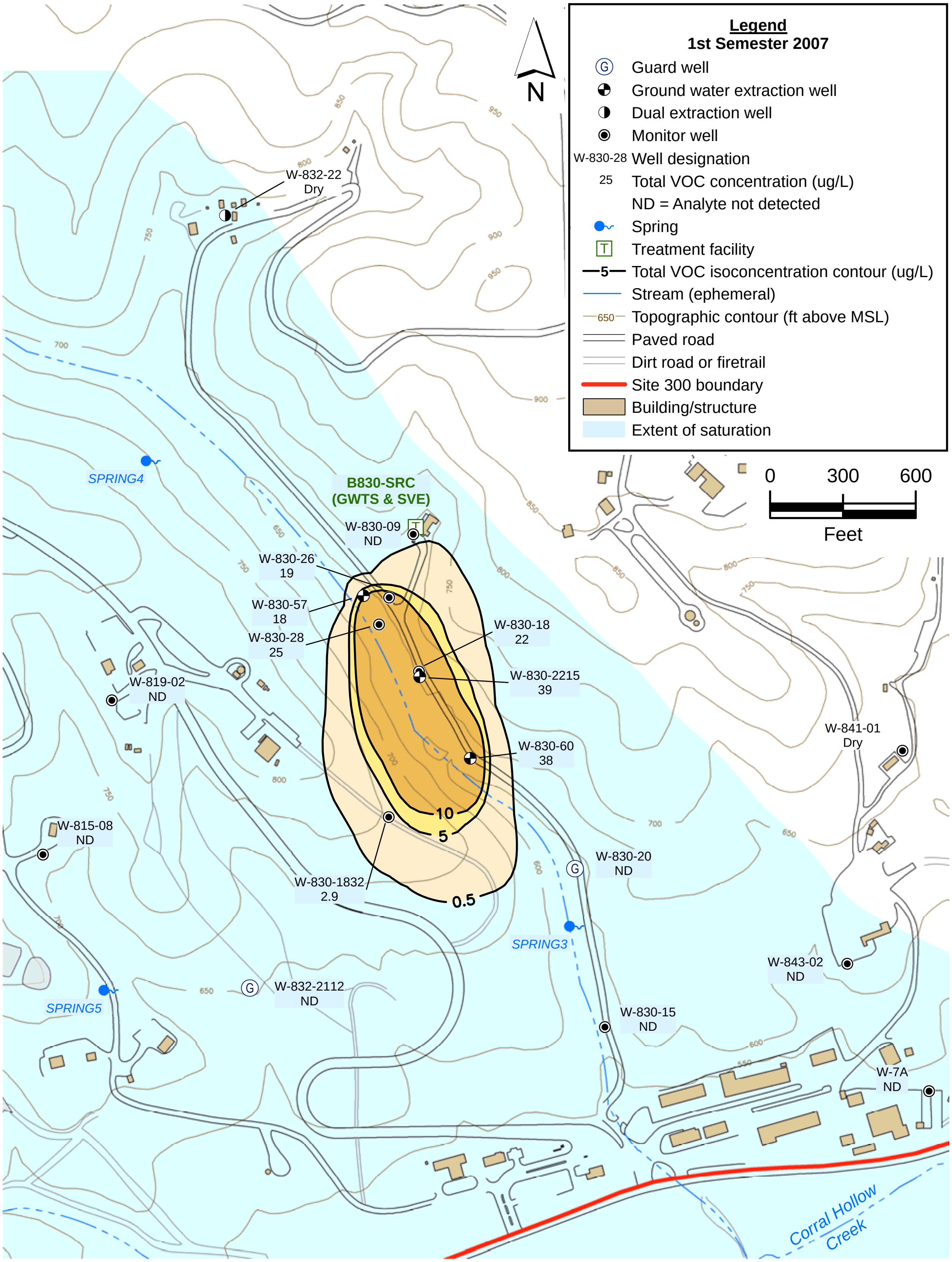

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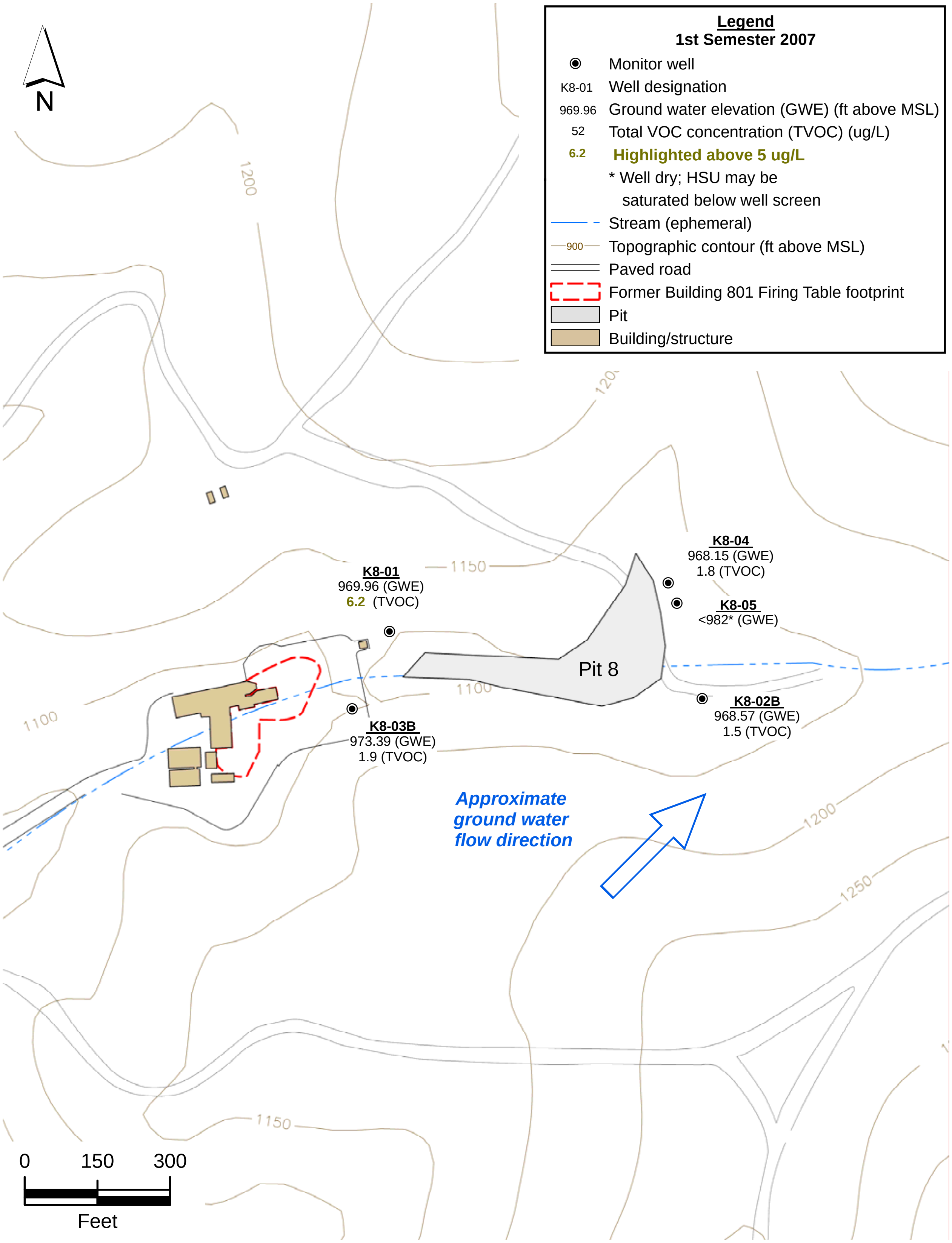

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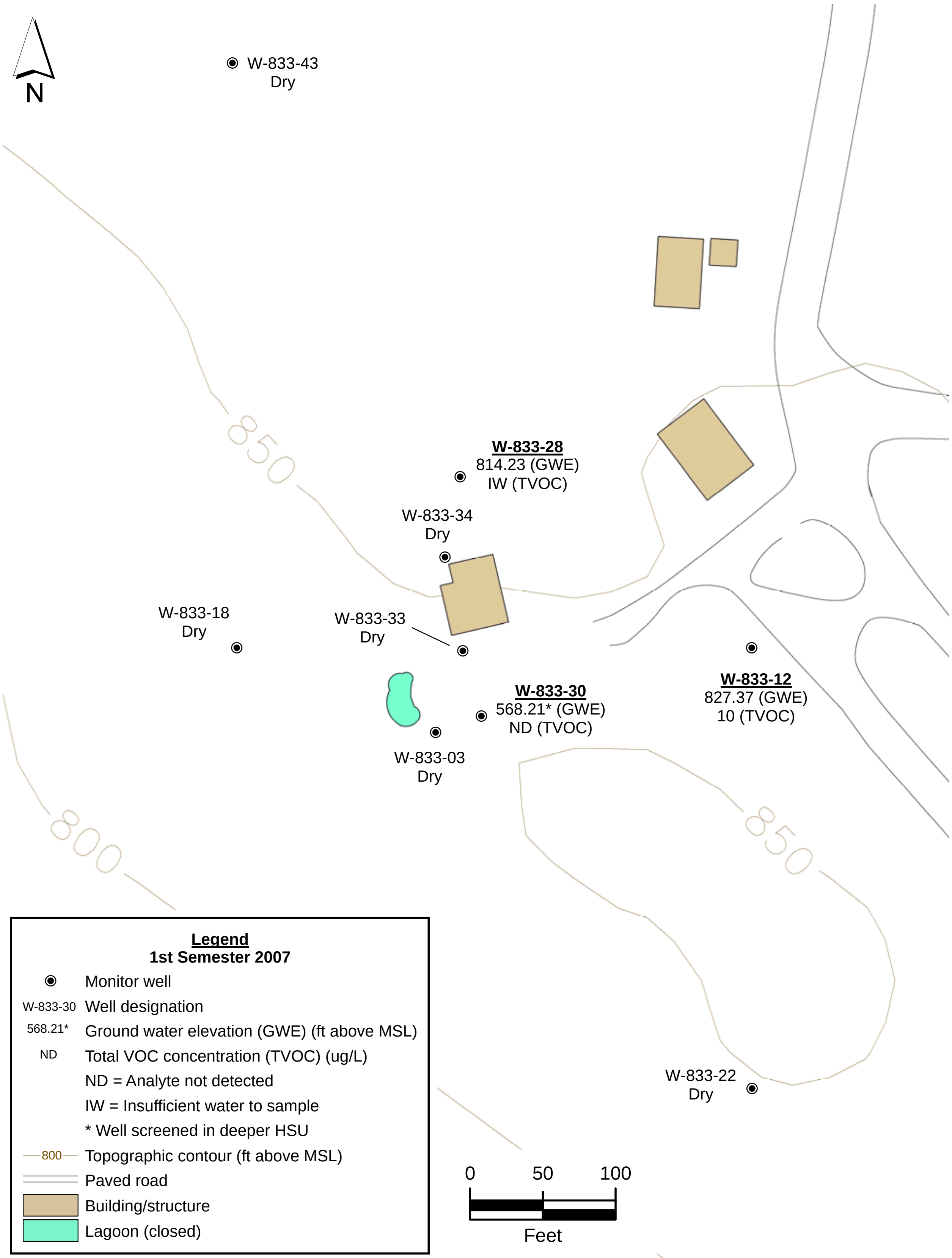

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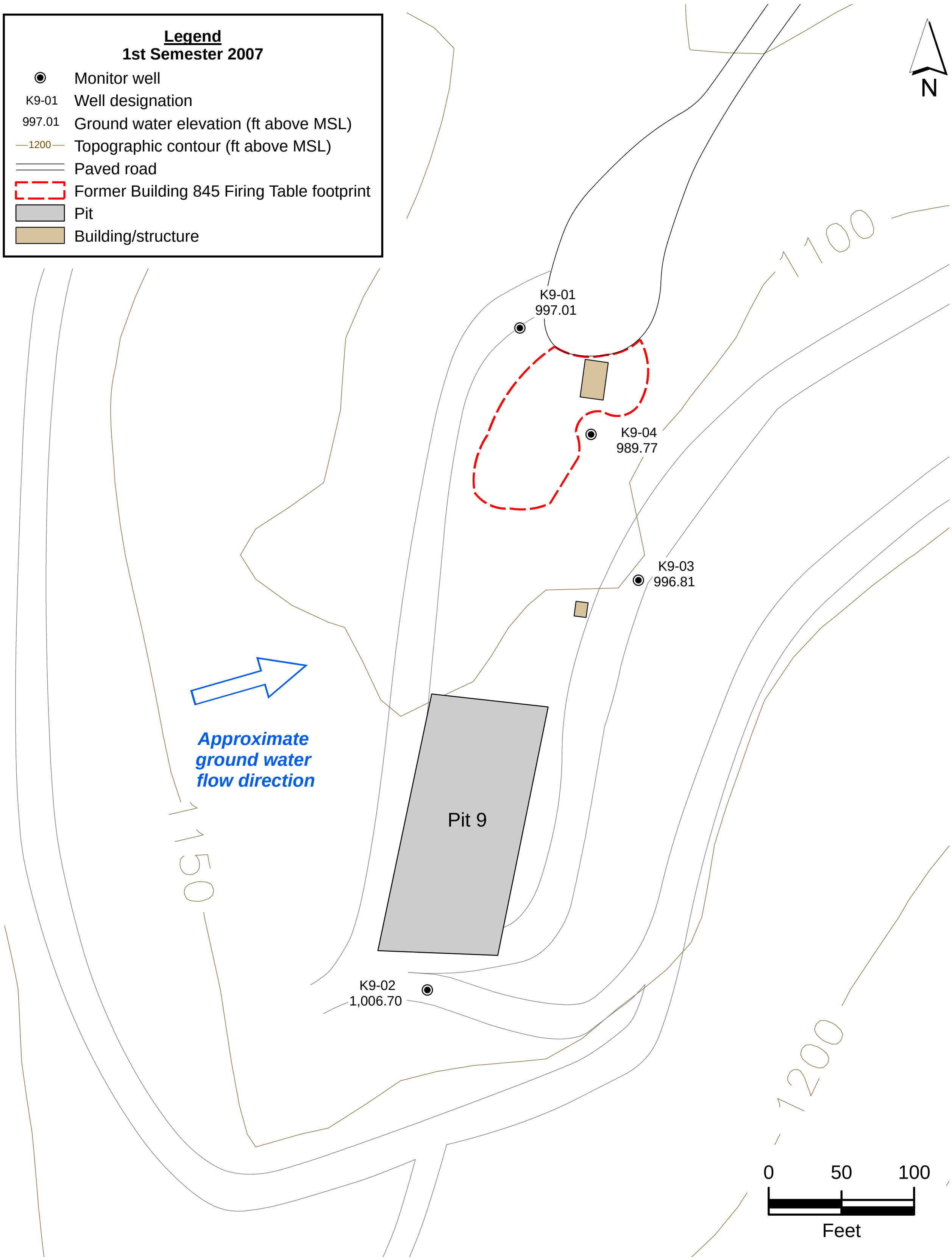

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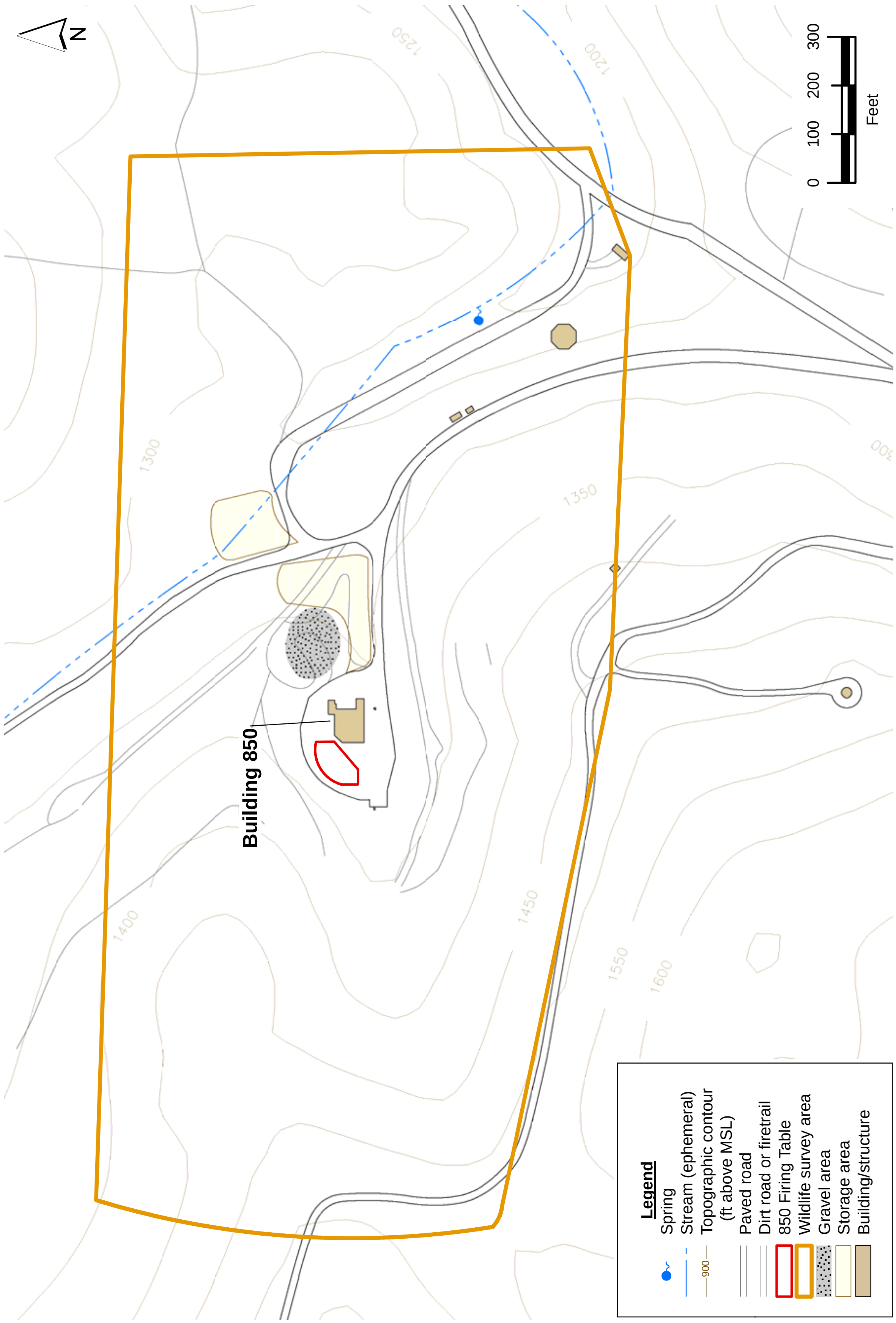

Figure 4.2-1. Area surveyed for important burrowing species at Building 850.

Tables

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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-DCE	1,2-dichloroethene
815	Building 815
817	Building 817
829	Building 829
832	Building 832
834	Building 834
850	Building 850
854	Building 854
A	Annual
As N	As nitrogen
As $CaCO_3$	As calcium carbonate
B	Biennial
BTEX	Benzene, toluene, ethyl benzene, and xylene
°C	Degrees Celsius
C12-C24	Diesel range organic compounds in the carbon 12 to carbon 24 range
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFE	Carbon filter effluent
CFI	Carbon filter influent
CF2I	Second aqueous phase granular carbon filter influent
CF3I	Third aqueous phase granular carbon filter influent
cfm	Cubic feet per minute
CFV2	Second vapor phase granular activated carbon filter effluent
CGSA	Central General Services Area
CHC	Corral hollow creek
Cis-1,2-DCE	Cis-1,2-dichloroethene
CMP	Compliance Monitoring Plan
CMR	Compliance Monitoring Report
COC	Contaminants of Concern
CRWQB	California Regional Water Quality Control Board
DIS	Discretionary sampling (not required by the CMP)
DISS	Distal south
DMW	Detection monitor well
DOE	Department of Energy
DSB	Distal Site Boundary
DTSC	Department of Toxic Substances Control
EGSA	Eastern General Services Area
EPA	Environmental Protection Agency

ERD	Environmental Restoration Division
E	Effluent
ES&H	Environmental Safety and Health
EV	Effluent vapor
EW	Extraction well
ft	Feet
ft^3	Cubic feet
g	Gram(s)
GAC	Granular activated carbon
gal	gallon(s)
gpm	Gallons per minute
GSA	General Services Area
GTU	Granular Activated Carbon Treatment Unit
GW	Guard well
GWTS	Ground Water Treatment System
HE	High Explosives
HEPA	High Explosives Process Area
HMX	High-Melting Explosive
HQ	Hazard quotient
HSU	Hydrostratigraphic unit
I	Influent
ITS	Issues Tracking System
IV	Influent vapor
IW	Injection well
kg	kilograms
km	Kilometers
lb	Pounds
LLNL	Lawrence Livermore National Laboratory
μg/L	Micrograms per liter
$\mu g/m^3$	Micrograms per meters cubed
μmhos/cm	Micro ohms per centimeter
M	Monthly
MCL	Maximum Contaminant Level
mg/L	Milligrams per liter
MNA	Monitored Natural Attenuation
MTU	Miniature Treatment Unit
MWB	Monitor well used for background
MWPT	Monitor well used for plume tracking
N	No
NO_3	Nitrate
NA	Not applicable
NTU	Nephelometric turbidity units
OU	Operable unit

O&M	Operations and Maintenance
PCBs	Polychlorinated biphenyls
PCE	Tetrachloroethylene
pCi/L	PicoCuries per liter
pH	A measure of the acidity or alkalinity of an aqueous solution
PHG	State of California Public Health Goal
$ppm_{v/v}$	Parts per million on a volume-to-volume basis
PRG	Preliminary Remediation Goal
PRX	Proximal
PRXN	Proximal north
PSDMP	Post-Monitoring Shutdown Plan
Q	Quarterly
QAPP	Quality Assurance Project Plan
QA/QC	Quality assurance/quality control
QIF	Quality Improvement Form
R1	Receiving water sampling point located 100 ft upstream
R2	Receiving water sampling point located 100 ft downstream
RDX	Research Department explosive
ROD	Record of Decision
RWQCB	Regional Water Quality Control Board
S	Semi-annual
Scfm	Standard cubic feet per minute
SEP	Safety and Environmental Protection (SEP) Directorate at LLNL
SOP	Standard Operating Procedure
SRC	Source
SPR	Spring
STU	Solar-powered Treatment Unit
SVE	Soil Vapor Extraction
SVI	Soil Vapor Influent
TBOS	Tetrabutyl orthosilicate
TKEBS	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
Yr.	Year

Hydrogeologic Units

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

Data Qualifier Flag Definitions

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

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

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

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

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

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

I = Surrogate recoveries were outside of QC limits.

