Appendix B

Field Investigation Methods and Results

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B-1.0 SEDIMENT INVESTIGATIONS IN REACHES

The former Environmental Restoration (ER) Project at Los Alamos National Laboratory (LANL or the Laboratory) conducted sediment investigations in several reaches in the Los Alamos and Pueblo Canyon watershed after reports were completed in 1998 and 1999 (Reneau et al. 1998, 59159; Reneau et al. 1998, 59160; Reneau et al. 1998, 59667; Katzman et al. 1999, 63915). This appendix summarizes results from field investigations in these reaches that have not been presented in previous reports. Investigations associated with evaluating potential adverse ecological impacts are presented separately in Section B-3.0 of this appendix and in investigations that focus on the impact of the May 2000 Cerro Grande fire are presented in Section B-4.0.

Geomorphic mapping at a scale of 1:200 occurred in each new reach and focused on delineating geomorphic units with differences in physical characteristics and/or contaminant levels. These maps are presented on Plates 2 to 11. Unit designations followed those used in previous reports, with “c” designating post-1942 channel units and “f” designating post-1942 floodplain units. Sediment thickness measurements distinguished between fine facies sediment, with typical median particle size of silt to fine sand (0.015 to 0.25 mm) in the less than 2 mm fraction, and coarse facies sediment, with typical median particle size of coarse to very coarse sand (0.5 to 2 mm) in the less than 2 mm fraction. Samples with median particle size of medium sand (0.25 to 0.5 mm) were classified either as fine or coarse facies, depending on the stratigraphic context and the particle size of adjacent layers. Coarse facies sediment is characteristic of material transported along the streambeds as bed load, and fine facies sediment is characteristic of material transported in suspension (Malmon 2002, 76038, pp. 94–97; Malmon et al. 2003, 82311, pp. 12–14). Several methods were used to identify the bottom of post-1942 sediment deposits, including determining the depth of buried trees and associated buried soils and noting the presence or absence of materials imported to the watershed after 1942 (e.g., quartzite gravel, coal). Analytical data from sediment samples were also used to help identify the bottom of post-1942 sediment deposits, as discussed below.

Average facies thickness in each unit was combined with unit area, as determined from digitized geomorphic maps, to obtain an estimated unit volume. The estimates of unit volume were combined with estimates of contaminant levels, where available, to allocate samples using a stratified sample allocation process (Gilbert 1987, 56179, pp. 45–57) designed to reduce uncertainties in the contaminant inventory in each reach. In this process, samples were preferentially allocated to units and sediment facies with either high variability in contaminant concentrations or a large portion of the total inventory, or both. This process is discussed in more detail in Ryti et al. (2004, 85206). One result of this sample allocation process is a high bias in sample results because of a disproportionately large number of samples were collected from the more contaminated geomorphic units and sediment facies. Weighted averages are generally used in this investigation to remove this bias introduced during sample collection.

Additional samples were collected from specific locations or layers in the reaches to help define the horizontal and vertical extent of contaminated sediments. For example, samples may be collected from surface or subsurface layers on floodplains or terraces where field evidence was inconclusive as to whether the layer pre- or post-dated contaminant releases. The presence of analytes at concentrations significantly above background values was used to infer that the sampled sediments were younger than 1942. Concentrations slightly above background values, and lower than overlying layers, are interpreted to record the downward translocation of trace levels of contaminants into pre-1942 sediment. Concentrations slightly above background levels in surface layers are interpreted to indicate minimal thicknesses of post-1942 overbank sediment or wind deposition of trace amounts of contaminated sediments.

Field radiological screening data were obtained in reaches where the levels of radionuclide contaminants were high enough that post-1942 sediment exhibited higher levels of radiation, as measured with field instruments, than nearby pre-1943 sediment. In these cases field radiological measurements were useful in delineating areas with varying contaminant levels. Screening data were not routinely obtained in reaches with low levels of radionuclides because previous studies in other reaches had indicated these data were not useful in characterizing variations in contaminant concentrations. Investigations in reaches where cesium-137 levels were sufficiently high to be detectable above background gamma radiation levels included gross gamma radiation walkover surveys by CHEMRAD (Oak Ridge, Tennessee) using Ludlum Model 44-2 detectors (1-in. by 1-in. NaI probes) with Ludlum Model 3 scaler/rate meters (single-channel analyzers).

Investigations also included fixed-point measurements of alpha and/or gamma radiation at various depths in reaches where levels of either plutonium-239,240 (an alpha emitter) or cesium-137 (a gamma emitter) resulted in detectable increases above background radiation levels. Fixed-point gamma radiation measurements utilized a Ludlum Model 44-10 detector encased in a lead- and copper-lined, polyethylene shield with a Ludlum Model 2221 scaler/rate meter. Fixed-point alpha radiation measurements utilized a Model 2221 rate meter with a 43-1 alpha scintillator probe. The measurement procedures are discussed further in Reneau et al. (1998, 59160, Appendix B, Section B-4.0) and Reneau et al. (2002, 73660, Appendix B, Section B-1.0).

Particle-size analyses from sediment samples were obtained at an off-site laboratory at the Desert Research Institute (DRI) following the procedures described in Janitzky (1986, 57674) to examine the effect of particle-size distribution on contaminant concentrations. Organic-matter content was determined for some of the samples at DRI using the loss-on-ignition method to provide additional information about the physical characteristics of potentially contaminated sediment deposits. Dendrochronological analyses (tree-ring dating) were obtained in some reaches to provide supplemental information on the age of sampled sediment deposits. These analyses followed the methodology described in Stokes and Smiley (1968, 57644) and Phipps (1985, 58477) and are discussed further in Reneau et al. (1998, 59160, Appendix B, Section B-1.0).