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

L = Spike accuracy not within control limits.

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

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

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

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

Requested Analyses

AS: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.
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:SI =	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 =	Volatile organic compounds performed by EPA Method 502.2.
E601 =	Halogenated volatile organic compounds performed by EPA Method 601.
E624 =	Volatile organic compounds performed by EPA Method 624.
E8082A =	Polychlorinated biphenyls performed by EPA Method 8082A.
E8260 =	Volatile organic compounds performed by EPA Method 8260.
E8330 =	High explosive compounds performed by EPA Method 8330.
E8330:R+H =	High explosive compounds RDX and HMX performed by EPA Method 8330.
E8330:TNT =	Trinitrotoluene performed by EPA Method 8330.
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.
ICMSRAD =	Uranium isotopes performed by mass spectrometry.
MS:THISO =	Thorium isotopes performed by mass spectrometry.
MS:UISO =	Uranium isotopes performed by mass spectrometry.
T26METALS =	Title 26 metals.
TBOS =	Tetrabutylorthosilicate.

Table Summ-1. Mass removed, January 1, 2007 through June 30, 2007.

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	2,971	NA	20	NA	NA	NA	NA
CGSA GWTS	668	NA	170	NA	NA	NA	NA
CGSA SVE	NA	4,791	230	NA	NA	NA	NA
834 GWTS	57	NA	900	NA	16	NA	2.6
834 SVE	NA	23,167	13,000	NA	NA	NA	NA
815-SRC GWTS	267	NA	7.3	14	100	66	NA
815-PRX GWTS	194	NA	19	4.9	59	NA	NA
815-DSB GWTS	956	NA	38	NA	NA	NA	NA
817-SRC GWTS	4	NA	NA	0.45	1.2	0.65	NA
817-PRX GWTS	43	NA	1.6	4.7	14	1.4	NA
829-SRC GWTS	<1	NA	0.00040	0.00023	0.0014	NA	NA
854-SRC GWTS	720	NA	200	7.2	130	NA	NA
854-SRC SVE	NA	1,525	670	NA	NA	NA	NA
854-PRX GWTS	81	NA	11	3.9	14	NA	NA
854-DIS GWTS	5	NA	0.83	0.026	0.39	NA	NA
832-SRC GWTS	100	NA	32	3.5	33	NA	NA
832-SRC SVE	NA	619	53	NA	NA	NA	NA
830-SRC GWTS	135	NA	240	1.3	21	NA	NA
830-SRC SVE	NA	2,328	20,000	NA	NA	NA	NA
830-DISS GWTS	7	NA	160	0.0091	1.0	NA	NA
Total	6,209	32,430	36,000	40	390	68	2.6

Notes:

834 = Building 834.
815 = Building 815.
817 = Building 817.
829 = Building 829.
854 = Building 854.
832 = Building 832.
830 = Building 830.
CGSA = Central General Services Area.
DIS = Distal.
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.
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	309,379	NA	7.6	NA	NA	NA	NA
CGSA GWTS	16,031	NA	25	NA	NA	NA	NA
CGSA SVE	NA	92,109	68	NA	NA	NA	NA
834 GWTS	585	NA	38	NA	130	NA	9.4
834 SVE	NA	160,242	300	NA	NA	NA	NA
815-SRC GWTS	2,839	NA	0.073	200	980	0.76	NA
815-PRX GWTS	4,210	NA	0.49	95	1,200	NA	NA
815-DSB GWTS	7,957	NA	0.26	NA	NA	NA	NA
817-SRC GWTS	19	NA	0	1.9	6.2	0.0032	NA
817-PRX GWTS	955	NA	0.034	92	300	0.020	NA
829-SRC GWTS	2	NA	0.00015	0.064	0.53	NA	NA
854-SRC GWTS	5,460	NA	4.6	120	1,100	NA	NA
854-SRC SVE	NA	23,445	8.2	NA	NA	NA	NA
854-PRX GWTS	1,693	NA	0.47	74	290	NA	NA
854-DIS GWTS	7	NA	0.00083	0.054	0.57	0	NA
832-SRC GWTS	460	NA	0.15	13	190	NA	NA
832-SRC SVE	NA	17,081	1.8	NA	NA	NA	NA
830-SRC GWTS	244	NA	1.2	2.5	58	NA	NA
830-SRC SVE	NA	5,394	24	NA	NA	NA	NA
830-PRXN GWTS	1,949	NA	0.26	NA	22	NA	NA
830-DISS GWTS	2,217	NA	0.93	27	540	NA	NA
Total	354,007	298,271	480	630	4,800	0.78	9.4

Notes:

834 = Building 834.
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830 = Building 830.
CGSA = Central General Services Area.
DIS = Distal.
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.
* Historical 830-SRC GWTS mass removed values were recalculated using extraction well concentrations.

Table 2.1-1. Central General Services Area (CGSA) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

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	696	696	669	88,452
	February	672	672	707	110,205
	March	672	672	646	102,714
	April	792	792	964	125,479
	May	720	720	923	123,426
	June	672	672	882	118,056
Total		4,224	4,224	4,791	668,332

Table 2.1-2. Eastern General Services Area (EGSA) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

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	789	NA	2,092,914
	February	NA	408	NA	878,161
Total		NA	1,197	NA	2,971,075

Table 2.1-3. General Services 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)
Central General Services Area															
CGSA-GWTS-E	1/24/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	2/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	3/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	4/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	5/14/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	6/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-E	6/27/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
CGSA-GWTS-I	1/24/07	140 D	5.9	4.8	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5	0.94	<0.5	<0.5
CGSA-GWTS-I	4/11/07	43	3.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.86	<0.5	<0.5	0.67	<0.5	<0.5
CGSA-GWTS-I	4/11/07[a]	29	2.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.64	<0.5	<0.5	1.3	<0.5	<0.5
CGSA-GWTS-I	6/27/07	37	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.52	<0.5	<0.5	<0.5	<0.5	<0.5
Eastern General Services Area															
EGSA-GWTS-E	1/23/07	<0.5	<0.5	<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-GWTS-E	2/7/07	<0.5	<0.5	<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-GWTS-I	1/23/07	1.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

[a] **Duplicate analysis.**

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

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

Location	Date	Detection frequency	1,2-DCE (total) (μg/L)
Central General Services Area			
CGSA-GWTS-E	1/24/07	0 of 18	-
CGSA-GWTS-E	2/7/07	0 of 18	-
CGSA-GWTS-E	3/7/07	0 of 18	-
CGSA-GWTS-E	4/11/07	0 of 18	-
CGSA-GWTS-E	5/14/07	0 of 18	-
CGSA-GWTS-E	6/6/07	0 of 18	-
CGSA-GWTS-E	6/27/07	0 of 18	-
CGSA-GWTS-I	1/24/07	1 of 18	5.2
CGSA-GWTS-I	4/11/07	0 of 18	-
CGSA-GWTS-I	4/11/07[a]	0 of 18	-
CGSA-GWTS-I	6/27/07	0 of 18	-
Eastern General Services Area			
EGSA-GWTS-E	1/23/07	0 of 18	-
EGSA-GWTS-E	2/7/07	0 of 18	-
EGSA-GWTS-I	1/23/07	0 of 18	-

Notes:

[a] **Duplicate analysis.**

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

Location	Date	Chloride (mg/L)	Flouride (mg/L)	Nitrate (as N) (mg/L)	Nitrate (as NO3) (mg/L)	Nitrite (as N) (mg/L)	Sulfate (mg/L)
Central General Services Area							
CGSA-GWTS-E	5/9/07	-	-	-	19	-	-
CGSA-GWTS-E	6/27/07	-	-	-	42	-	-
CGSA-GWTS-I	5/9/07	-	-	-	19 D	-	-
CGSA-GWTS-I	6/27/07	-	-	-	43	-	-
Eastern General Services Area							
EGSA-GWTS-E	1/23/07	140	0.37	2.6	-	<0.4	340
EGSA-GWTS-I	1/23/07	140	0.37	2.6	-	<0.4	350

Notes:

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

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

Location	Date	Aluminum (mg/L)	Arsenic (mg/L)	Selenium (mg/L)
EGSA-GWTS-E	1/23/07	<0.2	0.0022	0.0045 L
EGSA-GWTS-I	1/23/07	<0.2	0.0023	0.0085 L

Notes:

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

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

Location	Date	Specific Conductance (μmhos/cm)
EGSA-GWTS-E	1/23/07	1,600
EGSA-GWTS-E	2/7/07	1,500
EGSA-GWTS-I	1/23/07	1,600

Notes:

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

2.1-7. Eastern General Services Area OU cyanide in ground water treatment system influent and effluet.

Location	Date	Cyanide (mg/L)
EGSA-GWTS-E	1/23/07	<0.02
EGSA-GWTS-I	1/23/07	<0.02

Notes:

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

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

Location	Date	Total dissolved solids (mg/L)
EGSA-GWTS-E	1/23/07	1,100 D

Notes:

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

2.1-9. Eastern General Services Area OU toxicity in ground water treatment system effluent.

Location	Date	Aquatic Bioassay, Survival (Percent)
EGSA-GWTS-E	1/23/07	100

Notes:

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

2.1-10. Central General Services Area OU 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[a]	3/13/07	0.035	0.016	0.22	1.1
CGSA-SVE-I	3/13/07	<0.2	<0.2	<0.2	1.1
CGSA-SVE-I	5/2/07	<0.2	<0.2	<0.2	0.5

Notes:

[a] VOCs also include carbontetrachloride at 0.0056 $ppm_{v/v}$.

See 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	**EGSA-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	**EGSA-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**
		Temperature	**Quarterly**
		Hardness	**Quarterly**
		Turbidity	**Quarterly**
		Visual Observations[b]	**Monthly**
CGSA GWTS			
Influent Port	**CGSA-I**	**VOCs**	**Quarterly**
		pH	**Quarterly**
		Nitrate[c]	**Quarterly**
Effluent Port	**CGSA-E**	**VOCs**	**Monthly**
		pH	**Monthly**
		Nitrate[c]	**Monthly**
Vapor Samples	**CGSA-CFI**	**VOCs**	**Weekly[d]**
	CGSA -CFE	**VOCs**	**Weekly[d]**
	CGSA -CF2I	**VOCs**	**Weekly[d]**
CGSA SVE System			
Influent Vapor	**CGSA-VI**	**No Monitoring Requirements**	
Effluent Vapor	**CGSA-VE**	**VOCs**	**Weekly[c]**
Intermediate GAC	**CGSA-VCF4I**	**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] **Nitrate monitoring included as of June 2006 due to the addition of extracted water from 830-DISS.**

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

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

Table 2.1-12. 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		DIS	E601	1	Y	
W-35A-01	MWPT	Qal	B	CGSA CMP	E200.7:Cd	2	Y	Next sample required 2ndQ 2007.
W-35A-01	MWPT	Qal	B	CGSA CMP	E239.2	2	Y	Next sample required 2ndQ 2007.
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	Y	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	Y	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	Y	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	GW	Tnbs$_2$	Q	CGSA CMP	E601	1	Y	
W-35A-08	GW	Tnbs$_2$	Q	CGSA CMP	E601	2	Y	
W-35A-08	GW	Tnbs$_2$	Q	CGSA CMP	E601	3		
W-35A-08	GW	Tnbs$_2$	Q	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	GW	Tnbs$_2$	Q	CGSA CMP	E601	1	Y	
W-35A-14	GW	Tnbs$_2$	Q	CGSA CMP	E601	2	Y	
W-35A-14	GW	Tnbs$_2$	Q	CGSA CMP	E601	3		
W-35A-14	GW	Tnbs$_2$	Q	CGSA CMP	E601	4		
W-71	EW	Tnbs$_2$	B	CMP-TF	E245.2	4	NA	CGSA extraction well. Next sample required 4thQ 2008.
W-7A	MWPT	Tnbs$_1$	B	CGSA CMP	E239.2	2	Y	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		

Table 2.1-12 (Cont.). 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-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	
W-7H	MWPT	Qal	S	CGSA CMP	E601	4		
W-7I	EW	$Tnbs_2$	S	CMP-TF	E601	2	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	Y	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	Y	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	Y	CGSA extraction well. Next sample required 2ndQ 2007.
W-7O	EW	Qal	B	CMP-TF	E200.7:Zn	2	Y	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	N	CGSA extraction well. Insufficient water.
W-7P	EW	$Tnbs_1$	S	CMP-TF	E601	4		CGSA extraction well.
W-7PS	MWPT	Qal	Q	CMP/WGMG	E601	1	N	Dry.
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	

Table 2.1-12 (Cont.). 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-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	N	Next sample required 2ndQ 2007. Insufficient water.
W-872-01	MWPT	$Tnbs_2$	B	CGSA CMP	E239.2	2	Y	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.
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	Y	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	Y	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	Y	Next sample required 2ndQ 2007.
W-875-01	MWPT	$Tnbs_2$	B	CGSA CMP	E200.7:Cu	2	Y	Next sample required 2ndQ 2007.
W-875-01	MWPT	$Tnbs_2$	B	CGSA CMP	E200.7:Zn	2	Y	Next sample required 2ndQ 2007.
W-875-01	MWPT	$Tnbs_2$	B	CGSA CMP	E239.2	2	Y	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	Y	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	Y	CGSA extraction well. Next sample required 2ndQ 2007.
W-875-07	EW	$Tnbs_2$	S	CMP-TF	E601	2	Y	CGSA extraction well.

Table 2.1-12 (Cont.). 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-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	NA	Next sample required 2ndQ 2008.
W-875-10	MWPT	$Tnbs_2$	B	CGSA CMP	E239.2	2	NA	Next sample required 2ndQ 2008.
W-875-10	MWPT	$Tnbs_2$	S	CGSA CMP	E601	2	N	CGSA extraction well. 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.
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	Insufficient water.
W-CGSA-1733	MWPT	Qal		DIS	E601	1	N	Dry.
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		

Notes:

See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation 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	WS	Qal-$Tnsc_0$		WGMG	E502.2	1	Y	
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CDF-1	WS	Qal-$Tnsc_0$		WGMG	E502.2	2	Y	
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CDF-1	WS	Qal-$Tnsc_0$		WGMG	E502.2	3		
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	3		
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	3		
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	3		
CDF-1	WS	Qal-$Tnsc_0$		WGMG	E502.2	4		
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	4		
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	4		
CDF-1	WS	Qal-$Tnsc_0$	M	CMP/WGMG	E601	4		
CON-1	WS	$Tnsc_0$		WGMG	E502.2	1	Y	
CON-1	WS	$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CON-1	WS	$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CON-1	WS	$Tnsc_0$	M	CMP/WGMG	E601	1	Y	
CON-1	WS	$Tnsc_0$		WGMG	E502.2	2	Y	
CON-1	WS	$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CON-1	WS	$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CON-1	WS	$Tnsc_0$	M	CMP/WGMG	E601	2	Y	
CON-1	WS	$Tnsc_0$		WGMG	E502.2	3		
CON-1	WS	$Tnsc_0$	M	CMP/WGMG	E601	3		
CON-1	WS	$Tnsc_0$	M	CMP/WGMG	E601	3		
CON-1	WS	$Tnsc_0$	M	CMP/WGMG	E601	3		
CON-1	WS	$Tnsc_0$		WGMG	E502.2	4		
CON-1	WS	$Tnsc_0$	M	CMP/WGMG	E601	4		
CON-1	WS	$Tnsc_0$	M	CMP/WGMG	E601	4		
CON-1	WS	$Tnsc_0$	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-$Tnsc_0$	M	CMP/WGMG	E601	3		
CON-2	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	3		
CON-2	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	3	Y	
CON-2	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	4		
CON-2	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	4		
CON-2	MWPT	Qal-$Tnsc_0$	M	CMP/WGMG	E601	4		
W-24P-03	MWPT	Qal	A	PSDMP	E601	1	Y	
W-25D-01	MWPT	Qal	A	PSDMP	E601	2	Y	
W-25D-02	MWPT	Qal	A	PSDMP	E601	2	Y	
W-25M-01	MWPT	Qal	A	PSDMP	E601	3		
W-25M-02	MWPT	Qal	A	PSDMP	E601	2	Y	
W-25M-03	MWPT	Qal	A	PSDMP	E601	2	Y	

Table 2.1-13 (Cont.). 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-01	EW	Qal	Q	PSDMP	E601	1	Y	Quarterly for 1 yr. then semiannually.
W-25N-01	EW	Qal	Q	PSDMP	E601	2	Y	Quarterly for 1 yr. then semiannually.
W-25N-01	EW	Qal		DIS	E601	2	Y	
W-25N-01	EW	Qal		DIS	E601	2	Y	
W-25N-01	EW	Qal	Q	PSDMP	E601	3		Quarterly for 1 yr. then semiannually.
W-25N-01	EW	Qal	Q	PSDMP	E601	4		Quarterly for 1 yr. then semiannually.
W-25N-04	MWPT	Tmss	A	PSDMP	E601	3		
W-25N-05	MWPT	$Tnbs_1$	Q	PSDMP	E601	1	Y	Quarterly for 1 yr. then semiannually.
W-25N-05	MWPT	$Tnbs_1$	Q	PSDMP	E601	2	Y	Quarterly for 1 yr. then semiannually.
W-25N-05	MWPT	$Tnbs_1$	Q	PSDMP	E601	3		Quarterly for 1 yr. then semiannually.
W-25N-05	MWPT	$Tnbs_1$	Q	PSDMP	E601	4		Quarterly for 1 yr. then semiannually.
W-25N-06	MWPT	Qal	A	PSDMP	E601	2	Y	
W-25N-07	GW	Qal	Q	PSDMP	E601	1		
W-25N-07	GW	Qal	Q	PSDMP	E601	2	Y	
W-25N-07	GW	Qal		DIS	E601	2	Y	
W-25N-07	GW	Qal		DIS	E601	2	Y	
W-25N-07	GW	Qal	Q	PSDMP	E601	3		
W-25N-07	GW	Qal	Q	PSDMP	E601	4		
W-25N-08	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-09	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-10	GW	$Tnbs_1$	Q	PSDMP	E601	1	Y	
W-25N-10	GW	$Tnbs_1$	Q	PSDMP	E601	2	Y	
W-25N-10	GW	$Tnbs_1$		DIS	E601	2	Y	
W-25N-10	GW	$Tnbs_1$		DIS	E601	2	Y	
W-25N-10	GW	$Tnbs_1$	Q	PSDMP	E601	3		
W-25N-10	GW	$Tnbs_1$	Q	PSDMP	E601	4		
W-25N-11	GW	$Tnbs_1$	Q	PSDMP	E601	1	Y	
W-25N-11	GW	$Tnbs_1$	Q	PSDMP	E601	2	Y	
W-25N-11	GW	$Tnbs_1$		DIS	E601	2	Y	
W-25N-11	GW	$Tnbs_1$		DIS	E601	2	Y	
W-25N-11	GW	$Tnbs_1$	Q	PSDMP	E601	3		
W-25N-11	GW	$Tnbs_1$	Q	PSDMP	E601	4		
W-25N-12	GW	$Tnbs_1$	Q	PSDMP	E601	1	Y	
W-25N-12	GW	$Tnbs_1$	Q	PSDMP	E601	2	Y	
W-25N-12	GW	$Tnbs_1$		DIS	E601	2	Y	
W-25N-12	GW	$Tnbs_1$		DIS	E601	2	Y	
W-25N-12	GW	$Tnbs_1$	Q	PSDMP	E601	3		
W-25N-12	GW	$Tnbs_1$	Q	PSDMP	E601	4		
W-25N-13	GW	$Tnbs_1$	Q	PSDMP	E601	1	Y	
W-25N-13	GW	$Tnbs_1$	Q	PSDMP	E601	2	Y	
W-25N-13	GW	$Tnbs_1$		DIS	E601	2	Y	
W-25N-13	GW	$Tnbs_1$		DIS	E601	2	Y	
W-25N-13	GW	$Tnbs_1$	Q	PSDMP	E601	3		
W-25N-13	GW	$Tnbs_1$	Q	PSDMP	E601	4		
W-25N-15	MWPT	Qal	A	PSDMP	E601	2	Y	
W-25N-18	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	

Table 2.1-13 (Cont.). 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-20	MWPT	Qal	A	PSDMP	E601	2	Y	
W-25N-21	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-22	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-23	MWPT	$Tnbs_1$	Q	PSDMP	E601	1	Y	Quarterly for 1 yr. then semiannually.
W-25N-23	MWPT	$Tnbs_1$	Q	PSDMP	E601	2	Y	Quarterly for 1 yr. then semiannually.
W-25N-23	MWPT	$Tnbs_1$	Q	PSDMP	E601	3		Quarterly for 1 yr. then semiannually.
W-25N-23	MWPT	$Tnbs_1$	Q	PSDMP	E601	4		Quarterly for 1 yr. then semiannually.
W-25N-24	EW	Qal	Q	PSDMP	E601	1	Y	Quarterly for 1 yr. then semiannually.
W-25N-24	EW	Qal	Q	PSDMP	E601	2	Y	Quarterly for 1 yr. then semiannually.
W-25N-24	EW	Qal		DIS	E601	2	Y	
W-25N-24	EW	Qal		DIS	E601	2	Y	
W-25N-24	EW	Qal	Q	PSDMP	E601	3		Quarterly for 1 yr. then semiannually.
W-25N-24	EW	Qal	Q	PSDMP	E601	4		Quarterly for 1 yr. then semiannually.
W-25N-25	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-26	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-25N-28	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-26R-01	MWPT	$Tnbs_1$	Q	WGMG/PSDMP	E601	1	Y	Quarterly for 1 yr. then semiannually.
W-26R-01	MWPT	$Tnbs_1$	Q	WGMG/PSDMP	E601	2	Y	Quarterly for 1 yr. then semiannually.
W-26R-01	MWPT	$Tnbs_1$		DIS	E601	2	Y	
W-26R-01	MWPT	$Tnbs_1$		DIS	E601	2	Y	
W-26R-01	MWPT	$Tnbs_1$	Q	WGMG/PSDMP	E601	3		Quarterly for 1 yr. then semiannually.
W-26R-01	MWPT	$Tnbs_1$	Q	WGMG/PSDMP	E601	4		Quarterly for 1 yr. then semiannually.
W-26R-02	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-26R-03	EW	Qal	Q	PSDMP	E601	1	Y	Quarterly for 1 yr. then semiannually.
W-26R-03	EW	Qal	Q	PSDMP	E601	2	Y	Quarterly for 1 yr. then semiannually.
W-26R-03	EW	Qal		DIS	E601	2	Y	
W-26R-03	EW	Qal		DIS	E601	2	Y	
W-26R-03	EW	Qal	Q	PSDMP	E601	3		Quarterly for 1 yr. then semiannually.
W-26R-03	EW	Qal	Q	PSDMP	E601	4		Quarterly for 1 yr. then semiannually.
W-26R-04	MWPT	Qal	Q	PSDMP	E601	1	Y	Quarterly for 1 yr. then semiannually.
W-26R-04	MWPT	Qal	Q	PSDMP	E601	2	Y	Quarterly for 1 yr. then semiannually.
W-26R-04	MWPT	Qal		DIS	E601	2	Y	
W-26R-04	MWPT	Qal		DIS	E601	2	Y	
W-26R-04	MWPT	Qal	Q	PSDMP	E601	3		Quarterly for 1 yr. then semiannually.
W-26R-04	MWPT	Qal	Q	PSDMP	E601	4		Quarterly for 1 yr. then semiannually.
W-26R-05	MWPT	Qal	Q	PSDMP	E601	1	Y	Quarterly for 1 yr. then semiannually.
W-26R-05	MWPT	Qal	Q	PSDMP	E601	2	Y	Quarterly for 1 yr. then semiannually.
W-26R-05	MWPT	Qal		DIS	E601	2	Y	
W-26R-05	MWPT	Qal		DIS	E601	2	Y	
W-26R-05	MWPT	Qal	Q	PSDMP	E601	3		Quarterly for 1 yr. then semiannually.
W-26R-05	MWPT	Qal	Q	PSDMP	E601	4		Quarterly for 1 yr. then semiannually.
W-26R-06	MWPT	$Tnbs_1$	Q	PSDMP	E601	1	Y	Quarterly for 1 yr. then semiannually.
W-26R-06	MWPT	$Tnbs_1$	Q	PSDMP	E601	2	Y	Quarterly for 1 yr. then semiannually.
W-26R-06	MWPT	$Tnbs_1$		DIS	E601	2	Y	
W-26R-06	MWPT	$Tnbs_1$		DIS	E601	2	Y	
W-26R-06	MWPT	$Tnbs_1$	Q	PSDMP	E601	3		Quarterly for 1 yr. then semiannually.

Table 2.1-13 (Cont.). 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-06	MWPT	$Tnbs_1$	Q	PSDMP	E601	4		Quarterly for 1 yr. then semiannually.
W-26R-07	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-26R-08	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-26R-11	MWPT	Qal	S	CMP	E601	2	Y	
W-26R-11	MWPT	Qal	S	CMP	E601	4		
W-7D	MWPT	$Tnbs_1$	A	PSDMP	E601	2	Y	
W-7DS	MWPT	Qal		WGMG	E601	1	Y	
W-7DS	MWPT	Qal	A	WGMG/PSDMP	E601	2	Y	
W-7DS	MWPT	Qal		WGMG	E601	3		
W-7DS	MWPT	Qal		WGMG	E601	4		

Notes:
PSDMP = Post-shutdown Monitoring Plan.
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.1-14. Central General Services Area (CGSA) mass removed, January 1, 2007 through June 30, 2007.

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	41	27	NA	NA	NA	NA
	February	43	24	NA	NA	NA	NA
	March	39	25	NA	NA	NA	NA
	April	NA	35	NA	NA	NA	NA
	May	56	31	NA	NA	NA	NA
	June	54	23	NA	NA	NA	NA
Total		230	170	NA	NA	NA	NA

Table 2.1-15. Eastern General Services Area (EGSA) mass removed, January 1, 2007 through June 30, 2007.

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	14	NA	NA	NA	NA
	February	NA	5.6	NA	NA	NA	NA
Total		NA	20	NA	NA	NA	NA

Table 2.2-1. Building 834 (834) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
834	January	121	121	754	2,478
	February	663	663	4,136	11,208
	March	594	594	3,736	11,035
	April	642	642	4,449	10,800
	May	828	828	5,569	12,982
	June	669	669	4,523	8,974
Total		3,517	3,517	23,167	57,477

Table 2.2-2. Building 834 OU VOCs in ground water extraction 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-GWTS-E	1/9/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-E	2/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-E	3/5/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-E	4/3/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-E	5/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-E	6/4/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
834-GWTS-I	1/9/07	2,300 D	30	1,100 D	<25 D	<0.5	0.54	<0.5	<0.5	1.3	<0.5	1	<0.5	<0.5	<0.5
834-GWTS-I	4/3/07	2,900 D	28	300 D	<25 D	<0.5	0.71	<0.5	<0.5	0.99	<0.5	1.1	<0.5	<0.5	<0.5
834-GWTS-I	4/3/07[a]	3,100 D	29	310 D	<25 D	<0.5	0.67	<0.5	<0.5	1	<0.5	1.2	<0.5	<0.5	<0.5

Notes:

[a] **Duplicate analysis.**

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

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

Location	Date	Detection frequency	1,2-DCE (total) (μg/L)
834-GWTS-E	1/9/07	0 of 18	-
834-GWTS-E	2/6/07	0 of 18	-
834-GWTS-E	3/5/07	0 of 18	-
834-GWTS-E	4/3/07	0 of 18	-
834-GWTS-E	5/7/07	0 of 18	-
834-GWTS-E	6/4/07	0 of 18	-
834-GWTS-I	1/9/07	1 of 18	1,100 D
834-GWTS-I	4/3/07	1 of 18	300 D
834-GWTS-I	4/3/07[a]	1 of 18	310 D

Notes:

[a] **Duplicate analysis.**

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

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

Location	Date	Nitrate (as N03) (mg/L)
834-GWTS-E	1/9/07	82
834-GWTS-E	2/6/07	72
834-GWTS-E	3/5/07	71
834-GWTS-E	4/3/07	73
834-GWTS-E	5/7/07	79
834-GWTS-E	6/4/07	84
834-GWTS-I	1/9/07	77
834-GWTS-I	4/3/07	78
834-GWTS-I	4/3/07[a]	78

Notes:

[a] **Duplicate analysis.**

See 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-GWTS-E	1/9/07	<200
834-GWTS-E	2/6/07	<200 D
834-GWTS-E	3/5/07	<200
834-GWTS-E	4/3/07	<200 DLO
834-GWTS-E	5/7/07	<200
834-GWTS-E	6/4/07	<200
834-GWTS-I	1/9/07	<200
834-GWTS-I	2/6/07	240 D
834-GWTS-I	3/5/07	310
834-GWTS-I	4/3/07	280 D
834-GWTS-I	4/3/07[a]	280 D
834-GWTS-I	5/7/07	260 J
834-GWTS-I	6/4/07	<200

Notes:

[a] **Duplicate analysis.**

See 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 extraction treatment system influent and effluent.

Location	Date	TBOS (μg/L)
834-GWTS-E	1/9/07	<10
834-GWTS-E	2/6/07	<10
834-GWTS-E	3/5/07	<10
834-GWTS-E	4/3/07	<10 DLO
834-GWTS-E	5/7/07	<10 LO
834-GWTS-E	6/4/07	<10
834-GWTS-I	1/9/07	<10
834-GWTS-I	2/6/07	78 D
834-GWTS-I	3/5/07	10
834-GWTS-I	4/3/07	<10 D
834-GWTS-I	4/3/07[a]	<10
834-GWTS-I	5/7/07	<10 LO
834-GWTS-I	6/4/07	<10

Notes:

[a] **Duplicate analysis.**

See 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	**834-I**	**VOCs**	**Quarterly**
		TBOS	**Quarterly**
		Diesel	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**834-E**	**VOCs**	**Monthly**
		TBOS	**Monthly**
		Diesel	**Monthly**
		Nitrate	**Monthly**
		pH	**Monthly**
834 SVE			
Influent Port	**834-VI**	**No Monitoring Requirements**	
Effluent Port	**834-VE**	**VOCs**	**Weekly**[a]
Intermediate GAC	**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 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	A	CMP	TBOS	1	Y	
W-834-1709	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	Y	
W-834-1711	MWPT	Tps	S	CMP	E601	3		
W-834-1824	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-1824	MWPT	Tpsg		DIS	E300.0:PERC	1	Y	
W-834-1824	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-1824	MWPT	Tpsg	A	DIS	TBOS	1	Y	
W-834-1824	MWPT	Tpsg	S	CMP	E601	3		
W-834-1825	MWPT	Tpsg		DIS	E300.0:PERC	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	A	CMP	TBOS	1	Y	
W-834-1825	MWPT	Tpsg	S	CMP	E601	3		
W-834-1833	MWPT	Tpsg		DIS	E300.0:PERC	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	A	CMP	TBOS	1	Y	
W-834-1833	MWPT	Tpsg	S	CMP	E601	3		
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	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-834-2001	EW	Tpsg	S	CMP-TF	E601	3		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	A	CMP	TBOS	1	Y	
W-834-2113	MWPT	Tpsg		DIS	E624	2	Y	
W-834-2113	MWPT	Tpsg	S	CMP	E624	3		
W-834-2117	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2117	MWPT	Tpsg	S	CMP	E624	1	Y	
W-834-2117	MWPT	Tpsg	A	CMP	TBOS	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-834-2118	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2118	MWPT	Tpsg		DIS	E300.0:PERC	1	Y	
W-834-2118	MWPT	Tpsg	S	CMP	E624	1	Y	
W-834-2118	MWPT	Tpsg	A	CMP	TBOS	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-834-2119	MWPT	Tpsg		DIS	E300.0:PERC	1	Y	

Table 2.2-7 (Cont.). 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-834-2119	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-2119	MWPT	Tpsg	S	CMP	E624	1	Y	
W-834-2119	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-2119	MWPT	Tpsg	S	CMP	E601	3		
W-834-A1	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-834-A1	MWPT	Tps	S	CMP	E624	1	Y	
W-834-A1	MWPT	Tps	A	CMP	EM8015:DIESEL	1	Y	
W-834-A1	MWPT	Tps	A	CMP	TBOS	1	Y	
W-834-A1	MWPT	Tps	S	CMP	E601	3		
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	A	CMP	EM8015:DIESEL	1	N	Insufficient water.
W-834-A2	MWPT	Tpsg	A	CMP	TBOS	1	N	Insufficient water.
W-834-A2	MWPT	Tpsg	S	CMP	E601	3		
W-834-B2	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-B2	EW	Tpsg	A	DIS	E300.0:PERC	1	Y	B834 extraction well.
W-834-B2	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-B2	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-B2	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-B3	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-B3	EW	Tpsg	A	DIS	E300.0:PERC	1	Y	B834 extraction well.
W-834-B3	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-B3	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-B3	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-B4	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-B4	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-B4	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-B4	MWPT	Tpsg	S	CMP	E601	3		
W-834-C2	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-C2	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-C2	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-C2	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	Y	
W-834-C4	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	Y	
W-834-C5	MWPT	Tpsg	S	CMP	E601	3		
W-834-D10	MWPT	Tps	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D10	MWPT	Tps	S	CMP	E624	1	N	Dry.
W-834-D10	MWPT	Tps	A	CMP	EM8015:DIESEL	1	N	Dry.
W-834-D10	MWPT	Tps	A	CMP	TBOS	1	N	Dry.
W-834-D10	MWPT	Tps	S	CMP	E624	3		
W-834-D11	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D11	MWPT	Tpsg		DIS	E300.0:PERC	1	Y	

Table 2.2-7 (Cont.). 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-D11	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-D11	MWPT	Tpsg	A	CMP	EM8015:DIESEL	1	N	Insufficient water.
W-834-D11	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-D11	MWPT	Tpsg	S	CMP	E601	3		
W-834-D12	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-D12	EW	Tpsg	A	DIS	E300.0:PERC	1	Y	B834 extraction well.
W-834-D12	EW	Tpsg	S	CMP-TF	E624	1	Y	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-D12	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-D13	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-D13	EW	Tpsg	A	DIS	E300.0:PERC	1	Y	B834 extraction well.
W-834-D13	EW	Tpsg	S	CMP-TF	E601	1	Y	B834 extraction well.
W-834-D13	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-D13	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-D14	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D14	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-D14	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-D14	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	Y	
W-834-D15	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	EM8015:DIESEL	1	N	Dry.
W-834-D16	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-D16	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	EM8015:DIESEL	1	N	Dry.
W-834-D17	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-D17	MWPT	Tpsg	S	CMP	E601	3		
W-834-D18	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-D18	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-D18	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-D18	MWPT	Tpsg	S	CMP	E601	3		
W-834-D2	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D2	MWPT	$Tnbs_1$	A	CMP	E601	1	N	Dry.
W-834-D2	MWPT	$Tnbs_1$	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	A	CMP	TBOS	1	Y	
W-834-D3	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP-TF	TBOS	1	Y	B834 extraction well.

Table 2.2-7 (Cont.). 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-D4	EW	Tpsg	S	CMP-TF	E601	3		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	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-D5	EW	Tpsg	S	CMP-TF	E601	3		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		DIS	EM8015:DIESEL	1	Y	B834 extraction well.
W-834-D6	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-D6	EW	Tpsg	S	CMP-TF	E601	3		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	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-D7	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-D9A	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	N	Dry.
W-834-D9A	MWPT	$Tnbs_2$	A	CMP	E601	1	N	Dry.
W-834-D9A	MWPT	$Tnbs_2$	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	N	Insufficient water.
W-834-H2	MWPT	Tpsg	A	CMP	TBOS	1	N	Insufficient water.
W-834-H2	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-J1	EW	Tpsg	S	CMP-TF	E601	3		B834 extraction well.
W-834-J2	MWPT	Tpsg		DIS	E300.0:PERC	1	Y	
W-834-J2	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-J2	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-J2	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-J2	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	N	Dry.
W-834-J3	MWPT	Tpsg	S	CMP	E601	3		
W-834-K1A	MWPT	Tpsg	A	CMP	E300.0:NO3	1	N	Dry.
W-834-K1A	MWPT	Tpsg	S	CMP	E601	1	N	Dry.
W-834-K1A	MWPT	Tpsg	A	CMP	EM8015:DIESEL	1	N	Dry.
W-834-K1A	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-K1A	MWPT	Tpsg	S	CMP	E601	3		
W-834-M1	MWPT	Tpsg		DIS	E218.2	1	Y	
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	A	CMP	TBOS	1	Y	

Table 2.2-7 (Cont.). 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-M1	MWPT	Tpsg		DIS	E218.2	3		
W-834-M1	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	N	Dry.
W-834-M2	MWPT	Tpsg	S	CMP	E601	3		
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	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-S1	EW	Tpsg	S	CMP-TF	E601	3		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		DIS	EM8015:DIESEL	1	N	Dry.
W-834-S10	MWPT	Tpsg	A	CMP	TBOS	1	N	Dry.
W-834-S10	MWPT	Tpsg	S	CMP	E601	3		
W-834-S12A	EW	Tpsg	A	CMP-TF	E300.0:NO3	1	Y	B834 extraction well.
W-834-S12A	EW	Tpsg	A	DIS	E300.0:PERC	1	Y	B834 extraction well.
W-834-S12A	EW	Tpsg	S	CMP-TF	E624	1	Y	B834 extraction well.
W-834-S12A	EW	Tpsg	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-S12A	EW	Tpsg	S	CMP-TF	E624	3		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	A	CMP-TF	TBOS	1	Y	B834 extraction well.
W-834-S13	EW	Tpsg	S	CMP-TF	E601	3		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	
W-834-S4	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-S4	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-S4	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	N	Dry.
W-834-S5	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	Y	
W-834-S6	MWPT	Tpsg	S	CMP	E601	3		
W-834-S7	MWPT	Tpsg		DIS	E300.0:PERC	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	A	CMP	TBOS	1	Y	
W-834-S7	MWPT	Tpsg	S	CMP	E601	3		
W-834-S8	MWPT	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-834-S8	MWPT	$Tnsc_2$	S	CMP	E624	1	Y	
W-834-S8	MWPT	$Tnsc_2$	A	CMP	EM8015:DIESEL	1	Y	

Table 2.2-7 (Cont.). 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-S8	MWPT	$Tnsc_2$	A	CMP	TBOS	1	Y	
W-834-S8	MWPT	$Tnsc_2$	S	CMP	E601	3		
W-834-S9	MWPT	$Tnsc_2$		DIS	E218.2	1	Y	
W-834-S9	MWPT	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-834-S9	MWPT	$Tnsc_2$	S	CMP	E624	1	Y	
W-834-S9	MWPT	$Tnsc_2$	A	CMP	EM8015:DIESEL	1	Y	
W-834-S9	MWPT	$Tnsc_2$	A	CMP	TBOS	1	Y	
W-834-S9	MWPT	$Tnsc_2$		DIS	E218.2	3		
W-834-S9	MWPT	$Tnsc_2$	S	CMP	E601	3		
W-834-T1	GW	$Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-834-T1	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
W-834-T1	GW	$Tnbs_1$	S	CMP	TBOS	1	Y	
W-834-T1	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
W-834-T1	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3		
W-834-T1	GW	$Tnbs_1$	Q	CMP	E601	3		
W-834-T1	GW	$Tnbs_1$	S	CMP	TBOS	3		
W-834-T1	GW	$Tnbs_1$	Q	CMP	E601	4		
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	A	CMP	TBOS	1	N	Dry.
W-834-T11	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	Y	
W-834-T2	MWPT	Tpsg	S	CMP	E601	3		
W-834-T2A	MWPT	Tpsg		DIS	E300.0:PERC	1	Y	
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	A	CMP	TBOS	1	Y	
W-834-T2A	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	N	Dry.
W-834-T2B	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	N	Dry.
W-834-T2C	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	Y	
W-834-T2D	MWPT	Tpsg	S	CMP	E601	3		
W-834-T3	GW	$Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-834-T3	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
W-834-T3	GW	$Tnbs_1$	S	CMP	TBOS	1	Y	
W-834-T3	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
W-834-T3	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3		

Table 2.2-7 (Cont.). 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-T3	GW	$Tnbs_1$	Q	CMP	E601	3		
W-834-T3	GW	$Tnbs_1$	S	CMP	TBOS	3		
W-834-T3	GW	$Tnbs_1$	Q	CMP	E601	4		
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	A	CMP	TBOS	1	Y	
W-834-T5	MWPT	Tpsg	S	CMP	E601	3		
W-834-T7A	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-834-T7A	MWPT	Tpsg	S	CMP	E601	1	Y	
W-834-T7A	MWPT	Tpsg	A	CMP	TBOS	1	Y	
W-834-T7A	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	N	Dry.
W-834-T8A	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	TBOS	1	N	Dry.
W-834-T9	MWPT	Tpsg	S	CMP	E601	3		
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	A	CMP	EM8015:DIESEL	1	Y	
W-834-U1	MWPT	Tps	A	CMP	TBOS	1	Y	
W-834-U1	MWPT	Tps	S	CMP	E601	3		

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

Table 2.2-8. Building 834 (834) mass removed, January 1, 2007 through June 30, 2007.