Reaches LA-2FE and LA-3W

Investigation of two new reaches (LA-2FE and LA-3W) in the area between reaches LA-2E and LA-3E (previously referred to as LA-3 in Reneau et al. 1998, 59160) was undertaken to (1) evaluate a gamma radiation anomaly identified in aerial surveys (Fritzsche 1990, 58971); (2) reduce uncertainties in radionuclide inventory in upper Los Alamos Canyon; and (3) evaluate possible contributions from the TA-53 drainage. LA-2FE extends for 1.0 km (0.6 mi) upcanyon from the confluence of the tributary canyon east of TA-53 and Los Alamos Canyon, and LA-3W extends for 0.5 km (0.3 mi) downcanyon from the confluence. Table B-1.0-1 summarizes the characteristics of these reaches. Plate 5 shows the geomorphic units, field radiological measurement locations, dendrochronological measurement locations, and sample locations in these reaches. Plate 12 presents gross gamma walkover radiation data obtained from these reaches in 2000. Tables B-1.0-2 and B-1.0-3 present fixed-point radiological field data, Tables B-1.0-4 and B-1.0-5 present thickness measurements of sediment, Tables B-1.0-6 and B-1.0-7 present particle-size and organic-matter data, and Table B-1.0-8 presents dendrochronological data obtained from these reaches in 2001.

Organic Chemicals in Upper Los Alamos Canyon

Investigations to reduce uncertainties in the sources and concentrations of organic chemicals in upper Los Alamos Canyon included sampling in previously investigated reaches and in new reaches in 2000

and 2001. Geomorphic maps for these reaches are shown in Plates 2 to 6. Samples were collected in reach LA-3E to replace results that had been rejected because of quality assurance (QA) deficiencies (reach LA-3 in Reneau et al. 1998, 59160; pp. 3-11 and C-8). Samples were collected from previous sample locations in reaches LA-1W+, LA-1W, LA-1C, LA-1E, and LA-2W to increase data sets for pesticides, polychlorinated biphenyls (PCBs) and semivolatile organic compounds (SVOCs). Samples were collected in new study reaches upcanyon (LA-1FW and LA-0) to further evaluate sources of organic chemicals of potential concern (COPCs), including possible contributions from solid waste management units (SWMUs) and areas of concern (AOCs) at Technical Area (TA-) 3 and TA-43 (reach LA-1FW) and runoff from another source (reach LA-0). Tables B-1.0-9 and B-1.0-10 summarize the physical characteristics and sediment thickness measurements from the new reaches.

Inorganic and Organic Chemicals in Upper Pueblo and Walnut Canyons

Investigations to reduce uncertainties in the sources and concentrations of inorganic and organic chemicals in upper Pueblo Canyon and Walnut Canyon included sampling in previously investigated reaches and in new reaches in 1999. Most samples were collected in new study reaches to further evaluate sources of inorganic and organic COPCs, including relative contributions from the former Pueblo Canyon waste water treatment plant ([WWTP] (reach P-1W) and townsite runoff (reaches P-1FW and Walnut Canyon). Geomorphic maps for these reaches are shown on Plate 8. One sample was also collected in reach P-1E to further evaluate the presence of organic chemicals in this reach. Reach P-1W includes two discontinuous mapping areas, one immediately downcanyon from the former Pueblo Canyon WWTP (investigated in 1999) and the other immediately upcanyon from Acid Canyon (investigated in 1996 and 1997). For P-1W, tables in this appendix combine information from both areas, some of which was presented in Reneau et al. (1998, 59159). Table B-1.0-11 summarizes the characteristics of the new reaches of Pueblo and Walnut Canyons. Table B-1.0-12 presents thickness measurements of sediment, and Tables B-1.0-13 and B-1.0-14 present particle-size data obtained from the new reaches. Reaches P-1FW and P-1W have been heavily impacted by post-fire floods, and the data reported here pertain to pre-fire conditions.

Acid Canyon

Investigations were conducted in a series of reaches in Acid Canyon to evaluate sources and concentrations of inorganic chemicals, organic chemicals, and radionuclides. Some of the investigation results for reach ACS (the South Fork of Acid Canyon) are presented in Reneau et al. (2000, 66867; Reneau 2002, 73660). The investigations in Acid Canyon included the evaluation of the relative contributions from SWMU 0-030(g) (reach AC-2) and from upcanyon townsite runoff (AC-1), and supplementing the data reported in the “RFI Report for SWMU 0-030(g)” (LANL 2001, 70273). Table B-1.0-15 summarizes the characteristics of the Acid Canyon reaches. Geomorphic units for reach ACS include revisions made subsequent to the "Interim Report on Sediment Contamination in the South Fork of Acid Canyon” (Reneau et al. 2000, 66867), as discussed in the "Interim Action Completion Report for the South Fork of Acid Canyon” (Reneau et al. 2002, 73660). Characteristics of both pre-Interim Action (IA) and post-IA geomorphic units are presented for reach ACS for completeness, with “c.a.” indicating the IA cleanup area. Reach AC-2 includes two discontinuous mapping areas, one immediately downstream from the 0-030(g) drainage (investigated in 1998 and previously reported in by the Laboratory [LANL 2001, 70273]) and the other immediately upcanyon from ACS (investigated in 1999). For AC-2, the tables combine information from both areas. For completeness, the tables also include geomorphic characterization data from the 0-030(g) drainage that were not included in the previous report (LANL 2001, 70273). Geomorphic maps of the Acid Canyon reaches are shown in Plate 8. For reach

ACS, Plate 8 shows post-IA geomorphic units (Plate 1 of Reneau et al. 2002, 73660, shows the pre-IA units in ACS).