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)
834	January	570	54	NA	0.61	NA	1.5
	February	3,000	200	NA	3.1	NA	0.26
	March	2,000	200	NA	3.0	NA	0.27
	April	2,200	150	NA	3.0	NA	0.23
	May	2,700	180	NA	3.5	NA	0.24
	June	2,100	120	NA	2.6	NA	0.15
Total		13,000	900	NA	16	NA	2.6

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	E906	1	Y	
BC6-10	MWPT	$Tnbs_1$	S	CMP	E601	3		
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		
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: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	WGMG	E624	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	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	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: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	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	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	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: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	E601	3		
CARNRW1	WS	$Tnbs_1/Tmss$	M	CMP/WGMG	E601	3		

Table 2.3-1 (Cont.). 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	E601	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	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	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	4		
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	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: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	$Tnbs_1/Tmss$		WGMG	E502.2	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	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	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: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	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	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	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: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		

Table 2.3-1 (Cont.). 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	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	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	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	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	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		
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: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	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	E906	1	Y	
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	1	Y	
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E906	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: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	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	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	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:PERC	3		
CARNRW3	WS	Tnbs$_1$/Tmss	M	CMP	E300.0:PERC	3		

Table 2.3-1 (Cont.). 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	E300.0:PERC	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	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	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	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	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	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: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	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	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	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: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	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	E906	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	2	Y	
CARNRW4	WS	Qal/Tts	M	CMP	E906	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:PERC	3		

Table 2.3-1 (Cont.). 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	E300.0:PERC	3		
CARNRW4	WS	Qal/Tts	M	CMP	E300.0:PERC	3		
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	E906	3		
CARNRW4	WS	Qal/Tts	M	CMP	E906	3		
CARNRW4	WS	Qal/Tts	M	CMP	E906	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	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	4		
CARNRW4	WS	Qal/Tts	M	CMP	E601	4		
CARNRW4	WS	Qal/Tts	M	CMP	E601	4		
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:PERC	1	Y	
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E624	1	Y	
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E906	1	Y	
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	2	Y	
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	2	Y	
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E8260	2	Y	
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E906	2	Y	
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	3		
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	3		
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E624	3		
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E906	3		
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	4		
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	4		
EP6-06*	DMW	$Qt/Tnbs_1$		WGMG	E624	4		
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	E906	1	Y	
EP6-07	MWPT	$Tnbs_1$	S	CMP	E601	3		
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:PERC	1	Y	
EP6-08*	DMW	$Tnbs_1$		WGMG	E624	1	Y	
EP6-08*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
EP6-08*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	

Table 2.3-1 (Cont.). 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
EP6-08*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
EP6-08*	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
EP6-08*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
EP6-08*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
EP6-08*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
EP6-08*	DMW	$Tnbs_1$		WGMG	E624	3		
EP6-08*	DMW	$Tnbs_1$		WGMG	E906	3		
EP6-08*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
EP6-08*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
EP6-08*	DMW	$Tnbs_1$		WGMG	E624	4		
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:PERC	1	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E624	1	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
EP6-09*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
EP6-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
EP6-09*	DMW	$Tnbs_1$		WGMG	E624	3		
EP6-09*	DMW	$Tnbs_1$		WGMG	E906	3		
EP6-09*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
EP6-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
EP6-09*	DMW	$Tnbs_1$		WGMG	E624	4		
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	E906	1	Y	
K6-01**	DMW	$Tnbs_1$		WGMG	E601	3		
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:PERC	1	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E624	1	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E906	1	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E8260	2	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E906	2	Y	
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	3		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	3		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E624	3		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E906	3		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	4		
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	4		

Table 2.3-1 (Cont.). 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
K6-01S*	DMW	$Qt/Tnbs_1$		WGMG	E624	4		
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	E906	1	Y	
K6-03	MWPT	$Tnbs_1$	S	CMP/WGMG	E601	3		
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	E906	1	Y	
K6-04	MWPT	$Tnbs_1$	S	CMP	E601	3		
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	E906	1	Y	
K6-14	MWPT	$Tnbs_1$	S	CMP	E601	3		
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	E906	1	N	Dry.
K6-15	MWPT	$Qt/Tnbs_1$	S	CMP/WGMG	E601	3		
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	E906	1	Y	
K6-16	MWPT	$Qt/Tnbs_1$	S	CMP	E601	3		
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:PERC	1	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	1	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E906	1	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	2	Y	
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E906	2	Y	
K6-17	GW	$Qt/Tnbs_1$	S	CMP	E300.0:NO3	3		
K6-17	GW	$Qt/Tnbs_1$	S	CMP	E300.0:PERC	3		
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	3		
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E906	3		
K6-17	GW	$Qt/Tnbs_1$	Q	CMP	E601	4		
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	

Table 2.3-1 (Cont.). 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
K6-18	MWPT	$Qt/Tnbs_1$	S	CMP	E906	1	Y	
K6-18	MWPT	$Qt/Tnbs_1$	S	CMP	E601	3		
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:PERC	1	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E624	1	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E906	1	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E8260	2	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E906	2	Y	
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	3		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	3		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E624	3		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E906	3		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:NO3	4		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E300.0:PERC	4		
K6-19*	DMW	$Qt/Tnbs_1$		WGMG	E624	4		
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.
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:PERC	1	Y	
K6-22	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
K6-22	GW	$Tnbs_1$	Q	CMP	E906	1	Y	
K6-22	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
K6-22	GW	$Tnbs_1$	Q	CMP	E906	2	Y	
K6-22	GW	$Tnbs_1$		DIS	E300.0:NO3	2	Y	
K6-22	GW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
K6-22	GW	$Tnbs_1$		DIS	E601	2	Y	
K6-22	GW	$Tnbs_1$		DIS	E906	2	Y	
K6-22	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3		
K6-22	GW	$Tnbs_1$	S	CMP	E300.0:PERC	3		
K6-22	GW	$Tnbs_1$	Q	CMP	E601	3		
K6-22	GW	$Tnbs_1$	Q	CMP	E906	3		
K6-22	GW	$Tnbs_1$	Q	CMP	E601	4		
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	E906	1	Y	
K6-23	MWPT	Tmss	S	CMP	E601	3		
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	

Table 2.3-1 (Cont.). 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
K6-24	MWPT	$Tnbs_1$	S	CMP	E601	1	Y	
K6-24	MWPT	$Tnbs_1$	S	CMP	E906	1	Y	
K6-24	MWPT	$Tnbs_1$	S	CMP	E601	3		
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	E906	1	Y	
K6-25	MWPT	Tmss	S	CMP	E601	3		
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	E906	1	Y	
K6-26	MWPT	$Tnbs_1$	S	CMP	E601	3		
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	E906	1	Y	
K6-27	MWPT	$Tnbs_1$	S	CMP	E601	3		
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	E906	1	Y	
K6-32	MWPT	$Tnbs_1$	S	CMP/WGMG	E601	3		
K6-32	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	3		
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	E906	1	Y	
K6-33	MWPT	$Tnbs_1$	S	CMP	E601	3		
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:PERC	1	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E906	1	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
K6-34	GW	$Tnbs_1$	Q	CMP	E906	2	Y	
K6-34	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3		
K6-34	GW	$Tnbs_1$	S	CMP	E300.0:PERC	3		
K6-34	GW	$Tnbs_1$	Q	CMP	E601	3		
K6-34	GW	$Tnbs_1$	Q	CMP	E906	3		
K6-34	GW	$Tnbs_1$	Q	CMP	E601	4		
K6-34	GW	$Tnbs_1$	Q	CMP	E906	4		
K6-35	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	

Table 2.3-1 (Cont.). 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
K6-35	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	E906	1	Y	
K6-35	MWPT	$Tnbs_1$	S	CMP	E601	3		
K6-35	MWPT	$Tnbs_1$	S	CMP	E906	3		
K6-36*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	N	Dry.
K6-36*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	N	Dry.
K6-36*	DMW	$Tnbs_1$		WGMG	E624	1	N	Dry.
K6-36*	DMW	$Tnbs_1$		WGMG	E906	1	N	Dry.
K6-36*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	N	Dry.
K6-36*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	N	Dry.
K6-36*	DMW	$Tnbs_1$		WGMG	E8260	2	N	Dry.
K6-36*	DMW	$Tnbs_1$		WGMG	E906	2	N	Dry.
K6-36*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K6-36*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K6-36*	DMW	$Tnbs_1$		WGMG	E624	3		
K6-36*	DMW	$Tnbs_1$		WGMG	E906	3		
K6-36*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K6-36*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K6-36*	DMW	$Tnbs_1$		WGMG	E624	4		
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	E906	1	Y	
W-33C-01	MWPT	Tts	S	CMP	E601	3		
W-33C-01	MWPT	Tts	S	CMP	E906	3		
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:PERC	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E906	1	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E906	2	Y	
W-PIT6-1819	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3		
W-PIT6-1819	GW	$Tnbs_1$	S	CMP	E300.0:PERC	3		

Table 2.3-1 (Cont.). 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-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	3		
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E906	3		
W-PIT6-1819	GW	$Tnbs_1$	Q	CMP	E601	4		
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 Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.4-1. Building 815-Source (815-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
815-SRC	January	NA	737	NA	47,695
	February	NA	622	NA	38,007
	March	NA	623	NA	34,789
	April	NA	819	NA	52,661
	May	NA	691	NA	48,641
	June	NA	645	NA	45,161
Total		NA	4,137	NA	266,954

Table 2.4-2. Building 815-Proximal (815-PRX) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
815-PRX	January	NA	455	NA	42,793
	February	NA	647	NA	72,582
	March	NA	303	NA	33,566
	April	NA	6	NA	458
	May	NA	0	NA	0
	June	NA	349	NA	44,268
Total		NA	1,760	NA	193,667

Table 2.4-3. Building 815-Distal Site Boundary (815-DSB) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
815-DSB	January	NA	800	NA	182,744
	February	NA	671	NA	152,156
	March	NA	665	NA	149,916
	April	NA	795	NA	178,660
	May	NA	696	NA	151,438
	June	NA	648	NA	141,210
Total		NA	4,275	NA	956,124

Table 2.4-4. Building 817-Source (817-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
817-SRC	January	NA	10	NA	245
	February	NA	30	NA	772
	March	NA	30	NA	707
	April	NA	36	NA	799
	May	NA	34	NA	698
	June	NA	29	NA	558
Total		NA	169	NA	3,779

Table 2.4-5. Building 817-Proximal (817-PRX) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
817-PRX	January	NA	41	NA	2,385
	February	NA	667	NA	39,335
	March	NA	29	NA	1,769
	April	NA	0	NA	0
	May	NA	0	NA	0
	June	NA	0	NA	0
Total		NA	737	NA	43,489

Table 2.4-6. Building 829-Source (829-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
829-SRC	January	NA	0	NA	0
	February	NA	0	NA	0
	March	NA	0	NA	0
	April	NA	0	NA	0
	May	NA	0	NA	0
	June	NA	0	NA	7
Total		NA	0	NA	7

Table 2.4-7. High Explosives 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 Boundry															
815-DSB-GWTS-E	**1/8/07**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
815-DSB-GWTS-E	**2/6/07**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
815-DSB-GWTS-E	**3/5/07**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
815-DSB-GWTS-E	**4/12/07**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
815-DSB-GWTS-E	**5/7/07**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
815-DSB-GWTS-E	**6/4/07**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
815-DSB-GWTS-I	**1/8/07**	**11**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
815-DSB-GWTS-I	**4/12/07**	**11**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
815-DSB-GWTS-I	**4/12/07**[a]	**12**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
Building 815-Proximal															
815-PRX-GWTS-E	**1/8/07**	**<0.5**	**<0.5**	**<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-GWTS-E	**2/7/07**	**<0.5**	**<0.5**	**<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-GWTS-E	**3/5/07**	**<0.5**	**<0.5**	**<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-GWTS-E	**3/5/07**[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-GWTS-E	**3/8/07**	**<0.5**	**<0.5**	**<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-GWTS-E	**3/12/07**	**<0.5**	**<0.5**	**<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-GWTS-E	**3/20/07**	**<0.5**	**<0.5**	**<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-GWTS-E	**6/12/07**	**<0.5**	**<0.5**	**<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-GWTS-E	**6/19/07**	**<0.5**	**<0.5**	**<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-GWTS-I	**1/8/07**	**28**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
815-PRX-GWTS-I	**3/12/07**	**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-GWTS-I	**3/12/07**	**30**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**
815-PRX-GWTS-I	**3/20/07**	**16**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**	**<1**
815-PRX-GWTS-I	**6/12/07**	**26**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5 E**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
815-PRX-GWTS-I	**6/12/07**[a]	**26**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5 E**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Table 2.4-7 (Cont.). High Explosives 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-Source															
815-SRC-GWTS-E	1/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-E	2/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-E	3/5/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-E	4/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-E	5/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-E	6/4/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-I	1/10/07	6.5	<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-GWTS-I	4/12/07	6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.88	<0.5	<0.5	<0.5	<0.5	<0.5
815-SRC-GWTS-I	4/12/07[a]	6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.87	<0.5	<0.5	<0.5	<0.5	<0.5
Building 817-Proximal															
817-PRX-GWTS-E	1/30/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-GWTS-E	2/5/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-GWTS-E	3/5/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-PRX-GWTS-I	1/30/07	9.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 817-Source															
817-SRC-GWTS-E	1/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-E	2/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-E	3/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-E	4/3/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-E	5/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-E	6/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-I	1/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
817-SRC-GWTS-I	4/3/07	<0.5	<0.5	<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] **Duplicate analysis.**

[b] **Sample re-analyzed.**

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

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

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (μg/L)
Building 815-Distal Site Boundry			
815-DSB-GWTS-E	1/8/07	<0.5	-
815-DSB-GWTS-E	2/6/07	<0.5	-
815-DSB-GWTS-E	3/5/07	<0.44	-
815-DSB-GWTS-E	4/12/07	<0.5	-
815-DSB-GWTS-E	5/7/07	<0.5	-
815-DSB-GWTS-E	6/4/07	<0.5	-
815-DSB-GWTS-I	1/8/07	<0.5	-
815-DSB-GWTS-I	4/12/07	<0.5	-
815-DSB-GWTS-I	4/12/07[a]	<0.5	-
Building 815-Proximal			
815-PRX-GWTS-E	1/8/07	97 D	<4
815-PRX-GWTS-E	2/7/07	80	<4
815-PRX-GWTS-E	3/5/07	85	<4 LO
815-PRX-GWTS-E	6/12/07	1.9	<4
815-PRX-GWTS-E	6/19/07	58	<4
815-PRX-GWTS-I	1/8/07	81 D	8.7
815-PRX-GWTS-I	6/12/07	85	7.2
815-PRX-GWTS-I	6/12/07[a]	85 D	6.9
Building 815-Source			
815-SRC-GWTS-E	1/10/07	110 D	<4
815-SRC-GWTS-E	2/7/07	98 D	<4
815-SRC-GWTS-E	3/5/07	100 D	<4 LO
815-SRC-GWTS-E	4/12/07	86	<4
815-SRC-GWTS-E	5/7/07	94	<4
815-SRC-GWTS-E	6/4/07	100 D	<4
815-SRC-GWTS-I	1/10/07	100 D	14
815-SRC-GWTS-I	4/12/07	96 D	9.8
815-SRC-GWTS-I	4/12/07[a]	95 D	10
Building 817-Proximal			
817-PRX-GWTS-E	1/30/07	88	<4
817-PRX-GWTS-E	2/5/07	90	<4
817-PRX-GWTS-E	3/5/07	79	<4 LO
817-PRX-GWTS-I	1/30/07	89	29

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

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (μg/L)
Building 817-Source			
817-SRC-GWTS-E	1/11/07	42	<4
817-SRC-GWTS-E	2/6/07	44	<4 LO
817-SRC-GWTS-E	3/7/07	52	<4
817-SRC-GWTS-E	4/3/07	57	<4
817-SRC-GWTS-E	5/10/07	66	<4
817-SRC-GWTS-E	6/6/07	56	<4
817-SRC-GWTS-I	1/11/07	85	35
817-SRC-GWTS-I	4/3/07	82	28
817-SRC-GWTS-I	4/3/07[a]	82	28

Notes:

[a] **Duplicate analysis.**

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

Table 2.4-9. High Explosives 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-GWTS-E	1/8/07	<1	<1
815-PRX-GWTS-E	2/7/07	<1 DO	<1 D
815-PRX-GWTS-E	3/5/07	<1	<1
815-PRX-GWTS-E	6/12/07	<1	<1 L
815-PRX-GWTS-E	6/19/07	<1 D	<1 D
815-PRX-GWTS-I	1/8/07	<1	<1
815-PRX-GWTS-I	6/12/07	<1	<1 L
Building 815-Source			
815-SRC-GWTS-E	1/10/07	<1	<1
815-SRC-GWTS-E	2/7/07	<1 O	<1
815-SRC-GWTS-E	3/5/07	<1 LO	<1 LO
815-SRC-GWTS-E	4/12/07	<1 LO	<1 LO
815-SRC-GWTS-E	5/7/07	<1	<1
815-SRC-GWTS-E	6/4/07	<1 D	<1 D
815-SRC-GWTS-I	1/10/07	5.6	73
815-SRC-GWTS-I	4/12/07	6.7 LO	74
815-SRC-GWTS-I	4/12/07[a]	7.1 LO	76
Building 817-Proximal			
817-PRX-GWTS-E	1/30/07	<1	<1
817-PRX-GWTS-E	2/5/07	<1 D	<1 D
817-PRX-GWTS-E	3/5/07	<1 LO	<1 LO
817-PRX-GWTS-I	1/30/07	<1	8.8
Building 817-Source			
817-SRC-GWTS-E	1/11/07	<1 D	<1 D
817-SRC-GWTS-E	2/6/07	<1 D	<1 D
817-SRC-GWTS-E	3/7/07	<1	<1
817-SRC-GWTS-E	4/3/07	<1	<1
817-SRC-GWTS-E	5/10/07	<1 D	<1 D
817-SRC-GWTS-E	6/6/07	<1	<1
817-SRC-GWTS-I	1/11/07	12 D	39 D
817-SRC-GWTS-I	4/3/07	14	51
817-SRC-GWTS-I	4/3/07[a]	14	51

Notes:

[a] **Duplicate analysis.**

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

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

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

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

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

Notes:

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

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

Table 2.4-11. High Explosives Process Area 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: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	$Tnbs_2$		WGMG	E502.2	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	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	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: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	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	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	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: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	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	E8330:R+H	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	3		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E8330:R+H	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	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	$Tnbs_2$	M	CMP/WGMG	E601	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	4		
GALLO1	WS	$Tnbs_2$	M	CMP/WGMG	E601	4		

Table 2.4-11 (Cont.). High Explosives 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	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	Y	Next sample required 1stQ 2009.
SPRING14	SPR	$Tnbs_2$	B	CMP	E300.0:PERC	1	Y	Next sample required 1stQ 2009.
SPRING14	SPR	$Tnbs_2$	B	CMP	E601	1	Y	Next sample required 1stQ 2009.
SPRING14	SPR	$Tnbs_2$	B	CMP	E8330:R+H	1	Y	Next sample required 1stQ 2009.
SPRING5	SPR	Tps	A	CMP	E300.0:NO3	1	N	Dry. Sampled as W-817-03A.
SPRING5	SPR	Tps	A	CMP	E300.0:PERC	1	N	Dry. Sampled as W-817-03A.
SPRING5	SPR	Tps	S	CMP	E601	1	N	Dry. Sampled as W-817-03A.
SPRING5	SPR	Tps	A	CMP	E8330:R+H	1	N	Dry. Sampled as W-817-03A.
SPRING5	SPR	Tps	S	CMP	E601	3		
W-35B-01	GW	Qal	S	CMP	E300.0:NO3	1	Y	
W-35B-01	GW	Qal	S	CMP	E300.0:PERC	1	Y	
W-35B-01	GW	Qal	Q	CMP	E601	1	Y	
W-35B-01	GW	Qal	S	CMP	E8330:R+H	1	Y	
W-35B-01	GW	Qal	Q	CMP	E601	2	Y	
W-35B-01	GW	Qal	S	CMP	E300.0:NO3	3		
W-35B-01	GW	Qal	S	CMP	E300.0:PERC	3		
W-35B-01	GW	Qal	Q	CMP	E601	3		
W-35B-01	GW	Qal	S	CMP	E8330:R+H	3		
W-35B-01	GW	Qal	Q	CMP	E601	4		
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-35B-02	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	3		
W-35B-02	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-35B-02	GW	$Tnbs_2$	Q	CMP	E601	4		
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-35B-03	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	3		
W-35B-03	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-35B-03	GW	$Tnbs_2$	Q	CMP	E601	4		
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-35B-04	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-04	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	

Table 2.4-11 (Cont.). High Explosives 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	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-35B-04	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-35B-04	GW	$Tnbs_2$	Q	CMP	E601	3		
W-35B-04	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-35B-04	GW	$Tnbs_2$	Q	CMP	E601	4		
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-35B-05	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-35B-05	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	3		
W-35B-05	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-35B-05	GW	$Tnbs_2$	Q	CMP	E601	4		
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	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-35C-01	MWPT	$Tnsc_2$	S	CMP	E601	3		
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	$Tnbs_1$	A	CMP	E8330:R+H	1	Y	
W-35C-02	MWPT	$Tnbs_1$	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B815-DSB extraction well.
W-35C-04	EW	$Tnbs_2$	S	CMP-TF	E601	3		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	A	CMP	E8330:R+H	1	Y	
W-35C-05	MWPT	Tps	S	CMP	E601	3		
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	A	CMP	E8330:R+H	1	Y	
W-35C-06	MWPT	Qal	S	CMP	E601	3		
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	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-35C-07	MWPT	$Tnsc_2$	S	CMP	E601	3		

Table 2.4-11 (Cont.). High Explosives 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-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	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-35C-08	MWPT	$Tnsc_2$	S	CMP	E601	3		
W-4A	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-4A	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-4A	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-4A	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-4A	MWPT	$Tnbs_2$	S	CMP	E601	3		
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	A	CMP	E8330:R+H	1	Y	
W-4AS	MWPT	Tps	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-4B	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:NO3	1	Y	
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:PERC	1	Y	
W-4C	GW	$Tnsc_1$	Q	CMP	E601	1	Y	
W-4C	GW	$Tnsc_1$	Q	CMP	E601	2	Y	
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:NO3	3		
W-4C	GW	$Tnsc_1$	S	CMP	E300.0:PERC	3		
W-4C	GW	$Tnsc_1$	Q	CMP	E601	3		
W-4C	GW	$Tnsc_1$	Q	CMP	E601	4		
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	A	CMP	E8330:R+H	1	Y	
W-6BD	MWPT	Tps	S	CMP	E601	3		
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	A	CMP	E8330:R+H	1	Y	
W-6BS	MWPT	Tps	S	CMP	E601	3		
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	
W-6CD	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-6CD	MWPT	$Tnbs_2$	S	CMP	E601	3		
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	

Table 2.4-11 (Cont.). High Explosives 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-6CI	MWPT	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-6CI	MWPT	$Tnsc_2$	S	CMP	E601	3		
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	A	CMP	E8330:R+H	1	Y	
W-6CS	MWPT	Tps	S	CMP	E601	3		
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	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-6EI	MWPT	$Tnsc_2$	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B815-DSB extraction well.
W-6ER	EW	$Tnbs_2$	S	CMP-TF	E601	3		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	A	CMP	E8330:R+H	1	Y	
W-6ES	MWPT	Qal	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-6F	MWPT	$Tnbs_2$	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-6G	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-6H	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-6H	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-6H	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-6H	GW	$Tnbs_2$	Q	CMP	E601	3		
W-6H	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-6H	GW	$Tnbs_2$	Q	CMP	E601	4		
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	A	CMP	E8330:R+H	1	Y	

Table 2.4-11 (Cont.). High Explosives 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-6I	MWPT	Tps	S	CMP	E601	3		
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-6J	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-6J	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-6J	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-6J	GW	$Tnbs_2$	Q	CMP	E601	3		
W-6J	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-6J	GW	$Tnbs_2$	Q	CMP	E601	4		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-6K	MWPT	$Tnbs_2$	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-6L	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-806-06A	MWB	$Tnsc_1$	B	CMP	E300.0:NO3	1	Y	Next sample required 1stQ 2009.
W-806-06A	MWB	$Tnsc_1$	B	CMP	E300.0:PERC	1	Y	Next sample required 1stQ 2009.
W-806-06A	MWB	$Tnsc_1$	B	CMP	E601	1	Y	Next sample required 1stQ 2009.
W-806-06A	MWB	$Tnsc_1$	B	CMP	E8330:R+H	1	Y	Next sample required 1stQ 2009.
W-806-07	MWB	$Tnbs_2$	B	CMP	E300.0:NO3	1	N	Dry. Next sample required 1stQ 2009.
W-806-07	MWB	$Tnbs_2$	B	CMP	E300.0:PERC	1	N	Dry. Next sample required 1stQ 2009.
W-806-07	MWB	$Tnbs_2$	B	CMP	E601	1	N	Dry. Next sample required 1stQ 2009.
W-806-07	MWB	$Tnbs_2$	B	CMP	E8330:R+H	1	N	Dry. Next sample required 1stQ 2009.
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	A	CMP	E8330:R+H	1	Y	
W-808-01	MWPT	Tps	S	CMP	E601	3		
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	$Tnsc_2$	A	CMP	E8330:R+H	1	N	Dry.
W-808-02	MWPT	$Tnsc_2$	S	CMP	E601	3		
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	
W-808-03	MWPT	$Tnbs_1$	S	CMP	E601	1	Y	
W-808-03	MWPT	$Tnbs_1$	A	CMP	E8330:R+H	1	Y	
W-808-03	MWPT	$Tnbs_1$	S	CMP	E601	3		
W-809-01	MWPT	Tps	A	CMP	E300.0:NO3	1	Y	
W-809-01	MWPT	Tps	A	CMP	E300.0:PERC	1	Y	

Table 2.4-11 (Cont.). High Explosives 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-809-01	MWPT	Tps	S	CMP	E601	1	Y	
W-809-01	MWPT	Tps	A	CMP	E8330:R+H	1	Y	
W-809-01	MWPT	Tps	S	CMP	E601	3		
W-809-02	MWPT	$Tnbs_2$	B	CMP	E300.0:NO3	1	Y	Next sample required 1stQ 2009.
W-809-02	MWPT	$Tnbs_2$	B	CMP	E300.0:PERC	1	Y	Next sample required 1stQ 2009.
W-809-02	MWPT	$Tnbs_2$	B	CMP	E601	1	Y	Next sample required 1stQ 2009.
W-809-02	MWPT	$Tnbs_2$	B	CMP	E8330:R+H	1	Y	Next sample required 1stQ 2009.
W-809-03	MWPT	$Tnbs_2$	B	CMP	E300.0:NO3	1	Y	Next sample required 1stQ 2009.
W-809-03	MWPT	$Tnbs_2$	B	CMP	E300.0:PERC	1	Y	Next sample required 1stQ 2009.
W-809-03	MWPT	$Tnbs_2$	B	CMP	E601	1	Y	Next sample required 1stQ 2009.
W-809-03	MWPT	$Tnbs_2$	B	CMP	E8330:R+H	1	Y	Next sample required 1stQ 2009.
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	A	CMP	E8330:R+H	1	Y	
W-809-04	MWPT	Tps	S	CMP	E601	3		
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	$Tnbs_1$	A	CMP	E8330:R+H	1	Y	
W-810-01	MWPT	$Tnbs_1$	S	CMP	E601	3		
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	A	CMP	E8330:R+H	1	Y	
W-814-01	MWPT	Tps	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-814-02	MWPT	$Tnbs_2$	S	CMP	E601	3		
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	A	CMP	E8330:R+H	1	N	Dry.
W-814-03	MWPT	Tps	S	CMP	E601	3		
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:NO3	1	Y	
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:PERC	1	Y	
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	1	Y	
W-814-04	GW	$Tnsc_1$	S	CMP	E8330:R+H	1	Y	
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	2	Y	
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:NO3	3		
W-814-04	GW	$Tnsc_1$	S	CMP	E300.0:PERC	3		
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	3		
W-814-04	GW	$Tnsc_1$	S	CMP	E8330:R+H	3		
W-814-04	GW	$Tnsc_1$	Q	CMP	E601	4		

Table 2.4-11 (Cont.). High Explosives 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-814-2138	MWPT	Tpsg	A	CMP	E8330:R+H	1	Y	
W-814-2138	MWPT	Tpsg	A	CMP	E300.0:NO3	1	Y	
W-814-2138	MWPT	Tpsg	A	CMP	E300.0:PERC	1	Y	
W-814-2138	MWPT	Tpsg	A	CMP	E601	1	Y	
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	A	CMP	E8330:R+H	1	N	Dry.
W-815-01	MWPT	Tps	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B815-SRC extraction well.
W-815-02	EW	$Tnbs_2$	S	CMP-TF	E601	3		B815-SRC extraction well.
W-815-03	MWPT	Tps	A	CMP	E300.0:NO3	1	N	Insufficient water.
W-815-03	MWPT	Tps	A	CMP	E300.0:PERC	1	N	Insufficient water.
W-815-03	MWPT	Tps	S	CMP	E601	1	N	Insufficient water.
W-815-03	MWPT	Tps	A	CMP	E8330:R+H	1	N	Insufficient water.
W-815-03	MWPT	Tps	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B815-SRC extraction well.
W-815-04	EW	$Tnbs_2$	S	CMP-TF	E601	3		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	A	CMP	E8330:R+H	1	Y	
W-815-05	MWPT	Tps	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-815-06	MWPT	$Tnbs_2$	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-815-07	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:NO3	1	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:PERC	1	Y	
W-815-08	GW	$Tnbs_1$	Q	CMP	E601	1	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E8330:R+H	1	Y	
W-815-08	GW	$Tnbs_1$	Q	CMP	E601	2	Y	
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:NO3	3		
W-815-08	GW	$Tnbs_1$	S	CMP	E300.0:PERC	3		

Table 2.4-11 (Cont.). High Explosives 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	$Tnbs_1$	Q	CMP	E601	3		
W-815-08	GW	$Tnbs_1$	S	CMP	E8330:R+H	3		
W-815-08	GW	$Tnbs_1$	Q	CMP	E601	4		
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	A	CMP	E8330:R+H	1	N	Dry.
W-815-1928	MWPT	Tps	S	CMP	E601	3		
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-815-2110	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	3		
W-815-2110	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-815-2110	GW	$Tnbs_2$	Q	CMP	E601	4		
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	1	Y	
W-815-2111	GW	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-815-2111	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	3		
W-815-2111	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-815-2111	GW	$Tnbs_2$	Q	CMP	E601	4		
W-815-2217	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-815-2217	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-815-2217	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-815-2217	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-815-2217	MWPT	$Tnbs_2$	S	CMP	E601	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	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B817-SRC extraction well.
W-817-01	EW	$Tnbs_2$	S	CMP-TF	E601	3		B817-SRC extraction well.
W-817-02	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	New B817-PRX injection well.
W-817-02	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	New B817-PRX injection well.
W-817-02	MWPT	$Tnbs_2$	A	CMP	E601	1	Y	New B817-PRX injection well.
W-817-02	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	New B817-PRX injection well.
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.
W-817-03	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	B817-PRX extraction well.
W-817-03	EW	$Tnbs_2$	A	CMP-TF	E8330:R+H	1	Y	B817-PRX extraction well.

Table 2.4-11 (Cont.). High Explosives 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	3		B817-PRX extraction well.
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	A	CMP	E8330:R+H	1	Y	
W-817-03A	MWPT	Tps	S	CMP	E601	3		
W-817-04	EW	$Tnbs_2$	A	CMP-TF	E300.0:NO3	1	Y	B817-PRX extraction well.
W-817-04	EW	$Tnbs_2$	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	$Tnsc_1$	A	CMP	E8330:R+H	1	Y	
W-817-05	MWPT	$Tnsc_1$	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-817-07	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-817-2318	EW	Tpsg		Baseline	E200.7:SI	2	Y	New well. B817-PRX extraction well.
W-817-2318	EW	Tpsg	Q	Baseline	E624	2	Y	New well. B817-PRX extraction well.
W-817-2318	EW	Tpsg	S	Baseline	E8330:R+H	2	Y	New well. B817-PRX extraction well.
W-817-2318	EW	Tpsg		Baseline	GENMIN	2	Y	New well. B817-PRX extraction well.
W-817-2318	EW	Tpsg		Baseline	ICMSRAD	2	Y	New well. B817-PRX extraction well.
W-817-2318	EW	Tpsg	S	Baseline	E300.0:NO3	2	Y	New well. B817-PRX extraction well.
W-817-2318	EW	Tpsg	S	Baseline	E300.0:PERC	2	Y	New well. B817-PRX extraction well.
W-817-2318	EW	Tpsg		Baseline	DWMETALS	2	Y	New well. B817-PRX extraction well.
W-817-2318	EW	Tpsg		Baseline	E900	2	Y	New well. B817-PRX extraction well.
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-818-01	MWPT	$Tnbs_2$	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-818-03	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-818-04	MWPT	$Tnsc_2$	A	CMP	E300.0:NO3	1	Y	
W-818-04	MWPT	$Tnsc_2$	A	CMP	E300.0:PERC	1	Y	
W-818-04	MWPT	$Tnsc_2$	S	CMP	E601	1	Y	
W-818-04	MWPT	$Tnsc_2$	A	CMP	E8330:R+H	1	Y	
W-818-04	MWPT	$Tnsc_2$	S	CMP	E601	3		
W-818-06	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	

Table 2.4-11 (Cont.). High Explosives 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-818-06	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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-818-06	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-818-07	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-818-07	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-818-08	EW	$Tnbs_2$	S	CMP-TF	E601	1	Y	B815-PRX extraction well.
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	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	$Tnbs_2$	S	CMP-TF	E601	1	Y	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	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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-818-11	MWPT	$Tnbs_2$	S	CMP	E601	3		
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	$Tnsc_1$	A	CMP	E8330:R+H	1	Y	
W-819-02	MWPT	$Tnsc_1$	S	CMP	E601	3		
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	A	CMP	E8330:R+H	1	Y	
W-823-01	MWPT	Tps	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-823-02	MWPT	$Tnbs_2$	S	CMP	E601	3		
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	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-823-03	MWPT	$Tnbs_2$	S	CMP	E601	3		
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	

Table 2.4-11 (Cont.). High Explosives 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-823-13	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-823-13	MWPT	$Tnbs_2$	A	CMP	E8330:R+H	1	Y	
W-823-13	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-827-01	MWB	$Tnbs_2$	B	CMP	E300.0:NO3	1	N	Dry. Next sample required 1stQ
W-827-01	MWB	$Tnbs_2$	B	CMP	E300.0:PERC	1	N	Dry. Next sample required 1stQ
W-827-01	MWB	$Tnbs_2$	B	CMP	E601	1	N	Dry. Next sample required 1stQ
W-827-01	MWB	$Tnbs_2$	B	CMP	E8330:R+H	1	N	Dry. Next sample required 1stQ
W-827-02	MWB	$Tnsc_1$	B	CMP	E300.0:NO3	1	Y	Next sample required 1stQ 2009.
W-827-02	MWB	$Tnsc_1$	B	CMP	E300.0:PERC	1	Y	Next sample required 1stQ 2009.
W-827-02	MWB	$Tnsc_1$	B	CMP	E601	1	Y	Next sample required 1stQ 2009.
W-827-02	MWB	$Tnsc_1$	B	CMP	E8330:R+H	1	Y	Next sample required 1stQ 2009.
W-827-03	MWB	$Tnsc_1$	B	CMP	E300.0:NO3	1	Y	Next sample required 1stQ 2009.
W-827-03	MWB	$Tnsc_1$	B	CMP	E300.0:PERC	1	Y	Next sample required 1stQ 2009.
W-827-03	MWB	$Tnsc_1$	B	CMP	E601	1	Y	Next sample required 1stQ 2009.
W-827-03	MWB	$Tnsc_1$	B	CMP	E8330:R+H	1	Y	Next sample required 1stQ 2009.
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	$Tnbs_1$	A	CMP	E8330:R+H	1	Y	
W-827-05	MWPT	$Tnbs_1$	S	CMP	E601	3		
W-829-06	EW	$Tnsc_1$	A	CMP-TF	E300.0:NO3	1	N	B829-SRC extraction well. Pump
W-829-06	EW	$Tnsc_1$	A	CMP-TF	E300.0:PERC	1	N	B829-SRC extraction well. Pump
W-829-06	EW	$Tnsc_1$	S	CMP-TF	E601	1	N	B829-SRC extraction well. Pump
W-829-06	EW	$Tnsc_1$	A	CMP-TF	E8330:R+H	2	N	B829-SRC extraction well. Pump
W-829-06	EW	$Tnsc_1$	S	CMP-TF	E601	3		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-829-1938$	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	E624	1	Y	
W-829-1938$	DMW	$Tnbs_1$		WGMG	E8330:R+H	1	Y	
W-829-1938$	DMW	$Tnbs_1$		WGMG	E8330:TNT	1	Y	
W-829-1938$	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
W-829-1938$	DMW	$Tnbs_1$		WGMG	E624	2	Y	
W-829-1938$	DMW	$Tnbs_1$		WGMG	E8330:R+H	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	$Tnsc_1$	A	CMP	E8330:R+H	1	Y	
W-829-1940	MWPT	$Tnsc_1$	S	CMP	E601	3		
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-880-01	GW	$Tnbs_2$	S	CMP	E300.0:NO3	1	Y	
W-880-01	GW	$Tnbs_2$	S	CMP	E300.0:PERC	1	Y	

Table 2.4-11 (Cont.). High Explosives 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	$Tnbs_2$	S	CMP	E8330:R+H	1	Y	
W-880-01	GW	$Tnbs_2$	Q	CMP	E601	2	Y	
W-880-01	GW	$Tnbs_2$	S	CMP	E300.0:NO3	3		
W-880-01	GW	$Tnbs_2$	S	CMP	E300.0:PERC	3		
W-880-01	GW	$Tnbs_2$	Q	CMP	E601	3		
W-880-01	GW	$Tnbs_2$	S	CMP	E8330:R+H	3		
W-880-01	GW	$Tnbs_2$	Q	CMP	E601	4		
W-880-02	GW	Qal	S	CMP	E300.0:NO3	1	Y	
W-880-02	GW	Qal	S	CMP	E300.0:PERC	1	Y	
W-880-02	GW	Qal	Q	CMP	E601	1	Y	
W-880-02	GW	Qal	S	CMP	E8330:R+H	1	Y	
W-880-02	GW	Qal	Q	CMP	E601	2	Y	
W-880-02	GW	Qal	S	CMP	E300.0:NO3	3		
W-880-02	GW	Qal	S	CMP	E300.0:PERC	3		
W-880-02	GW	Qal	Q	CMP	E601	3		
W-880-02	GW	Qal	S	CMP	E8330:R+H	3		
W-880-02	GW	Qal	Q	CMP	E601	4		
W-880-03	GW	$Tnsc_1$	S	CMP	E300.0:NO3	1	Y	
W-880-03	GW	$Tnsc_1$	S	CMP	E300.0:PERC	1	Y	
W-880-03	GW	$Tnsc_1$	Q	CMP	E601	1	Y	
W-880-03	GW	$Tnsc_1$	S	CMP	E8330:R+H	1	Y	
W-880-03	GW	$Tnsc_1$	Q	CMP	E601	2	Y	
W-880-03	GW	$Tnsc_1$	S	CMP	E300.0:NO3	3		
W-880-03	GW	$Tnsc_1$	S	CMP	E300.0:PERC	3		
W-880-03	GW	$Tnsc_1$	Q	CMP	E601	3		
W-880-03	GW	$Tnsc_1$	S	CMP	E8330:R+H	3		
W-880-03	GW	$Tnsc_1$	Q	CMP	E601	4		
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: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	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	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	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: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	

Table 2.4-11 (Cont.). High Explosives 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	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	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	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:PERC	3		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	3		
WELL 18	WS	$Tnbs_1$	M	CMP/WGMG	E300.0:PERC	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	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	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	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	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	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: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	$Tnbs_1$		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	$Tnbs_1$	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	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	E300.0:NO3	2	Y	

Table 2.4-11 (Cont.). High Explosives 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: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: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	
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	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	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: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	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	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	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	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	$Tnbs_1$	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	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 Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.4-12. Building 815-Source (815-SRC) mass removed, January 1, 2007 through June 30, 2007.

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)
815-SRC	January	NA	1.3	2.5	18	12	NA
	February	NA	1.1	2.0	14	9.3	NA
	March	NA	0.98	1.8	13	8.5	NA
	April	NA	1.4	2.6	20	13	NA
	May	NA	1.3	2.4	18	12	NA
	June	NA	1.2	2.3	17	11	NA
Total		NA	7.3	14	100	66	NA

Notes:

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

Table 2.4-13. Building 815-Proximal (815-PRX) mass removed, January 1, 2007 through June 30, 2007.

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)
815-PRX	January	NA	4.4	1.1	13	NA	NA
	February	NA	7.2	1.8	22	NA	NA
	March	NA	3.4	0.85	10	NA	NA
	April	NA	0.051	0.012	0.14	NA	NA
	May	NA	0	0	0	NA	NA
	June	NA	4.4	1.1	13	NA	NA
Total		NA	19	4.9	59	NA	NA

Notes:

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

Table 2.4-14. Building 815-Distal Site Boundary (815-DSB) mass removed, January 1, 2007 through June 30, 2007.