Tables B-1.0-16 through B-1.0-19 present fixed-point field radiological screening data from reaches AC-1, AC-2, AC-3, and ACS. For reach ACS, only data collected prior to the IA are presented because these data have not been reported previously. Data collected during the implementation of the IA are presented in Reneau et al. (2002, 73660, Table B-1.0-1, pp. B-2 to B-5). Tables B-1.0-20 through B-1.0-22 present thickness measurements of sediment obtained prior to the IA, and Tables B-1.0-23 and B-1.0-24 present particle-size data obtained from Acid Canyon reaches. Although most of the reach ACS sample locations were excavated, the characteristics of these locations are included to document pre-IA conditions, which are important for estimating pre-IA contaminant inventories and for constraining a conceptual model of contaminant distribution. Data from samples collected in AC-3 in 1996 and 1997 and reported in Reneau et al. (1998, 59159) are included for completeness. Separate sample IDs were obtained for particle-size and organic-matter analyses and other analyses for some reach ACS samples, and a crosswalk between sample IDs is presented in Table B-1.0-25.

B-2.0 ALLUVIAL GROUNDWATER AND SURFACE WATER INVESTIGATIONS

B-2.1 Sample Collection Methodology

B-2.1.1 Surface Water Sampling

Surface water samples were collected using the direct-grab method according to ER Project standard operating procedure (SOP)-06.13. Sample bottles for nonfiltered samples were filled by dipping them into the stream in an area of moderate flow. Filtered samples were collected by first dipping a bottle into the stream, then filtering the sample through a disposable 0.45-µm filter into a separate sample container using a GeoPump. QA duplicate samples were collected at a frequency of one duplicate for every 20 samples collected.

Measurements of field parameters for surface water samples were taken to provide data that could be useful for evaluating contaminant variability. Field parameters were measured for each sample collected according to LANL-ER-SOP-6.02, Field Analytical Measurements of Groundwater (the methodology described in this SOP also applies to surface water). Specific conductance, pH, and temperature were measured using an YSI 63 multiparameter probe and meter. The YSI 63 was calibrated each day prior to sampling using National Institute of Standards and Technology (NIST) traceable standards. Turbidity was measured using a Hach 2100p portable turbidimeter. The Hach turbidimeter was calibrated every three months using NIST traceable standards. The field parameters were recorded on a water-quality stabilization record form for each surface water sample and are presented according to canyon and location in Tables B-2.1-1 and B-2.1-2. Table B-2.1-3 summarizes the range of field-parameter values recorded at samples surface locations. All samples have a corresponding sample collection log that is completed in the field, including information about the date and time the sample was collected, the appearance and odor of the sample, the location information, the weather conditions, and other relevant observations.

B-2.1.2 Alluvial Groundwater Sampling

Alluvial groundwater samples were collected according to LANL-ER-SOP-06.01, Purging and Sampling Methods for Single Completion Wells. Samples were drawn from the well using an electric submersible pump with Teflon tubing. The intake for the pump was typically set near the bottom of the screened interval. Three casing volumes were purged from the well prior to sample collection. The typical pump

rate for an alluvial well was 1.5 gal. per min. Pump rates were reduced in wells with a recharge rate of less than 1.5 gal. per min to minimize turbidity and prevent drawing the water down to a level where samples could not be collected. Groundwater samples were collected after purging three casing volumes and after obtaining stable pH and specific conductance readings. Whenever possible, samples were collected after a turbidity value of less than 5 nephelometric turbidity units (NTU) was achieved. Wells were purged at a lower rate than 1.5 gpm if turbidity was greater than 5 NTU in an attempt to lower the turbidity. In some instances, the wells were purged more than three casing volumes in an attempt to reduce turbidity. On some occasions, the wells would not produce a sample of less than 5 NTU despite these efforts. Samples collected for analysis of volatile organic compounds (VOCs) were collected according to LANL-ER-SOP-06.03. A stainless steel bailer or Teflon tubing was used to collect VOC samples from alluvial groundwater wells. QA duplicate samples were collected at a frequency of one duplicate for every 20 samples collected in accordance with LANL-ER-SOP-01.05.

Measurements of field parameters for groundwater samples were taken to provide data potentially useful for evaluating contaminant variability. Field parameters were measured at least twice for every purged casing volume to evaluate the efficacy of purging. Specific conductance, pH, and temperature were measured using an YSI 63 multiparameter probe and meter. Once the parameters stabilized, the field parameters values associated with the samples collected were recorded. The YSI 63 was calibrated each day prior to sampling using NIST traceable standards. Turbidity was measured using a Hach 2100p portable turbidimeter. The Hach turbidimeter was calibrated every three months using NIST traceable standards. The field parameters were recorded on a water-quality stabilization record form for each groundwater sample. Water-level measurements were also made when the wells were sampled prior to purging the well using an electronic Solinst® Model 101 water-level meter. Water-level measurements were taken from the top of the casing at a permanent marked location on the casing. The water-level measurements associated with sampling are discussed further in Section B-2.2. The field parameters and water levels are presented by canyon and location in Tables B-2.1-4 and B-2.1-5. Table B-2.1-6 summarizes the range of field-parameter values recorded at sampled wells.