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)
815-DSB	January	NA	8.0	NA	NA	NA	NA
	February	NA	5.9	NA	NA	NA	NA
	March	NA	5.8	NA	NA	NA	NA
	April	NA	6.9	NA	NA	NA	NA
	May	NA	5.8	NA	NA	NA	NA
	June	NA	5.4	NA	NA	NA	NA
Total		NA	38	NA	NA	NA	NA

Table 2.4-15. Building 817-Source (817-SRC) mass removed, January 1, 2007 through June 30, 2007.

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)
817-SRC	January	NA	NA	0.033	0.079	0.036	NA
	February	NA	NA	0.10	0.25	0.11	NA
	March	NA	NA	0.094	0.23	0.10	NA
	April	NA	NA	0.085	0.25	0.15	NA
	May	NA	NA	0.074	0.22	0.14	NA
	June	NA	NA	0.059	0.17	0.11	NA
Total		NA	NA	0.45	1.2	0.65	NA

Notes:

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

Table 2.4-16. Building 817-Proximal (817-PRX) mass removed, January 1, 2007 through June 30, 2007.

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)
817-PRX	January	NA	0.061	0.18	0.80	0.031	NA
	February	NA	1.5	4.3	13	1.3	NA
	March	NA	0.067	0.19	0.59	0.058	NA
	April	NA	0	0	0	0	NA
	May	NA	0	0	0	0	NA
	June	NA	0	0	0	0	NA
Total		NA	1.6	4.7	14	1.4	NA

Notes:

***Nitrate re-injected into the Tnbs$_2$ HSU undergoes in-situ biotransformation to benign N_2 gas by anaerobic denitrifying bacteria.**

Table 2.4-17. Building 829-Source (829-SRC) mass removed, January 1, 2007 through June 30, 2007.

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)
829-SRC	January	NA	0	0	0	NA	NA
	February	NA	0	0	0	NA	NA
	March	NA	0	0	0	NA	NA
	April	NA	0	0	0	NA	NA
	May	NA	0	0	0	NA	NA
	June	NA	0.00040	0.00023	0.0014	NA	NA
Total		NA	0.00040	0.00023	0.0014	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:UISO	1	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E8260	1	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	MS:UISO	2	Y	
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		
K1-01C*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-01C*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-01C*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-01C*	DMW	$Tnbs_1$		WGMG	E906	4		
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:THISO	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:UISO	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:NO3	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:PERC	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E8260	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E906	1	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:THISO	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:UISO	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:NO3	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:PERC	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E8260	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	E906	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	MS:UISO	2	Y	
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:THISO	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:UISO	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:NO3	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:PERC	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	E624	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	E906	3		
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:THISO	4		
K1-02B*	DMW	$Tnbs_0$		WGMG	AS:UISO	4		
K1-02B*	DMW	$Tnbs_0$		WGMG	E300.0:NO3	4		

Table 2.5-1 (Cont.). 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	E300.0:PERC	4		
K1-02B*	DMW	$Tnbs_0$		WGMG	E624	4		
K1-02B*	DMW	$Tnbs_0$		WGMG	E906	4		
K1-03*	DMW	$Tnbs_1$		WGMG	AS:THISO	1	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	AS:UISO	1	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	E624	1	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	E906	1	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	E624	2	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	E906	2	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	MS:UISO	2	N	Replaced by W-PIT1-02 due to inoperable and stuck pump.
K1-03*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-03*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-03*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-03*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-03*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		
K1-03*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-03*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-03*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-03*	DMW	$Tnbs_1$		WGMG	E906	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E8260	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	1	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E8260	2	Y	

Table 2.5-1 (Cont.). 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	E906	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	MS:UISO	2	Y	
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	3		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	3		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	3		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	3		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E624	3		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	3		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:THISO	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	AS:UISO	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:NO3	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E300.0:PERC	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E624	4		
K1-04*	DMW	$Tnbs_1/Tnbs_0$		WGMG	E906	4		
K1-05*	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E8260	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	MS:UISO	2	Y	
K1-05*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-05*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-05*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-05*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-05*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		
K1-05*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-05*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-05*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-05*	DMW	$Tnbs_1$		WGMG	E906	4		
K1-06	DMW	$Tnbs_1$		DIS	E906	1	Y	
K1-06	DMW	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
K1-06	DMW	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
K1-06	DMW	$Tnbs_1$	S	CMP	E906	2	Y	
K1-06	DMW	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
K1-06	DMW	$Tnbs_1$	S	CMP	E906	4		
K1-07*	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	

Table 2.5-1 (Cont.). 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	E300.0:NO3	1	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E8260	1	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	MS:UISO	2	Y	
K1-07*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-07*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-07*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-07*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-07*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		
K1-07*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-07*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-07*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-07*	DMW	$Tnbs_1$		WGMG	E906	4		
K1-08*	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E8260	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-08*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-08*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-08*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-08*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-08*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		
K1-08*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-08*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-08*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-08*	DMW	$Tnbs_1$		WGMG	E906	4		

Table 2.5-1 (Cont.). 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:THISO	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E8260	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E906	1	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E8260	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	E906	2	Y	
K1-09*	DMW	$Tnbs_1$		WGMG	AS:THISO	3		
K1-09*	DMW	$Tnbs_1$		WGMG	AS:UISO	3		
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	3		
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	3		
K1-09*	DMW	$Tnbs_1$		WGMG	E624	3		
K1-09*	DMW	$Tnbs_1$		WGMG	E906	3		
K1-09*	DMW	$Tnbs_1$		WGMG	AS:THISO	4		
K1-09*	DMW	$Tnbs_1$		WGMG	AS:UISO	4		
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:NO3	4		
K1-09*	DMW	$Tnbs_1$		WGMG	E300.0:PERC	4		
K1-09*	DMW	$Tnbs_1$		WGMG	E624	4		
K1-09*	DMW	$Tnbs_1$		WGMG	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
K2-03	MWPT	$Tnbs_1$	S	CMP	E906	4		
K2-04D	MWPT	$Tnbs_1$		WGMG	AS:UISO	2		
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	$Tnbs_1$	A	CMP/WGMG	MS:UISO	2	Y	
K2-04D	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	4		
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	$Tnbs_1$	A	CMP/WGMG	MS:UISO	2	Y	
K2-04S	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-05	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-05A	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-05A	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	

Table 2.5-1 (Cont.). 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
NC2-05A	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-05A	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-05A	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-06	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-06A	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-09	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-10	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP/WGMG	MS:UISO	2	Y	
NC2-11D	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-11I	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-11S	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-12D	MWPT	$Tnbs_1$		DIS	MS:UISO	1	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	$Tnbs_1$	S	CMP/WGMG	E906	2	Y	
NC2-12D	MWPT	$Tnbs_1$	A	CMP/WGMG	MS:UISO	2	Y	
NC2-12D	MWPT	$Tnbs_1$		WGMG	E601	4		
NC2-12D	MWPT	$Tnbs_1$	S	CMP/WGMG	E906	4		
NC2-12I	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-12I	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	

Table 2.5-1 (Cont.). 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
NC2-12I	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-12I	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-12S	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-12S	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-12S	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-12S	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-13	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-13	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-14S	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC2-14S	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-14S	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-14S	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-14S	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-14S	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-15	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC2-15	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-15	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-15	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-15	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-16	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-16	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC2-16	MWPT	$Tnbs_1$	A	CMP	E906	2	Y	
NC2-16	MWPT	$Tnbs_1$	S	CMP	E300.0:NO3	2	Y	
NC2-16	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-16	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC2-17	MWPT	$Tnbs_1$			E300.0:NO3	2	Y	
NC2-17	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC2-17	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC2-17	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-17	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	4		
NC2-17	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-18	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-19	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	

Table 2.5-1 (Cont.). 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
NC2-20	MWPT	$Tnbs_0$	A	CMP	MS:UISO	2	Y	
NC2-20	MWPT	$Tnbs_0$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC2-21	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-10	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-10	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	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	$Tnbs_1$	A	DIS	MS:UISO	2	Y	
NC7-10	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-11	MWPT	$Qal/Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-11	MWPT	$Qal/Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-11	MWPT	$Qal/Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-11	MWPT	$Qal/Tnbs_1$	S	CMP	E906	2	Y	
NC7-11	MWPT	$Qal/Tnbs_1$	A	DIS	MS:UISO	2	Y	
NC7-11	MWPT	$Qal/Tnbs_1$	S	CMP	E906	4		
NC7-14	MWPT	$Qal/Tnbs_1$	A	CMP	E300.0:NO3	2	N	Dry.
NC7-14	MWPT	$Qal/Tnbs_1$		DIS	E300.0:PERC	2	N	Dry.
NC7-14	MWPT	$Qal/Tnbs_1$	S	CMP	E906	2	N	Dry.
NC7-14	MWPT	$Qal/Tnbs_1$	A	CMP	MS:UISO	2	N	Dry.
NC7-14	MWPT	$Qal/Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-15	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Qal/Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-19	MWPT	$Qal/Tnbs_1$	S	CMP	E906	4		
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	$Tnsc_0$	A	CMP	MS:UISO	2	Y	
NC7-27	MWPT	$Tnsc_0$	S	CMP	E906	4		
NC7-28	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-28	MWPT	$Tnbs_1$		DIS	MS:UISO	1	Y	
NC7-28	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-28	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-29	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	

Table 2.5-1 (Cont.). 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
NC7-29	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-29	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-29	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-29	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-29	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-43	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-43	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-43	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-43	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-43	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-43	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-44	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-45	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	N	Cannot be sampled-bent casing.
NC7-45	MWPT	$Tnbs_1$	S	CMP	E906	2	N	Cannot be sampled-bent casing.
NC7-45	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	N	Cannot be sampled-bent casing.
NC7-45	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-46	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-54	MWPT	Qal	A	CMP	E300.0:NO3	2	Y	
NC7-54	MWPT	Qal	S	CMP	E906	2	Y	
NC7-54	MWPT	Qal	A	CMP	MS:UISO	2	Y	
NC7-54	MWPT	Qal	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	N	Dry.
NC7-55	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-56	MWPT	Qal/$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-56	MWPT	Qal/$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-56	MWPT	Qal/$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-56	MWPT	Qal/$Tnbs_1$	S	CMP	E906	2	Y	
NC7-56	MWPT	Qal/$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-56	MWPT	Qal/$Tnbs_1$	S	CMP	E906	4		
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	A	CMP	MS:UISO	2	N	Dry.
NC7-57	MWPT	Qal	S	CMP	E906	4		
NC7-58	MWPT	Qal		DIS	E300.0:PERC	1	Y	
NC7-58	MWPT	Qal		DIS	E300.0:PERC	2	Y	
NC7-58	MWPT	Qal	A	CMP	E300.0:NO3	2	Y	
NC7-58	MWPT	Qal	S	CMP	E906	2	Y	

Table 2.5-1 (Cont.). 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
NC7-58	MWPT	Qal	A	CMP	MS:UISO	2	Y	
NC7-58	MWPT	Qal	S	CMP	E906	4		
NC7-59	MWPT	Qal/$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-59	MWPT	Qal/$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-59	MWPT	Qal/$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-59	MWPT	Qal/$Tnbs_1$	S	CMP	E906	2	Y	
NC7-59	MWPT	Qal/$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-59	MWPT	Qal/$Tnbs_1$	S	CMP	E906	4		
NC7-60	MWPT	$Tnbs_0$		DIS	E300.0:PERC	1	Y	
NC7-60	MWPT	$Tnbs_0$		DIS	E300.0:PERC	2	Y	
NC7-60	MWPT	$Tnbs_0$	A	CMP	E300.0:NO3	2	Y	
NC7-60	MWPT	$Tnbs_0$	S	CMP	E906	2	Y	
NC7-60	MWPT	$Tnbs_0$	A	CMP	MS:UISO	2	Y	
NC7-60	MWPT	$Tnbs_0$	S	CMP	E906	4		
NC7-61	MWPT	$Tnbs_0$		WGMG	E300.0:PERC	1	Y	
NC7-61	MWPT	$Tnbs_0$		DIS	MS:UISO	1	Y	
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	2	Y	
NC7-61	MWPT	$Tnbs_0$	S	CMP/WGMG	E906	2	Y	
NC7-61	MWPT	$Tnbs_0$	A	CMP/WGMG	MS:UISO	2	Y	
NC7-61	MWPT	$Tnbs_0$	S	CMP/WGMG	E906	4		
NC7-62	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-62	MWPT	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
NC7-62	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-62	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-62	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-62	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-69	MWPT	Tmss		WGMG	AS:UISO	2	Y	
NC7-69	MWPT	Tmss	A	CMP/WGMG	E300.0:NO3	2	Y	
NC7-69	MWPT	Tmss		WGMG	E300.0:PERC	2	Y	
NC7-69	MWPT	Tmss		WGMG	E601	2	Y	
NC7-69	MWPT	Tmss	S	CMP/WGMG	E906	2	Y	
NC7-69	MWPT	Tmss	A	CMP/WGMG	MS:UISO	2	Y	
NC7-69	MWPT	Tmss		WGMG	E300.0:NO2	4		
NC7-69	MWPT	Tmss		WGMG	E300.0:O-PO2	4		
NC7-69	MWPT	Tmss		WGMG	E350.2	4		
NC7-69	MWPT	Tmss		WGMG	E601	4		
NC7-69	MWPT	Tmss	S	CMP/WGMG	E906	4		
NC7-70	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-70	MWPT	$Tnbs_1$		DIS	MS:UISO	1	Y	
NC7-70	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-70	MWPT	$Tnbs_1$		DIS	MS:UISO	3		
NC7-70	MWPT	$Tnbs_1$	S	CMP	E906	4		

Table 2.5-1 (Cont.). 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
NC7-70	MWPT	$Tnbs_1$		DIS	MS:UISO	4		
NC7-71	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-71	MWPT	$Tnbs_1$	A	CMP	MS:UISO	1	Y	
NC7-71	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-71	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-72	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-72	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-72	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-72	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-72	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-72	MWPT	$Tnbs_1$	S	CMP	E906	4		
NC7-73	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC7-73	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
NC7-73	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
NC7-73	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
NC7-73	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-73	MWPT	$Tnbs_1$	S	CMP	E906	4		
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	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
NC7-76	MWPT	$Tnbs_1$	S	CMP	E906	4		
SPRING24	SPR	$Tnbs_0/Tnbs_1$		DIS	E300.0:PERC	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	$Tnbs_0/Tnbs_1$	A	CMP	MS:UISO	2	Y	
SPRING24	SPR	$Tnbs_0/Tnbs_1$	S	DIS	E906	3		
SPRING24	SPR	$Tnbs_0/Tnbs_1$	S	CMP	E906	4		
W-850-05	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-850-05	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W-850-05	MWPT	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
W-850-05	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
W-850-05	MWPT	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
W-850-05	MWPT	$Tnbs_1$		DIS	DWMETALS	4		
W-850-05	MWPT	$Tnbs_1$	S	CMP	E906	4		
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$	A	CMP	E300.0:NO3	2	Y	
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$		DIS	E300.0:PERC	2	Y	
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$	S	CMP	E906	2	Y	
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$	A	CMP	MS:UISO	2	N	
W-850-2145	MWPT	$Tnbs_1/Tnbs_0$	S	CMP	E906	4		
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E601	1	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	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	2	Y	

Table 2.5-1 (Cont.). 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-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$	A	CMP	MS:UISO	2	Y	
W-865-1802	MWPT	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	4		
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$		DIS	E601	1	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	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$	A	CMP	MS:UISO	2	Y	
W-865-1803	MWPT	$Tnbs_0$-$Tnsc_0$	S	CMP	E906	4		
W8SPRNG	SPR	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
W8SPRNG	SPR	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
W8SPRNG	SPR	$Tnbs_1$		DIS	E300.0:PERC	2	Y	
W8SPRNG	SPR	$Tnbs_1$	S	CMP	E906	2	Y	
W8SPRNG	SPR	$Tnbs_1$	A	CMP	MS:UISO	2	Y	
W8SPRNG	SPR	$Tnbs_1$	S	CMP	E906	4		
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E300.0:NO3	1	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E601	1	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	DWMETALS	1	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E602	1	Y	
W-PIT1-02	MWPT	$Tnbs_1$		DIS	E906	1	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	AS:THISO	1	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	AS:UISO	1	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	E300.0:NO3	1	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	E300.0:PERC	1	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	E624	1	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	E906	1	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	AS:THISO	2	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	AS:UISO	2	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	E300.0:NO3	2	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	E300.0:PERC	2	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	E624	2	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	E906	2	Y	
W-PIT1-02	DMW	$Tnbs_1$		WGMG	MS:UISO	2	Y	
W-PIT1-2204	MWPT	Qal/$Tnbs_1$-cong		Baseline	DWMETALS	1	N	Dry.
W-PIT1-2204	MWPT	Qal/$Tnbs_1$-cong		Baseline	E200.7:SI	1	N	Dry.
W-PIT1-2204	MWPT	Qal/$Tnbs_1$-cong		Baseline	E624	1	N	Dry.
W-PIT1-2204	MWPT	Qal/$Tnbs_1$-cong		Baseline	E8330:R+H	1	N	Dry.
W-PIT1-2204	MWPT	Qal/$Tnbs_1$-cong		Baseline	GENMIN	1	N	Dry.
W-PIT1-2204	MWPT	Qal/$Tnbs_1$-cong		Baseline	MS:UISO	1	N	Dry.
W-PIT1-2204	MWPT	Qal/$Tnbs_1$-cong		Baseline	E300.0:NO3	1	N	Dry.
W-PIT1-2204	MWPT	Qal/$Tnbs_1$-cong		Baseline	E300.0:PERC	1	N	Dry.

Table 2.5-1 (Cont.). 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-PIT1-2204	MWPT	$Qal/Tnbs_1$-cong		Baseline	E900	1	N	Dry.
W-PIT1-2204	MWPT	$Qal/Tnbs_1$-cong		Baseline	E906	1	N	Dry.
W-PIT1-2204	MWPT	$Qal/Tnbs_1$-cong	S	CMP	E906	2	N	Dry.
W-PIT1-2204	MWPT	$Qal/Tnbs_1$-cong	A	CMP	MS:UISO	2	N	Dry.
W-PIT1-2204	MWPT	$Qal/Tnbs_1$-cong	A	CMP	E300.0:NO3	2	N	Dry.
W-PIT1-2204	MWPT	$Qal/Tnbs_1$-cong	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT1-2204	MWPT	$Qal/Tnbs_1$-cong	S	CMP	E906	4		
W-PIT1-2209	MWPT	$Tnbs_1$		DIS	E906	1	Y	
W-PIT1-2209	MWPT	$Tnbs_1$		DIS	E601	1	Y	
W-PIT1-2209	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	1	Y	
W-PIT1-2209	MWPT	$Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-PIT1-2209	MWPT	$Tnbs_1$	S	CMP	E906	2	Y	
W-PIT1-2209	MWPT	$Tnbs_1$	A	CMP	MS:UISO	4		
W-PIT1-2209	MWPT	$Tnbs_1$	S	CMP	E906	4		
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$	Q	CMP	E906	1	N	Waiting for pump equipment installation.
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$		Baseline	DWMETALS	1	N	Waiting for pump equipment installation.
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$		Baseline	E200.7:SI	1	N	Waiting for pump equipment installation.
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$		Baseline	E624	1	N	Waiting for pump equipment installation.
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$		Baseline	E8330:R+H	1	N	Waiting for pump equipment installation.
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$		Baseline	GENMIN	1	N	Waiting for pump equipment installation.
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$		Baseline	MS:UISO	1	N	Waiting for pump equipment installation.
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$		Baseline	E300.0:NO3	1	N	Waiting for pump equipment installation.
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$		Baseline	E300.0:PERC	1	N	Waiting for pump equipment installation.
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$		Baseline	E900	1	N	Waiting for pump equipment installation.
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$	Q	CMP	E906	2	N	Waiting for pump equipment installation.
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$	Q	CMP	E906	3		
W-PIT1-2225	GW	$Tnbs_1/Tnbs_0$	Q	CMP	E906	4		
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	$Tnsc_0$	A	CMP	MS:UISO	2	Y	
W-PIT7-16	MWPT	$Tnsc_0$	S	CMP	E906	4		

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: perchlorate (E300.0:PERC) for select wells.
Building 850 secondary COC: uranium (MS:UISO).
Contaminants of Concern in the Vadose Zone not detected in Ground Water: PCBs.
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.6-1. Building 854-Source (854-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
854-SRC	January	322	765	905	155,837
	February	0	671	0	112,797
	March	0	666	0	120,799
	April	30	565	620	99,306
	May	0	839	0	133,981
	June	0	671	0	97,111
Total		352	4,177	1,525	719,831

Table 2.6-2. Building 854-Proximal (854-PRX) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
854-PRX	January	NA	27	NA	2,095
	February	NA	199	NA	16,310
	March	NA	304	NA	24,950
	April	NA	334	NA	27,159
	May	NA	47	NA	4,194
	June	NA	73	NA	6,003
Total		NA	984	NA	80,711

Table 2.6-3. Building 854-Distal (854-DIS) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
854-DIS	January	NA	1	NA	65
	February	NA	14	NA	779
	March	NA	14	NA	804
	April	NA	15	NA	843
	May	NA	22	NA	1,155
	June	NA	17	NA	926
Total		NA	83	NA	4,572

Table 2.6-4. 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-Distal															
854-DIS-GWTS-E	2/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-E	3/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-E	4/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-E	5/14/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-E	6/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-I	2/7/07	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-I	4/11/07	49	<0.5	0.65	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-DIS-GWTS-I	4/11/07[a]	50	<0.5	0.61	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 854-Proximal															
854-PRX-GWTS-E	2/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-E	3/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-E	4/3/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-E	5/15/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-E	6/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-I	2/12/07	33	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-I	4/3/07	39	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-I	4/3/07[a]	41	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-PRX-GWTS-I	6/6/07	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 854-Source															
854-SRC-GWTS-E	1/11/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-E	2/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-E	3/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-E	4/5/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-E	5/14/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-E	6/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-I	1/11/07	74	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-I	4/5/07	110 D	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
854-SRC-GWTS-I	4/5/07[a]	93 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] **Duplicate analysis.**

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

Table 2.6-5. Building 854 OU nitrate and perchlorate in ground water treatment system influent and effluent.