B-2.2 Water-Level Measurements

Since 1996, manual water-level measurements have been taken at alluvial groundwater wells in Los Alamos and Pueblo Canyons. Measurements were made with a Solinst Model 101 or similar model water-level meter. The instrument's graduated tape provided a measurement accuracy of 0.01 ft. Tape readings were made at the top of the well casing adjacent to a mark or notch made on one side of the casing to ensure consistent measurements. Readings of the water-level depths below the top of the casing were recorded in a field notebook along with the date and time of measurement. Plots of water level versus measurement date are shown in Figures B-2.2-1(a–j). The distribution of manual groundwater levels measurements is calculated from the period of record for each well and is shown as 25th and 75th quartiles on the water-level plots, which also include groundwater levels for each sampling event at a well. Plotting the groundwater level associated with sampling events on the long-term water-level record shows how contaminant concentrations relate to variations in groundwater levels. The quartiles provide a frame of reference to examine whether the sampling is representative of the range of groundwater levels at a well.

Automated, high-frequency water-level data were collected with multiparameter MPTROLL-8000 probes (0–15 pounds per square inch [psi] operating range) with integrated dataloggers manufactured by In-Situ® Corporation. These probes were installed in each of these wells in August 2000 and have operated continuously since to monitor water levels and the following field parameters: temperature, electrical conductance, pH, and dissolved oxygen (DO). Measurements were recorded at 30-min intervals through mid-2002, after which measurements were taken once every hour. The pressure transducers were factory

calibrated, and calibrations were verified annually in accordance with LANL-ER SOP-7.01, Pressure Transducers, to check for drift and measurement accuracy. These tests verified that pressure readings were accurate within the manufacturer's specifications (± 0.05% of full scale over operating temperature range of 0° to 50° C; equivalent to ± 0.02 ft). Pressure readings were made from the top of casing and were calibrated to a manual water-level measurement taken at the time that the execution program for each probe was initiated.

Plots of groundwater level versus each of the field parameters are shown in Figure B-2.2-2(a–h). Several problems were encountered during the deployment of the multiparameter probes. The DO sensor calibrations were particularly problematic and occasionally resulted in negative DO readings immediately after the sensors were deployed. In these cases, the data illustrate relative variations in DO, but absolute values are erroneous. Sensor readings sometimes showed a tendency to drift between calibrations, resulting in apparent shifts in parameter values when the recalibrated probes were installed. The pH sensors also required continuous submersion to maintain calibration, and some wells periodically dried up, resulting in erratic readings after re-saturation occurred. Therefore, the values should not be considered absolute. However, the data and plots are still useful for assessing overall patterns and trends. The plots of water level versus time are shown in Figure B-2.2-3(a–g). The distribution of groundwater level measurements is calculated from the period of record for each well and is shown as 25th and 75th quartiles on the water level plots. They also include groundwater levels for each sampling event at a well. Plotting the groundwater level associated with sampling events on the long-term water level record allows an assessment of how variations in contaminant concentrations might relate to variations in groundwater levels. The quartiles provide a frame of reference to examine whether the sampling is representative of the range of groundwater levels at a well.

Pressure transducers were also used to collect high frequency water-level data in several piezometers and piezometer nests using model SSP-100 miniTROLL probes (0–15 psi operating range) with integrated dataloggers manufactured by In-Situ Corporation. These probes were installed in each of these piezometers in 2001 and have operated more or less continuously since (some probes were for a few months). Pressure and temperature readings were collected at 30-min intervals. Calibration and operation procedures employed for these probes were identical to those described above for the MPTROLL-8000 probes, the only difference being that the miniTROLL instrument's accuracy is ±0.2% of full scale (equivalent to ±0.03 ft). Each time the probe data were downloaded, a manual water-level measurement was taken to verify the accuracy of the measurement recorded by the pressure transducer. An analysis of the water-level data quality is presented in Appendix F.

B-2.3 Multiparameter Probe Data

The discussion below is a review of field-parameters data collected from dedicated down-hole multiparameter probes installed in a series of wells following the Cerro Grande fire. The measured parameters, including pH, specific conductance (SC), temperature, and DO, are shown in Figure B-2.2-2(a–h). Wells monitored in Los Alamos Canyon include LAO-B, LAO-0.3, LAO-0.91, and LAO-1.6(g). Wells monitored in Pueblo Canyon include PAO-1, PAO-3, PAO-4, and PAO-5n. The method for collecting these data is presented in Section B-2.2. Comparison of the relation of these parameters to water level at a series of wells and over time provides a means of evaluating the effect of the Cerro Grande fire in alluvial groundwater and provides insight into the nature and duration of potential consequences of a large fire. A detailed discussion of the potential effects on contamination is presented in Section 7 of this report.

B-2.3.1 Water Level and pH

The conceptual model for variations in pH in alluvial groundwater is related to very high concentrations (up to 90,000 mg/kg) of calcium carbonate present in ash following the Cerro Grande fire. Interactions of surface water with ash were expected to yield increases in pH. Subsequent infiltration of surface water to the alluvial system may cause perturbations in the pH of the alluvial groundwater. The variations in pH could cause increased mobility of some contaminants.