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (µg/L)
Building 854-Distal			
854-DIS-GWTS-E	2/7/07	<0.44	<4
854-DIS-GWTS-E	3/7/07	<0.5	<4
854-DIS-GWTS-E	4/11/07	<0.5	<4
854-DIS-GWTS-E	5/14/07	<0.5	<4
854-DIS-GWTS-E	6/6/07	<0.5	<4
854-DIS-GWTS-I	2/7/07	24	4.2
854-DIS-GWTS-I	4/11/07	22	<4
854-DIS-GWTS-I	4/11/07[a]	-	<4
Building 854-Proximal			
854-PRX-GWTS-E	2/12/07	23	<4
854-PRX-GWTS-E	3/7/07	36	<4
854-PRX-GWTS-E	4/3/07	37	<4
854-PRX-GWTS-E	5/15/07	47	<4
854-PRX-GWTS-E	6/6/07	33	18
854-PRX-GWTS-E	6/28/07	24	-
854-PRX-GWTS-I	2/12/07	45	13
854-PRX-GWTS-I	4/3/07	46	12
854-PRX-GWTS-I	4/3/07[a]	46	13
854-PRX-GWTS-I	6/6/07	45	13
Building 854-Source			
854-SRC-GWTS-E	1/11/07	47	<4
854-SRC-GWTS-E	2/12/07	45	<4
854-SRC-GWTS-E	3/7/07	46	<4
854-SRC-GWTS-E	4/5/07	59	<4
854-SRC-GWTS-E	5/14/07	46	<4
854-SRC-GWTS-E	6/6/07	43	<4
854-SRC-GWTS-I	1/11/07	49	<4
854-SRC-GWTS-I	4/5/07	48	4.4
854-SRC-GWTS-I	4/5/07[a]	48	4.9

Notes:

[a] **Duplicate analysis.**

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

Table 2.6-6. Building 854 OU treatment facility sampling and analysis plan.

Sample location	Sample identification	Parameter	Frequency
854-SRC GWTS			
Influent Port	854-SRC-I	VOCs	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
		pH	Quarterly
Effluent Port	854-SRC-E	VOCs	Monthly
		Perchlorate	Monthly
		Nitrate	Monthly
		pH	Monthly
854-SRC SVE			
Influent Port	W-854-1834-854-SRC-VI	No Monitoring Requirements	
Effluent Port	854-SRC-E	VOCs	Weekly[a]
Intermediate GAC	854-SRC-VCF3I	VOCs	Weekly[a]
854-PRX GWTS			
Influent Port	W-854-03-854-PRX-I	VOCs	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
		pH	Quarterly
Effluent Port	854-PRX-BTU-I	VOCs	Monthly
Effluent Port	854-PRX-E	Perchlorate	Monthly
		Nitrate	Monthly
		pH	Monthly
854-DIS GWTS			
Influent Port	W-854-2139-854-DIS-I	VOCs	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
		pH	Quarterly
Effluent Port	854-DIS-E	VOCs	Monthly
		Perchlorate	Monthly
		Nitrate	Monthly
		pH	Monthly

Notes:

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

Table 2.6-7. 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-$Tnbs_1$	Q	CMP	E601	1	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	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	N	Dry.
SPRING18	SPR	$Tnbs_1$		DIS	DWMETALS	2	N	Dry.
SPRING18	SPR	$Tnbs_1$		DIS	E210.2	2	N	Dry.
SPRING18	SPR	$Tnbs_1$		DIS	E601	2	N	Dry.
SPRING18	SPR	$Tnbs_1$		DIS	E8330:R+H	2	N	Dry.
SPRING18	SPR	$Tnbs_1$		DIS	E900	2	N	Dry.
SPRING18	SPR	$Tnbs_1$		DIS	E906	2	N	Dry.
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		

Table 2.6-7 (Cont.). 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	$Tnbs_1$	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	
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	EW	$Tnsbs_0$	A	CMP-TF	E300.0:NO3	2	Y	B854-SRC extraction well.
W-854-10	EW	$Tnsbs_0$	A	CMP-TF	E300.0:PERC	2	Y	B854-SRC extraction well.
W-854-10	EW	$Tnsbs_0$	S	CMP-TF	E601	2	Y	B854-SRC extraction well.
W-854-10	EW	$Tnsbs_0$	S	CMP-TF	E601	4		B854-SRC extraction well.
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	NA	Next sample required 2ndQ 2008.
W-854-12	MWPT	Tmss	B	CMP	E300.0:PERC	2	NA	Next sample required 2ndQ 2008.
W-854-12	MWPT	Tmss	B	CMP	E601	2	NA	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	$Tnsc_0$	B	CMP	E8082A	2	Y	Next sample required 2ndQ 2007.
W-854-13	MWPT	$Tnsc_0$	S	CMP	E601	4		
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	EW	$Tnsbs_0$-$Tnsc_0$	A	CMP-TF	E300.0:NO3	2	Y	B854-SRC extraction well.
W-854-17	EW	$Tnsbs_0$-$Tnsc_0$	A	CMP-TF	E300.0:PERC	2	Y	B854-SRC extraction well.
W-854-17	EW	$Tnsbs_0$-$Tnsc_0$	S	CMP-TF	E601	2	Y	B854-SRC extraction well.
W-854-17	EW	$Tnsbs_0$-$Tnsc_0$	S	CMP-TF	E601	4		B854-SRC extraction well.
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	

Table 2.6-7 (Cont.). 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	A	CMP	E300.0:PERC	2	Y	
W-854-1731	MWPT	Tmss	S	CMP	E601	2	Y	
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	EW	$Tnbs_1$	A	CMP-TF	E300.0:NO3	2	Y	B854-SRC extraction well.
W-854-18A	EW	$Tnbs_1$	A	CMP-TF	E300.0:PERC	2	Y	B854-SRC extraction well.
W-854-18A	EW	$Tnbs_1$	S	CMP-TF	E601	2	Y	B854-SRC extraction well.
W-854-18A	EW	$Tnbs_1$	S	CMP-TF	E601	4		B854-SRC extraction well.
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	$Tnsbs_1$-$Tnsc_0$	A	CMP	E300.0:NO3	2	Y	
W-854-2115	MWPT	$Tnsbs_1$-$Tnsc_0$	A	CMP	E300.0:PERC	2	Y	
W-854-2115	MWPT	$Tnsbs_1$-$Tnsc_0$	S	CMP	E601	2	Y	
W-854-2115	MWPT	$Tnsbs_1$-$Tnsc_0$	S	CMP	E601	4		
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$	S	CMP-TF	E601	2	Y	B854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$	A	CMP-TF	E300.0:PERC	2	Y	B854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$	A	CMP-TF	E300.0:NO3	2	Y	B854-DIS extraction well.
W-854-2139	EW	$Tnsbs_1$-$Tnsc_0$	S	CMP-TF	E601	4		B854-DIS extraction well.
W-854-2218	EW	$Tnbs_1$	A	CMP-TF	E300.0:NO3	2	Y	B854-SRC extraction well.
W-854-2218	EW	$Tnbs_1$	A	CMP-TF	E300.0:PERC	2	Y	B854-SRC extraction well.
W-854-2218	EW	$Tnbs_1$	S	CMP-TF	E601	2	Y	B854-SRC extraction well.
W-854-2218	EW	$Tnbs_1$	S	CMP-TF	E601	4		B854-SRC extraction well.
W-854-45	MWPT	$Tnbs_1$	A	CMP	E300.0:NO3	2	Y	
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	N	Dry.
W-854-F2	MWPT	Qls-$Tnbs_1$	B	CMP	E300.0:PERC	2	N	Dry.
W-854-F2	MWPT	Qls-$Tnbs_1$	B	CMP	E601	2	N	Dry.

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

Table 2.6-8. Building 854-Source (854-SRC) mass removed, January 1, 2007 through June 30, 2007.

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)
854-SRC	January	400	35	1.8	29	NA	NA
	February	0	22	0.78	20	NA	NA
	March	0	24	0.96	22	NA	NA
	April	270	38	1.3	18	NA	NA
	May	0	46	1.4	24	NA	NA
	June	0	31	0.94	17	NA	NA
Total		670	200	7.2	130	NA	NA

Table 2.6-9. Building 854-Proximal (854-PRX) mass removed, January 1, 2007 through June 30, 2007.

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)
854-PRX	January	NA	0.40	0	0.37	NA	NA
	February	NA	2.0	0.80	2.8	NA	NA
	March	NA	3.1	1.2	4.3	NA	NA
	April	NA	4.2	1.3	4.7	NA	NA
	May	NA	0.65	0.21	0.73	NA	NA
	June	NA	0.91	0.30	1.0	NA	NA
Total		NA	11	3.9	14	NA	NA

Table 2.6-10. Building 854-Distal (854-DIS) mass removed, January 1, 2007 through June 30, 2007.

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)
854-DIS	January	NA	0.0098	0.0013	0.0027	NA	NA
	February	NA	0.13	0.012	0.071	NA	NA
	March	NA	0.13	0.013	0.073	NA	NA
	April	NA	0.16	0	0.070	NA	NA
	May	NA	0.22	0	0.096	NA	NA
	June	NA	0.18	0	0.077	NA	NA
Total		NA	0.83	0.026	0.39	NA	NA

Table 2.7-1. Building 832-Source (832-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
832-SRC	January	411	411	76	1,426
	February	546	546	96	13,919
	March	696	696	127	22,835
	April	624	624	90	21,236
	May	648	648	127	23,491
	June	672	672	103	17,432
Total		3,597	3,597	619	100,339

Table 2.7-2. Building 830-Source (830-SRC) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
830-SRC	January	0	109	0	21,500
	February	0	29	0	5,018
	March	0	0	0	48
	April	73	84	98	15,484
	May	625	377	1,030	43,867
	June	648	644	1,199	49,236
Total		1,346	1,243	2,327	135,153

Table 2.7-3. Building 830-Distal South (830-DISS) volumes of ground water and soil vapor extracted and discharged, January 1, 2007 through June 30, 2007.

Treatment facility	Month	SVE Operational hours	GWTS Operational hours	Volume of vapor extracted (thousands of ft^3)	Volume of ground water discharged (gal)
830-DISS	January	NA	0	NA	0
	February	NA	0	NA	0
	March	NA	0	NA	0
	April	NA	0	NA	0
	May	NA	0	NA	0
	June	NA	40	NA	7,045
Total		NA	40	NA	7,045

Table 2.7-4. 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-GWTS-E[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	–	–
830-DISS-GWTS-I	6/26/07	73	<0.5	0.53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 830-Source															
830-SRC-GWTS-E	1/23/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-E	2/13/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-E	3/13/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-E	4/2/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-E	4/12/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
830-SRC-GWTS-E	5/10/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-E	6/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-I	1/23/07	230 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
830-SRC-GWTS-I	3/29/07	160 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
830-SRC-GWTS-I	4/2/07	290 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
830-SRC-GWTS-I	4/12/07	270 D	<0.5	0.54	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
830-SRC-GWTS-I	4/12/07[b]	280 D	<0.5	0.55	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Building 832-Source															
832-SRC-GWTS-E	1/9/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-E	2/6/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-E	3/5/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-E	4/2/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-E	5/7/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-E	6/4/07	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-I	1/9/07	43	<0.5	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-I	4/2/07	79	<0.5	3.3	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
832-SRC-GWTS-I	4/2/07[b]	76	<0.5	3.2	<0.5	<0.5	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

Notes:

[a] **No effluent sample required due to VOC treatment at CGSA GWTS.**

[b] **Duplicate analysis.**

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

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

Location	Date	Nitrate (as NO3) (mg/L)	Perchlorate (μg/L)
Building 830-Distal South			
830-DISS-GWTS-E	6/26/07	62	<4
830-DISS-GWTS-I	6/26/07	46	<4
Building 830-Source			
830-SRC-GWTS-E	1/23/07	19 D	<4
830-SRC-GWTS-E	2/13/07	23	<4
830-SRC-GWTS-E	3/13/07	25	<4
830-SRC-GWTS-E	4/12/07	27 D	<4
830-SRC-GWTS-E	5/10/07	42 D	<4
830-SRC-GWTS-E	6/6/07	38	<4
830-SRC-GWTS-I	1/23/07	16 D	<4
830-SRC-GWTS-I	4/12/07	31 D	<4
830-SRC-GWTS-I	4/12/07[a]	34 D	5.4
Building 832-Source			
832-SRC-GWTS-E	1/9/07	66 D	<4
832-SRC-GWTS-E	2/6/07	110 D	<4 LO
832-SRC-GWTS-E	3/5/07	95 D	<4 LO
832-SRC-GWTS-E	4/2/07	80 D	<4
832-SRC-GWTS-E	5/7/07	61	<4
832-SRC-GWTS-E	6/4/07	74	<4
832-SRC-GWTS-I	1/9/07	120 D	11
832-SRC-GWTS-I	4/2/07	84 D	6.3
832-SRC-GWTS-I	4/2/07[a]	84 D	8.7

Notes:

[a] **Duplicate analysis.**

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

Table 2.7-6. Building 832 Canyon OU treatment facility sampling and analysis plan.

Sample location	Sample identification	Parameter	Frequency
832-SRC GWTS			
Influent Port	**832-SRC-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		pH	**Quarterly**
Effluent Port	**832-SRC-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		PH	**Monthly**
832-SRC SVE			
Influent Port	**832-SRC-VI**	**No Monitoring Requirements**	
Effluent Port	**832-SRC-VE**	**VOCs**	**Weekly**[a]
Intermediate GAC	**832-SRC-VCF3I**	**VOCs**	**Weekly**[a]
830-SRC GWTS			
Influent Port	**830-SRC-I**	**VOCs**	**Quarterly**
		Perchlorate	**Quarterly**
		Nitrate	**Quarterly**
		PH	**Quarterly**
Effluent Port	**830-SRC-E**	**VOCs**	**Monthly**
		Perchlorate	**Monthly**
		Nitrate	**Monthly**
		PH	**Monthly**
830-SRC SVE			
Influent Port	**830-SRC-VI**	**No Monitoring Requirements**	
Effluent Port	**830-SRC-VE**	**VOCs**	**Weekly**[a]
Intermediate GAC	**830-SRC-VCF3I**	**VOCs**	**Weekly**[a]

Table 2.7-6 (Cont.). Building 832 Canyon treatment facility sampling and analysis plans.

Sample Location	Sample Identification	Parameter	Frequency
830-DISS GWTS			
Influent Port	830-DISS-I	VOCs[b]	Quarterly
		Perchlorate	Quarterly
		Nitrate	Quarterly
		pH	Quarterly
Effluent Port	830-DISS-E	VOCs[b]	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.**

[b] **Due to combining 830-DISS effluent discharge to the CGSA GWTS, VOC treatment of extracted water now takes place at CGSA. Therefore, no VOC monitoring is required at the 830-DISS GWTS as of June 2006.**

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

Table 2.7-7. 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	N	Dry. Next sample required 1stQ 2009.
SPRING4	SPR	Tps	B	CMP	E300.0:PERC	1	N	Dry. Next sample required 1stQ 2009.
SPRING4	SPR	Tps	B	CMP	E601	1	N	Dry. Next sample required 1stQ 2009.
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	N	Insufficient water.
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	Y	
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	Dry.
W-830-07	MWPT	$Tnsc_1$	A	CMP	E300.0:PERC	1	N	Dry.
W-830-07	MWPT	$Tnsc_1$	S	CMP	E601	1	N	Dry.
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	

Table 2.7-7 (Cont.). 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-830-11	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	
W-830-15	MWPT	Upper $Tnbs_1$	A	CMP	E300.0:PERC	1	Y	
W-830-15	MWPT	Upper $Tnbs_1$	S	CMP	E601	1	Y	
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:PERC	1	Y	
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	$Tnsc_{1b}$	S	CMP	E300.0:NO3	3		
W-830-16	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	3		
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:PERC	1	Y	
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	$Tnsc_{1b}$	S	CMP	E300.0:NO3	3		
W-830-1730	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	3		
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	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B830-SRC extraction well.

Table 2.7-7 (Cont.). 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-830-1829	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B830-SRC extraction well.
W-830-1829	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B830-SRC extraction well.
W-830-1829	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		B830-SRC extraction well.
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:PERC	1	Y	
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	$Tnsc_{1b}$	S	CMP	E300.0:NO3	3		
W-830-1831	GW	$Tnsc_{1b}$	S	CMP	E300.0:PERC	3		
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:PERC	1	Y	
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 $Tnbs_1$	S	CMP	E300.0:NO3	3		
W-830-20	GW	Upper $Tnbs_1$	S	CMP	E300.0:PERC	3		
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	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B830-SRC extraction well.
W-830-2213	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$	A	CMP-TF	E300.0:NO3	1	Y	B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$	A	CMP-TF	E300.0:PERC	1	Y	B830-SRC extraction well.
W-830-2214	EW	$Tnsc_{1a}$	S	CMP-TF	E601	1	Y	B830-SRC extraction well.

Table 2.7-7 (Cont.). 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-830-2214	EW	$Tnsc_{1a}$	S	CMP-TF	E601	3		B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:NO3	1	Y	B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:PERC	1	Y	B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	S	CMP-TF	E601	1	Y	B830-SRC extraction well.
W-830-2215	EW	Upper $Tnbs_1$	S	CMP-TF	E601	3		B830-SRC extraction well.
W-830-2216	MWPT	$Tnbs_2$	A	CMP	E300.0:NO3	1	Y	
W-830-2216	MWPT	$Tnbs_2$	A	CMP	E300.0:PERC	1	Y	
W-830-2216	MWPT	$Tnbs_2$	S	CMP	E601	1	Y	
W-830-2216	MWPT	$Tnbs_2$	S	DIS	E601	2	Y	
W-830-2216	MWPT	$Tnbs_2$	S	CMP	E601	3		
W-830-2311	GW	$Tnsc_{1a}$	Baseline	CMP	DWMETALS	3		New well.
W-830-2311	GW	$Tnsc_{1a}$	Baseline	CMP	E2007.SI	3		New well.
W-830-2311	GW	$Tnsc_{1a}$	S	CMP	E300.0:NO3	3		New well.
W-830-2311	GW	$Tnsc_{1a}$	S	CMP	E300.0:PERC	3		New well.
W-830-2311	GW	$Tnsc_{1a}$	Q	CMP	E624	3		New well.
W-830-2311	GW	$Tnsc_{1a}$	A	CMP	E8330:R+H	3		New well.
W-830-2311	GW	$Tnsc_{1a}$	Baseline	CMP	GENMIN	3		New well.
W-830-2311	GW	$Tnsc_{1a}$	Baseline	CMP	MS:UISO	3		New well.
W-830-2311	GW	$Tnsc_{1a}$	Baseline	CMP	E900	3		New well.
W-830-2311	GW	$Tnsc_{1a}$	Baseline	CMP	E906	3		New well.
W-830-25	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	1	N	Dry.
W-830-25	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	1	N	Dry.
W-830-25	MWPT	$Tnsc_{1b}$	S	CMP	E601	1	N	Dry.
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	

Table 2.7-7 (Cont.). 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-830-34	MWPT	$Qal/Tnsc_1$	S	CMP	E601	1	Y	
W-830-34	MWPT	$Qal/Tnsc_1$	S	CMP	E601	3		
W-830-49	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B830-SRC extraction well.
W-830-49	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B830-SRC extraction well.
W-830-49	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B830-SRC extraction well.
W-830-49	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		B830-SRC extraction well.
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-SRC extraction well.
W-830-57	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:PERC	1	Y	B830-SRC extraction well.
W-830-57	EW	Upper $Tnbs_1$	S	CMP-TF	E601	1	Y	B830-SRC extraction well.
W-830-57	EW	Upper $Tnbs_1$	S	CMP-TF	E601	3		B830-SRC extraction well.
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.