Upper Los Alamos Canyon

At LAO-B, periods of low pH tend to correlate with winter months where surface water flow is dilute with respect to ash content. The number and magnitude of high pH spikes generally diminished with time after the fire consistent with a return to lower alkalinity as the amount of ash in the system decreased. Further downcanyon at LAO-0.3, there is no apparent correlation between water-level response and pH. Spikes in pH occur in all seasons and seem to be related to both summer flood recharge and underflow recharge. The highest pH spikes tend to be related to summer runoff events. The number and magnitude of high pH spikes generally diminished with time after the fire, which is consistent with a return to lower alkalinity as the amount of ash in the system decreased. Spikes of high pH at LAO-0.91 are generally associated with increases in water level but not in all cases. The variability may relate to whether surface water flow and associated recharge contained significant ash content or had long residence time in contact with ash. The pH values also decrease over time indicating progressively less ash in the system. At LAO-1.6(g), spikes in pH correlate well with water-level spikes related to the onset of spring underflow recharge and to summer and fall floods. In each case, the return to lower pH values is relatively rapid regardless of how long the increased water-level condition persists. For example, the spring 2001 underflow recharge produced an elevated water level that persisted for approximately two months, but the initial pH spike lasted only about one week, which is comparable to the duration of the spikes associated with flood recharge.

Pueblo Canyon

At PAO-1, short-term increases in pH appear to be associated with summer and fall flood events that are known to have transported significant quantities of ash. However, the spring 2001 snowmelt recharge correlates with a lowering of pH, indicating that the runoff was relatively dilute with respect to ash content. At PAO-3, a good correlation occurs between spikes in pH and the abrupt increases in water level, probably resulting from either infiltration of ash-rich flood water or from mobilization of interstitial ash within alluvium during increases in water level associated with winter and spring snowmelt runoff. The data also show an overall decrease in the magnitude of pH spikes and a general decline in pH over time. The relation of pH to water level is difficult to discern at PAO-4 because of variations in water quality from the Bayo WWTP. Good correlations exist for some flood events early in the record, but the correlations diminish. However, an overall decrease in the frequency and magnitude of pH spikes occurs over time, suggesting a progressive decline in ash in the system. The pH data from PAO-5n do not show a good correlation with water level variations. Here, as at PAO-4, potential influences of the Bayo WWTP cause difficulty in interpretation.

B-2.3.2 Water Level and SC

SC is typically used as a surrogate for total dissolved solids (TDS). The conceptual model for variations in SC is that higher SC values are associated with dissolved solids derived from the interaction of surface water and alluvial groundwater with soluble constituents in Cerro Grande ash.

Los Alamos Canyon

At LAO-B, higher SC seems to be inversely related to water level. Low water levels in the late fall and early winter correlate with higher SC, whereas higher water levels in the spring correlate with lower SC values. Seasonal effects on SC variation are strong as peak SC levels were consistently recorded in mid-November during 2000, 2001, and 2002, after which sharp declines in SC coincided with rising saturation levels in the alluvium. It is possible that the relatively high concentration of TDS in groundwater was diluted by alluvial groundwater recharge with low TDS concentrations during late winter to early spring. The consistent timing of the annual SC declines suggests that recharge in the upper canyon is dominated by upgradient underflow derived from late summer/fall monsoon rainfall over the upper basin of the watershed rather than from direct infiltration of streamflow runoff. Overall, the trend appears to show higher SC with time, which seems counter to the expected post-fire trend. That trend may, however, be related to reduced runoff volumes during the spring and summer seasons in 2002 and 2003 that would have further diluted the existing TDS concentrations, as was seen in 2001.

The 2000–2001 data from LAO-0.3 are generally inconclusive with respect to the relation between water level and SC and the strong seasonal effects seen at LAO-B are absent at this location. Sensor operation problems may account for the discrepancy between the early 2001 data and that collected after April 2001. Fairly consistent SC values recorded afterward during a lengthy hydrograph recession persisted until the spring of 2002 when a strong correlation between rising water levels and SC is apparent. Similar responses again occurred in the fall of 2002 and spring of 2003. One possible explanation is that recharge of surface water with high TDS concentrations may be a factor in the vicinity of LAO-0.3. The SC record is incomplete at LAO-0.91 because the alluvium dried out periodically at this location and sensor problems developed in the final months of record. However, the available data indicate a similar relation as was seen at LAO-0.3, with increasing SC values generally associated with rising water levels. The increase in SC associated with the spring 2001 underflow recharge is longer lived than the increases associated with water-level spikes related to summer and fall floods. The data from LAO-1.6(g) suggest a similar water level/SC relationship at this location, although its effect was highly suppressed until the large increase that accompanied the June 2002 recharge event.

Pueblo Canyon

At PAO-1, a slight correlation is observed between water-level increases and increases in SC, although in some cases a significant lag occurs in the SC response. This correlation is not consistent during the record. Some recharge events caused increases in SC and others did not, indicating variability in TDS levels of the recharge water, perhaps because of differing recharge sources (i.e., underflow versus surface water infiltration). Potential problems with proper SC sensor functioning are suggested by apparent plateaus in the SC values for the spring of 2001 and the summer through fall of 2001. However, the elevated SC levels recorded in the fall of 2001 in PAO-1 correspond to similar increases seen downgradient at the PAO-4 and PAO-5n sites, lending credence to the PAO-1 record. In Pueblo Canyon, a possible explanation for increases in SC in during the winter and spring is runoff containing salts applied to roads in the townsite during the winter.

Although the SC curve at PAO-3 is incomplete because the alluvium at this site frequently dries out, it is still possible to discern a good correlation between several rises in water level and increases in SC during 2001. This effect is presumably related to recharge from flood water and winter and spring runoff. However, a recharge event in October 2000 was accompanied by a marked decrease in SC, suggesting that prior to spring 2001, recharge waters had a lower TDS than the aquifer, but afterwards, the recharge waters are associated with elevated TDS relative to the aquifer. The lack of persistent saturation after spring 2002 and associated sensor calibration maintenance problems impacted the quality of the subsequent data collected at this site.

At PAO-4, many frequent and significant fluctuations in SC levels cannot be directly tied to known flood events in Pueblo Canyon. However, a positive correlation between several short-lived recharge events and sharp increases in SC is apparent in the record through spring 2002. Afterwards, fluctuations in SC levels were significantly lower in magnitude and lesser in frequency, suggesting a progressive decline in ash in the system. Much of the variability in SC levels at this site is probably related to variations in the quality water discharged from the Bayo WWTP. In general, the higher SC values at PAO-5n occur in the summer and fall, whereas low SC values tend to occur in the winter and spring. This pattern may be related to generally lower, less dilute water levels that tend to occur in the summer in the portion of Pueblo Canyon below the Bayo WWTP. The lower water levels result from diversion of water from the WWTP for the municipal golf course.

B-2.3.3 Water Level and Temperature

Variations in temperature are not specifically related to a possible Cerro Grande effect but, rather, they provide insights into the nature and timing of surface water recharge to the alluvial system.

Los Alamos Canyon

At LAO-B, minimum groundwater temperatures occur in February through April, and maximum temperatures occur in October and November. The temperature pattern is inversely correlated with water level. A possible explanation is that recharge in this portion of the canyon is from underflow originating as surface water higher in the watershed. It also suggests a lag in the arrival of recharge water in this portion of the canyon and that underflow recharge is a larger component than stream recharge. The temperature patterns at LAO-0.3 are similar to those at LAO-B, with the exception that maximum temperatures occur earlier, in August and September. Temperatures are also generally inversely correlated to water level at LAO-0.3. Temperature fluctuations at LAO-0.91 are also similar to those in the upcanyon wells, except that longer periods of maximum temperatures occur at this location, lasting from September through November in 2002 and from August through November in 2003. Lengthier periods of minimum temperatures were also recorded, beginning in February and extending through May in both 2002 and 2003. Temperatures are also generally inversely correlated to water level in this well. Temperature fluctuations are significantly damped out at LAO-1.6(g) relative to those in the upper canyon monitoring wells. Also, maximum water temperatures at LAO-1.6(g) tend to occur in January and February, and minimum water temperatures generally occur in May through June. The timing of the temperature variations at LAO-1.6(g) is out of phase with seasonal air temperatures, indicating that underflow from upcanyon is the most significant source of recharge at this location. Temperature variations at LAO-1.6(g) show a weak inverse relation to water level.

Pueblo Canyon

At PAO-1, maximum groundwater temperatures occur in late August through September and minimum temperatures occur from December through March. The timing of temperature fluctuations in upper Pueblo Canyon tends to show a stronger seasonal signature than in upper Los Alamos Canyon, indicating that less alluvial groundwater storage in Pueblo Canyon. At PAO-3, maximum groundwater temperatures occur from August through September, and minimum temperatures occur from January through April. As with PAO-1, there is good correlation between alluvial groundwater temperatures and seasonal air temperatures; in fact, the seasonal relation seems more important than the relation to water level. Maximum groundwater temperatures at PAO-4 occur from August through September, and minimum temperatures occur from February through March. It is difficult to discern whether a relation between water-level variations and temperature exists because PAO-4 is maintained at full or nearly full

saturation because of effluent from the Bayo WWTP. The seasonal variation of the groundwater temperature data from this well is probably related to the temperature of the water processed at the WWTP. At PAO-5n, the maximum groundwater temperatures occur from September through October, and the minimum temperatures occur from January through March. The slight shift in the maximum and minimum values at PAO-5n relative to wells further up Pueblo Canyon suggests a slight lag in the arrival of recharge water in this portion of Pueblo Canyon.

B-2.3.4 Water Level and DO

The conceptual model for DO predicts that surface water with high ash content will have lower DO content. Infiltration of surface water with low DO content may also affect contaminant mobility.

Los Alamos Canyon

At all four wells in Los Alamos Canyon, the DO record is somewhat incomplete and spans only from August 25, 2000, through July 13, 2001. At LAO-B, the relative stability in groundwater level during the period of DO measurements does not allow for an accurate assessment of the relation between alluvial water levels and DO. A few pronounced DO spikes occur in the LAO-B data and may be related to precipitation events. At LAO-0.3, several DO spikes correspond to increasing water levels, while others do not. Similar observations were made at LAO-0.91 and LAO-1.6(g). Thus, the data suggest a more complex mechanism for DO variation in the alluvium than a simple correlation to water-level fluctuations, although the infiltration of recharge water is clearly related to significant DO increases in some cases.

Pueblo Canyon

For the wells in Pueblo Canyon, the DO record is somewhat incomplete and spans from August 22, 2000, through July 11, 2001. The DO record in the wells located above the Bayo WWTP shows several distinct spikes, and, in some cases such as at PAO-3, the spikes relate to abrupt increases in water level related to flood events and to snowmelt recharge. However, a consistent relationship between water levels and DO concentrations is not apparent in these data. Variations in DO below the Bayo WWTP are probably affected by the WWTP discharges. The DO data in Pueblo Canyon, like the data from Los Alamos Canyon, suggest a more complex mechanism for DO variation in the alluvium than a simple correlation to water-level fluctuations, although the infiltration of recharge water is clearly related to significant DO increases in some cases.