Table 2.7-7 (Cont.). 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-830-60	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:NO3	1	Y	B830-SRC extraction well.
W-830-60	EW	Upper $Tnbs_1$	A	CMP-TF	E300.0:PERC	1	Y	B830-SRC extraction well.
W-830-60	EW	Upper $Tnbs_1$	S	CMP-TF	E601	1	Y	B830-SRC extraction well.
W-830-60	EW	Upper $Tnbs_1$	S	CMP-TF	E601	3		B830-SRC extraction well.
W-831-01	MWB	Lower $Tnbs_1$	B	CMP	E300.0:NO3	1	Y	Next sample required 1stQ 2009.
W-831-01	MWB	Lower $Tnbs_1$	B	CMP	E300.0:PERC	1	Y	Next sample required 1stQ 2009.
W-831-01	MWB	Lower $Tnbs_1$	B	CMP	E601	1	Y	Next sample required 1stQ 2009.
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-832-06	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:NO3	2	N	Unable to sample due to construction.
W-832-06	MWPT	$Tnsc_{1b}$	A	CMP	E300.0:PERC	2	N	Unable to sample due to construction.
W-832-06	MWPT	$Tnsc_{1b}$	S	CMP	E601	2	N	Unable to sample due to construction.
W-832-06	MWPT	$Tnsc_{1b}$	S	CMP	E601	4		
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	Y	
W-832-13	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	Y	
W-832-13	MWPT	Qal/fill	S	CMP	E601	1	Y	
W-832-13	MWPT	Qal/fill	S	CMP	E601	3		
W-832-14	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Dry.
W-832-14	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Dry.
W-832-14	MWPT	Qal/fill	S	CMP	E601	1	N	Dry.
W-832-14	MWPT	Qal/fill	S	CMP	E601	3		
W-832-15	EW	Qal/fill	B	CMP-TF	E8330:R+H	1	NA	B832-SRC extraction well. Next sample required 1stQ 2008.
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-832-16	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Dry.
W-832-16	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Dry.

Table 2.7-7 (Cont.). 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-832-16	MWPT	Qal/fill	S	CMP	E601	1	N	Dry.
W-832-16	MWPT	Qal/fill	S	CMP	E601	3		
W-832-17	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Dry.
W-832-17	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Dry.
W-832-17	MWPT	Qal/fill	S	CMP	E601	1	N	Dry.
W-832-17	MWPT	Qal/fill	S	CMP	E601	3		
W-832-18	MWPT	Qal/fill	A	CMP	E300.0:NO3	1	N	Dry.
W-832-18	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Dry.
W-832-18	MWPT	Qal/fill	S	CMP	E601	1	N	Dry.
W-832-18	MWPT	Qal/fill	S	CMP	E601	3		
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	Dry.
W-832-20	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Dry.
W-832-20	MWPT	Qal/fill	S	CMP	E601	1	N	Dry.
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:PERC	1	Y	
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 $Tnbs_1$	S	CMP	E300.0:NO3	3		
W-832-2112	GW	Upper $Tnbs_1$	S	CMP	E300.0:PERC	3		
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	Dry.
W-832-22	MWPT	Qal/fill	A	CMP	E300.0:PERC	1	N	Dry.
W-832-22	MWPT	Qal/fill	S	CMP	E601	1	N	Dry.
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		

Table 2.7-7 (Cont.). 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-832-25	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:NO3	1	Y	B832-SRC extraction well.
W-832-25	EW	$Tnsc_{1b}$	A	CMP-TF	E300.0:PERC	1	Y	B832-SRC extraction well.
W-832-25	EW	$Tnsc_{1b}$	S	CMP-TF	E601	1	Y	B832-SRC extraction well.
W-832-25	EW	$Tnsc_{1b}$	S	CMP-TF	E601	3		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	Y	
W-832-SC2	MWPT	Qal	A	CMP	E300.0:PERC	1	Y	
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	
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 Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

Table 2.7-8. Building 832-Source (832-SRC) mass removed, January 1, 2007 through June 30, 2007.

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)
832-SRC	January	6.5	0.20	0.058	0.63	NA	NA
	February	8.2	4.4	0.48	4.6	NA	NA
	March	11	7.3	0.79	7.5	NA	NA
	April	7.7	6.9	0.73	6.9	NA	NA
	May	11	7.8	0.81	7.5	NA	NA
	June	8.8	5.4	0.62	5.8	NA	NA
Total		53	32	3.5	33	NA	NA

Table 2.7-9. Building 830-Source (830-SRC) mass removed, January 1, 2007 through June 30, 2007.

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)
830-SRC	January	0	17	0.11	2.4	NA	NA
	February	0	3.6	0.022	0.50	NA	NA
	March	0	0.33	0.00070	0.018	NA	NA
	April	730	20	0.081	1.7	NA	NA
	May	8,800	91	0.50	7.4	NA	NA
	June	11,000	110	0.64	8.7	NA	NA
Total		20,000	240	1.3	21	NA	NA

Table 2.7-10. Building 830-Distal South (830-DISS) mass removed, January 1, 2007 through June 30, 2007.

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)
830-DISS	January	NA	0	0	0	NA	NA
	February	NA	0	0	0	NA	NA
	March	NA	0	0	0	NA	NA
	April	NA	0	0	0	NA	NA
	May	NA	0	0	0	NA	NA
	June	NA	160	0.0091	1.0	NA	NA
Total		NA	160	0.0091	1.0	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	Y	
K8-02B	CMP DMW	$Tnsc_1$/Upper $Tnbs_1$	B	CMP	MS:UISO	2	Y	
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	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	B	CMP	MS:UISO	2	Y	
K8-04	CMP DMW	Upper $Tnbs_1$	A	CMP	T26METALS	2	Y	
K8-05	CMP DMW	$Tnbs_2$	B	CMP	CMPTRIMET	2	NA	Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E300.0:NO3	2	NA	Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E300.0:PERC	2	NA	Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E340.2	2	NA	Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E601	2	NA	Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E8330:R+H	2	NA	Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	E906	2	NA	Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	MS:THISO	2	NA	Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	MS:UISO	2	NA	Next sample required 2ndQ 2008.
K8-05	CMP DMW	$Tnbs_2$	B	CMP	T26METALS	2	NA	Next sample required 2ndQ 2008.

Notes appear on the following page.

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

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

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

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	1	NA	Next sample required 1stQ 2008.
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	1	NA	Next sample required 1stQ 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 Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

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

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	Y	
K9-01	CMP DMW	Tmss	B	CMP	MS:UISO	2	Y	
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	Y	
K9-02	CMP DMW	Tmss	B	CMP	MS:UISO	2	Y	
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	Y	
K9-03	CMP DMW	Tmss	B	CMP	MS:UISO	2	Y	
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	
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	Y	
K9-04	CMP DMW	Tmss	B	CMP	MS:UISO	2	Y	
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 Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

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

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	Y	Next sample required 2ndQ 2007.
W-851-05	MWPT	Tmss	S	CMP	MS:UISO	2	Y	
W-851-05	MWPT	Tmss	S	CMP	MS:UISO	4		
W-851-05	MWPT	Tmss	A	CMP	E906	2	Y	
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).
Contaminants of Concern in the Vadose Zone not detected in Ground Water: VOCs (E601).
See Acronyms and Abbreviations in the Tables section of this report for acronym and abbreviation definitions.

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

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	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
K2-01C	CMP DMW	$Tnbs_1$	Q	CMP/WGMG	E906	1	Y	
K2-01C	CMP DMW	$Tnbs_1$		DIS	MS:THISO	1	Y	
K2-01C	CMP DMW	$Tnbs_1$		DIS	MS: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	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	B	CMP	MS:THISO	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	B	CMP	MS:UISO	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	A	CMP	T26METALS	2	Y	
K2-01C	CMP DMW	$Tnbs_1$	Q	CMP/WGMG	E906	3		
K2-01C	CMP DMW	$Tnbs_1$	Q	CMP/WGMG	E906	4		
NC2-08	CMP DMW	$Tnbs_1$		DIS	E300.0:PERC	1	Y	
NC2-08	CMP DMW	$Tnbs_1$	Q	CMP	E906	1	Y	
NC2-08	CMP DMW	$Tnbs_1$		DIS	MS:THISO	1	Y	
NC2-08	CMP DMW	$Tnbs_1$		DIS	MS:UISO	1	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	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	B	CMP	MS:THISO	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	B	CMP	MS:UISO	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	A	CMP	T26METALS	2	Y	
NC2-08	CMP DMW	$Tnbs_1$	Q	CMP	E906	3		
NC2-08	CMP DMW	$Tnbs_1$	Q	CMP	E906	4		
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	Q	CMP	E906	1	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$		DIS	MS:THISO	1	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$		DIS	MS:UISO	1	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	2	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	B	CMP	MS:THISO	2	Y	

Table 3.1-1 (Cont.). 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-PIT2-1934	CMP DMW	Lower $Tnbs_1$	B	CMP	MS:UISO	2	Y	
W-PIT2-1934	CMP DMW	Lower $Tnbs_1$	A	CMP	T26METALS	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-PIT2-1935	CMP DMW	Lower $Tnbs_1$		DIS	E300.0:PERC	1	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	Q	CMP	E906	1	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$		DIS	MS:THISO	1	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$		DIS	MS:UISO	1	Y	
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	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	B	CMP	MS:THISO	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	B	CMP	MS:UISO	2	Y	
W-PIT2-1935	CMP DMW	Lower $Tnbs_1$	A	CMP	T26METALS	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-PIT2-2226	GW	$Tnbs_1$/$Tnbs_0$	Q	CMP	E906	1	N	Dry.
W-PIT2-2226	GW	$Tnbs_1$/$Tnbs_0$	Q	CMP	E906	2	N	Dry.
W-PIT2-2226	GW	$Tnbs_1$/$Tnbs_0$	Q	CMP	E906	3		
W-PIT2-2226	GW	$Tnbs_1$/$Tnbs_0$	Q	CMP	E906	4		
W-PIT2-2301	MWPT	Qal/WBR	A	CMP	MS:UISO	2	N	Dry.
W-PIT2-2301	MWPT	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
W-PIT2-2301	MWPT	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT2-2301	MWPT	Qal/WBR	S	CMP	E906	2	N	Dry.
W-PIT2-2301	MWPT	Qal/WBR	S	CMP	E906	4		
W-PIT2-2302	MWPT	Qal/WBR	A	CMP	MS:UISO	2	N	Dry.
W-PIT2-2302	MWPT	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
W-PIT2-2302	MWPT	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT2-2302	MWPT	Qal/WBR	S	CMP	E906	2	N	Dry.
W-PIT2-2302	MWPT	Qal/WBR	S	CMP	E906	4		
W-PIT2-2303	MWPT	Qal/WBR	A	CMP	MS:UISO	2	N	Dry.
W-PIT2-2303	MWPT	Qal/WBR	A	CMP	E300.0:NO3	2	N	Dry.
W-PIT2-2303	MWPT	Qal/WBR	A	CMP	E300.0:PERC	2	N	Dry.
W-PIT2-2303	MWPT	Qal/WBR	S	CMP	E906	2	N	Dry.
W-PIT2-2303	MWPT	Qal/WBR	S	CMP	E906	4		
W-PIT2-2304	MWPT	Qal/WBR		Baseline	E8330	1	Y	
W-PIT2-2304	MWPT	Qal/WBR		Baseline	GENMIN	1	Y	
W-PIT2-2304	MWPT	Qal/WBR		Baseline	DWMETALS	1	Y	
W-PIT2-2304	MWPT	Qal/WBR		Baseline	E900	1	Y	
W-PIT2-2304	MWPT	Qal/WBR	A	CMP/Baseline	ICMSRAD	1	Y	
W-PIT2-2304	MWPT	Qal/WBR		Baseline	E624	1	Y	
W-PIT2-2304	MWPT	Qal/WBR	A	CMP/Baseline	E300.0:NO3	1	Y	

Table 3.1-1 (Cont.). 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-PIT2-2304	MWPT	Qal/WBR	A	CMP/Baseline	E300.0:PERC	1	Y	
W-PIT2-2304	MWPT	Qal/WBR	S	CMP/Baseline	E906	1	Y	
W-PIT2-2304	MWPT	Qal/WBR	S	CMP/Baseline	E906	3		

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

Table 4-1. Analytical results for the first semester 2007 ambient air sampling at Spring 3.

Constitutent	SPRING3-001 Results (µg/m³)	SPRING3-002 Results (µg/m³)	SPRING3-003 Results (µg/m³)	PRG[b] (µg/m³)
Vinyl chloride	<0.017	<0.017	<0.018	0.11
1,1-Dichloroethene	<0.017	<0.017	<0.018	210
1,1,2-Trichloro-1,2,2-trifluoroethane	0.077[a]	0.080[a]	0.075[a]	31,000
Cis-1,2-Dichloroethene	<0.034	<0.034	<0.036	37
Chloroform	<0.034	<0.034	<0.036	0.08
1,2-Dichloroethane	<0.034	<0.034	<0.036	0.07
Trichloroethene	0.047	0.051	<0.036	0.02
1,2-Dichloropropane	<0.034	<0.034	<0.036	0.10
1,1,2-Trichloroethane	<0.034	<0.034	<0.036	0.12
Tetrachloroethene	<0.034	<0.034	<0.036	0.32
Trans-1,2-Dichloroethene	<0.17	<0.17	<0.18	73
Methylene chloride	<0.034	0.48[a]	<0.036	4.1

Notes:

[a] **Common analytical laboratory contaminant.**

[b] **U.S. Environmental Protection Agency 2004 ambient air Preliminary Remediation Goal.**

Samples collected on 5/3/07 in SUMMA canisters and analyzed by EPA method TO14.

Appendix A

Results of Influent and effluent pH Monitoring

A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, January through June 2007.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result	Effluent Dissolved Oxygen (mg/L)
GSA OU				
EGSA GWTS	01/23/2007	7	7	4.1
EGSA GWTS	01/30/2007	NA	7	0.5
EGSA GWTS	03/31/2007	NM	NM	NM
EGSA GWTS	04/30/2007	NM	NM	NM
EGSA GWTS	05/31/2007	NM	NM	NM
EGSA GWTS	06/30/2007	NM	NM	NM
CGSA GWTS	01/24/2007	6.5	7	NR
CGSA GWTS	02/07/2007	NA	7	NR
CGSA GWTS	03/07/2007	NA	7.5	NR
CGSA GWTS	04/11/2007	7	7	NR
CGSA GWTS	05/14/2007	NA	7.2	NR
CGSA GWTS	06/06/2007	NA	7	NR
Building 834 OU				
834 GWTS	01/09/2007	7.7	8	NR
834 GWTS	02/06/2007	NA	7.9	NR
834 GWTS	03/05/2007	NA	7.8	NR
834 GWTS	04/03/2007	8	7.9	NR
834 GWTS	05/07/2007	NA	8	NR
834 GWTS	06/04/2007	NA	8.1	NR
HEPA OU				
815-SRC GWTS	01/10/2007	7	7	NR
815-SRC GWTS	02/07/2007	NA	7	NR
815-SRC GWTS	03/05/2007	NA	7	NR
815-SRC GWTS	04/12/2007	7	7	NR
815-SRC GWTS	05/07/2007	NA	7	NR
815-SRC GWTS	06/04/2007	NA	7	NR
815-PRX GWTS	01/08/2007	7	7	NR
815-PRX GWTS	02/07/2007	NA	7	NR

A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, January through June 2007.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result	Effluent Dissolved Oxygen (mg/L)
815-PRX GWTS	**03/05/2007**	**NA**	**7**	**NR**
815-PRX GWTS	**04/30/2007**	**NM**	**NM**	**NR**
815-PRX GWTS	**05/31/2007**	**NM**	**NM**	**NR**
815-PRX GWTS	**06/12/2007**	**NA**	**7**	**NR**
815-DSB GWTS	**01/08/2007**	**7**	**7**	**NR**
815-DSB GWTS	**02/06/2007**	**NA**	**7**	**NR**
815-DSB GWTS	**02/27/2007**	**NA**	**7**	**NR**
815-DSB GWTS	**04/12/2007**	**7**	**7**	**NR**
815-DSB GWTS	**05/07/2007**	**NA**	**7**	**NR**
815-DSB GWTS	**06/04/2007**	**NA**	**7**	**NR**
817-SRC GWTS	**01/11/2007**	**7.5**	**7.5**	**NR**
817-SRC GWTS	**02/06/2007**	**NA**	**7.5**	**NR**
817-SRC GWTS	**03/07/2007**	**NA**	**7.5**	**NR**
817-SRC GWTS	**04/03/2007**	**7.5**	**7.5**	**NR**
817-SRC GWTS	**05/10/2007**	**NA**	**7.5**	**NR**
817-SRC GWTS	**06/06/2007**	**NA**	**7**	**NR**
817-PRX GWTS	**01/30/2007**	**7.8**	**7.3**	**NR**
817-PRX GWTS	**02/05/2007**	**NA**	**7.7**	**NR**
817-PRX GWTS	**03/05/2007**	**NA**	**7.4**	**NR**
817-PRX GWTS	**04/30/2007**	**NM**	**NM**	**NR**
817-PRX GWTS	**05/31/2007**	**NM**	**NM**	**NR**
817-PRX GWTS	**06/30/2007**	**NM**	**NM**	**NR**
Building 854 OU				
854-SRC GWTS	**01/11/2007**	**7**	**7**	**NR**
854-SRC GWTS	**02/12/2007**	**NA**	**6.5**	**NR**
854-SRC GWTS	**03/07/2007**	**NA**	**6.5**	**NR**
854-SRC GWTS	**04/05/2007**	**7**	**7**	**NR**
854-SRC GWTS	**05/14/2007**	**NA**	**7**	**NR**
854-SRC GWTS	**06/06/2007**	**NA**	**7**	**NR**

A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, January through June 2007.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result	Effluent Dissolved Oxygen (mg/L)
854-PRX GWTS	**01/31/2007**	**NM**	**NM**	**NR**
854-PRX GWTS	**02/12/2007**	**NA**	**7**	**NR**
854-PRX GWTS	**03/07/2007**	**NA**	**7**	**NR**
854-PRX GWTS	**04/03/2007**	**6.5**	**6.5**	**NR**
854-PRX GWTS	**05/15/2007**	**NA**	**7**	**NR**
854-PRX GWTS	**06/06/2007**	**NA**	**7**	**NR**
854-DIS GWTS	**01/31/2007**	**NM**	**NM**	**NR**
854-DIS GWTS	**02/07/2007**	**NA**	**7**	**NR**
854-DIS GWTS	**03/07/2007**	**NA**	**7**	**NR**
854-DIS GWTS	**04/11/2007**	**6.5**	**7**	**NR**
854-DIS GWTS	**05/14/2007**	**NA**	**7**	**NR**
854-DIS GWTS	**06/06/2007**	**NA**	**6.5**	**NR**
832 Canyon OU				
832-SRC GWTS	**01/09/2007**	**7.7**	**7.7**	**NR**
832-SRC GWTS	**02/01/2007**	**NA**	**7.4**	**NR**
832-SRC GWTS	**03/05/2007**	**NA**	**7.2**	**NR**
832-SRC GWTS	**04/02/2007**	**7.6**	**7.3**	**NR**
832-SRC GWTS	**05/07/2007**	**NA**	**7.6**	**NR**
832-SRC GWTS	**06/04/2007**	**NA**	**7.37**	**NR**
830-SRC GWTS	**01/23/2007**	**7.5**	**7.5**	**NR**
830-SRC GWTS	**02/13/2007**	**NA**	**7.5**	**NR**
830-SRC GWTS	**03/13/2007**	**NA**	**7.5**	**NR**
830-SRC GWTS	**04/12/2007**	**7.5**	**7.5**	**NR**
830-SRC GWTS	**05/10/2007**	**NA**	**7.5**	**NR**
830-SRC GWTS	**06/06/2007**	**NA**	**7.5**	**NR**
830-DISS GWTS	**01/31/2007**	**NM**	**NM**	**NR**
830-DISS GWTS	**02/28/2007**	**NM**	**NM**	**NR**
830-DISS GWTS	**03/31/2007**	**NM**	**NM**	**NR**
830-DISS GWTS	**04/30/2007**	**NM**	**NM**	**NR**

A-1. Results of infuent and effluent pH, and effluent dissolved oxygen monitoring, January through June 2007.

Sample Location	Sample Date	Influent pH Result	Effluent pH Result	Effluent Dissolved Oxygen (mg/L)
830-DISS GWTS	05/31/2007	NM	NM	NR
830-DISS GWTS	06/26/2007	NA	7.79	NR

Notes:

834 = Building 834.
815 = Building 815.
817 = Building 817.
829 = Building 829.
854 = Building 854.
832 = Building 832.
830 = Building 830.
CGSA = Central General Services Area.
EGSA = Eastern General Services Area.
DIS = Distal.
DISS = Distal south.
DSB = Distal site boundary.
GWTS = Ground water treatment system.
PRX = Proximal.
SRC = Source.
NA = Not applicable.
NM = Not measured due to facility not operating during this period.
NR = Not required.
OU = Operable unit.
pH = A measure of the acidity or alkalinity of an aqueous solution.
mg/L = milligrams per liter

Appendix B

Analytical Results from Eastern General Service Receiving Water Field Monitoring 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 (^{o}C)
TF-GSA1-CHC-R1	09-JAN-07	No	NA	NA	NA
TF-GSA1-CHC-R2	09-JAN-07	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.

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

Sample Location	Sample Date	Visual Observations						
		A	B	C	D	E	F	G
TF-GSA1-CHC-R1	09-JAN-07	NA	NA	NA	NA	NA	NA	NA
TF-GSA1-CHC-R2	09-JAN-07	No	No	No	No	No	No	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.

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