B-2.4 DP Canyon Tracer Study

A bromide tracer study was conducted in DP Canyon to fulfill a requirement in the sampling plan for DP Canyon (LANL 1998, 59373). The following goals were used to design, implement, and evaluate the tracer study:

- develop and confirm a conceptual model for hydrologic connectivity between the alluvial groundwater in reach DP-2 and DP Spring,
- determine travel time and residence time for groundwater within reach DP-2 and between reach DP-2 and DP Spring, and
- evaluate the potential movement of water into bedrock and fractures along the surface water and alluvial groundwater flow paths.

The location of the tracer study includes reaches DP-2, DP-3, and DP-4 and is situated directly north of TA-21 and just south of the Los Alamos County airport (Figure B-2.4-1). Strontium-90 is identified as the most important COPC in the surface water and alluvial groundwater in DP Canyon and is discussed in detail in Section 7.2. The following sections describe the investigation methods, results, and conceptual model for solute transport.

B-2.4.1 Drilling Activities

A drilling program was implemented in September 2002 to install a network of monitoring points for the bromide tracer. As part of the program, additional boreholes were drilled to assess the stratigraphy of the alluvial aquifer and to delineate the extent of saturation. Well construction diagrams and borehole logs detailing the stratigraphy are presented in a report on alluvial well and piezometer completion in the reach DP-2 (LANL 2004, 85537).

Alluvial Stratigraphy

Borehole logs and field observations indicate a coarse-grained, well-sorted sand horizon is present at depth within the alluvium and generally occurs along the trend of the present-day channel. This body of coarse sand is thickest in the middle of the valley floor and thins progressively laterally onto the bedrock and colluvial slope. The coarse sand overlies weathered bedrock and is itself overlain by finer-grained sands and silts with local coarse lenses. The coarse sand represents a highly transmissive conduit that focuses groundwater and tracer movement in the alluvial aquifer. The stratigraphy was an important factor in the design of the monitoring network described below.

Extent of Saturation

Twenty-eight boreholes were advanced in the canyon bottom during the drilling program to determine the lateral extent of the alluvial aquifer (Figure B-2.4-2). Nine wells were installed along the margins of the valley floor to monitor groundwater levels and the tracer along the edge of the alluvial aquifer. Several boreholes were advanced in transects to identify the lateral extent of saturation, and a monitoring well was installed where sufficient groundwater was found. Data from these wells were used to characterize water table fluctuations and to monitor tracer movement along the margins of the aquifer.

Monitoring Network

The monitoring network, shown in Figure B-2.4-2, is made up of nested 1-in. monitoring wells, 2-in. monitoring wells, piezometer nests, and surface water locations. The network was designed to characterize the different subsurface conditions present in reach DP-2.

Eight multilevel transects consisting of three 1-in. well bundles with staggered screens and six fully screened wells were installed to monitor tracer migration (Figure B-2.4-3a). Several of these wells were instrumented with dedicated TempHion® bromide-specific electrodes.

Piezometer nests were installed to monitor vertical hydraulic gradients in the alluvial aquifer. Each nest consists of three 2-in. piezometers with screen intervals at discrete zones within the saturated portion of the alluvium (Figure B-2.4-3b). The piezometers were installed in different boreholes to eliminate hydraulic communication between screened intervals. Water levels were measured regularly (every two to four weeks) and evaluated for potential vertical hydraulic gradients.

Two ISCO® sampler pairs in reach DP-2 and a single ISCO® sampler in DP-3 were deployed to monitor the tracer in surface water in the event of groundwater/surface water exchange. An additional ISCO® sampler was placed at DP Spring to monitor the breakthrough of the bromide and to account for the bromide mass moving through the system.

B-2.4.2 Tracer Injection

The tracer solution consisted of 47 kg of potassium bromide (KBr) and 100 gal. of groundwater from DP Canyon mixed in two 50-gal. drums and circulated for 24 hr to ensure homogeneity. Calculated concentrations were 83.34 g/L bromide and 40.77 g/L potassium, well below the solubility limit of potassium bromide salts, The tracer was injected into the aquifer at approximately 3 L/min in well DPW-1S, located in the upper end of the reach on February 24, 2003 (Figure B-2.4-2). Piezometer nest DPPN-1.1-1 and bromide monitor well DPBN-1A1 were instrumented with transducers to monitor change in pressure head throughout the injection. The maximum response of the water table was a 3-cm (1 in.) rise observed at location DPPN-1.1-1, approximately 6 m (20 ft) away from the injection well. TempHion probes located at bromide monitoring well transect-2 showed an immediate response during injection as displaced groundwater moved through the aquifer. Water samples were collected several times a day in the upper part of the reach during the initial phase of the test and collected less frequently, but over a much larger area, during later phases of the study.

Alluvial groundwater samples were collected with a peristaltic pump equipped with Tygon® tubing. The intake for the pump was typically set near the center of the screened interval. Screening samples collected for bromide analysis were not filtered and were stored at room temperature until they were analyzed with an ion selective electrode.

B-2.4.3 Analytical Methods

Bromide concentrations were measured using ion selective electrodes (ISE) and ion chromatography (IC) techniques. Groundwater samples were analyzed in the laboratory with an Orion® model 9635-ioplus™ series bromide ISE. Measurements were performed according to Laboratory bromide screening guidelines (LANL 2003, 77439). In addition, select samples were submitted to the EES-6 analytical laboratory for low-level bromide analysis. These samples were analyzed according to, EPA Method SW-846 for chemical analysis of water and wastes, using an ion chromatography method to analyze anions. Dedicated ISE TempHion® probes, coupled with Campbell Scientific data loggers, were deployed at select wells to measure in situ bromide concentrations in groundwater. TempHion® temperature and the ISE signals were recorded every 30 min. and downloaded for processing. Bromide standards for conversion of ISE signals were prepared using DP Canyon groundwater and KBr salt from Fisher Scientific. Site groundwater was used to account for potential interference from elevated levels of chloride derived from Los Alamos townsite runoff. The detection limits for the Orion® probe were approximately 1 mg/L; the limit of detection for the TempHion® probe was approximately 10 mg/L; the IC detection limits ranged from 5 to 10 parts per billion.

B-2.4.4 Conceptual Model for Solute Transport

Transport in Alluvial Groundwater

Groundwater showed a range of different responses as the tracer moved through the alluvial aquifer. Bromide concentrations plotted through time define curves unique to each monitoring location. These shapes or configurations depend upon travel velocities, plume location with respect to injection location, time after injection (t_0), and proximity to the influence of surface water flow in the channel. Bromide curves

from individual screens at nested wells proximal to the channel are shown in Figure B-2.4-4. Bromide concentrations are generally higher in the lower screen perhaps because of (1) the greater density of the tracer compared to the surrounding groundwater especially close to the injection well where the tracer initially pooled on the bottom of the aquifer, or (2) the presence of basal coarse-sand facies that act as preferential flow paths within the alluvial sequence. Generally, bromide concentrations measured from individual screens have greater separation closer to the injection well and become more coincident as the bromide tracer migrated to the lower portion of reach DP-2. The merging of curves reflects mixing and dilution through hydrodynamic dispersion as the tracer is transported down gradient.

Tracer dilution occurred as the bromide plume was transported through the alluvial aquifer. Bromide concentration scales on the vertical axis range from 10,000 mg/L close to the injection well to 100 mg/L bromide distant from the injection well in the lower part of reach DP-2 of Figure B-2.4-4. In addition, locations proximal to the injection well (Figure B-2.4-4, graphs a and b) show very steep ascending limbs and asymmetrical profiles, and locations distant from the injection well show a more symmetrical profile and gentler ascending limb (Figure B-2.4-4, graphs g and h). The symmetry increases as the concentration gradients are reduced and the centroid of the tracer is elongated during transport. Hydrodynamic dispersion diluted and mixed the tracer with ambient groundwater and expanded the volume of the plume as it was transported downgradient from the injection well.

Visualization techniques of the bromide concentrations from both automated and manual sampling illustrate the expansion of the plume through hydrodynamic dispersion (Figure B-2.4-5). Initially the tracer was restricted to the region around the injection well. As the tracer was transported downgradient, the centroid of the bromide mass expanded and the bromide concentrations decreased. Although bromide was detected in low concentrations laterally away from the channel, the tracer mass was generally confined to the center of the valley floor in upper DP-2. The mass spread laterally in lower DP-2, diverging to the south and ultimately discharged to the bedrock channel where alluvium pinches out at the east end of the reach.

Transport in Surface Water

Surface water is an important mechanism for bromide transport. Figure B-2.4-6 shows bromide results for surface water sample locations in upper DP-2, lower DP-2, DP-3, and DP Spring. Average bromide background concentrations ranged from 0.034 mg/L in DP-2 (n=9 location) to 0.018 mg/L at DP Spring (n = 5 samples). Bromide was detected above groundwater background values in the majority of the surface water samples and was observed at concentrations up to 117 mg/L in upper DP-2 shortly after tracer injection on February 24, 2003. Groundwater discharge to the channel in the bottom of reach DP-2 maintained bromide concentrations ranging from 0.6 to 12.6 mg/L throughout the tracer study. Results from the early summer, when evapotranspiration was high and channel flow minimal, may not be completely representative because of the potential concentrating effects of evaporation. Samples from DP-3 showed the effects of evapotranspiration, where the sample intake port was in a scour hole in the bedrock. Relatively little alluvium is present in DP-3, and the water is derived from a combination of groundwater and surface flow from upcanyon reaches.

The travel time for bromide from the point of injection to DP Spring was approximately 24 to 27 days (Figure B-2.4-6). Bromide, measured at three times above background (0.09 mg/L), arrived at DP Spring 24 days after injection; bromide at seven times above background (0.23 mg/L) was measured 27 days after injection. Preliminary transport velocities, calculated using a distance of 1220 m (4000 ft) from the tracer injection well to DP Spring and 24-day arrival time, are approximately 50.8 m (167 ft) a day. Considering the 27-day arrival time, the transport rate is 45.2 m (148 ft) per day, which accounts for both surface and groundwater flow transport processes and is most likely highly variable. Therefore, water

discharged at DP Spring may be derived from surface water and from shallow, discontinuous aquifers that temporarily store infiltrated surface water.

Surface Water/Groundwater Interaction

Observations indicate that runoff events from the Los Alamos townsite, resulting from both rainfall and snowmelt, provide recharge into the alluvial aquifers in DP Canyon. The response of the water table is immediate with measured heads greater near the channel and diminishing away from it. Water table elevations rise above the channel for a short period of time during runoff events and are maintained throughout the rising limb up to peak discharge. During the receding limb of the hydrograph, the water table gradients are reversed, allowing groundwater and solute to flow back into the channel. As a result, surface water/groundwater interactions episodically flush the aquifer adjacent to the channel and result in discharge of groundwater solutes into surface water. The recharge events also cause enhanced transport of solutes in groundwater.

Bromide and temperature signals from the automated TempHion© probes were used to identify where the surface water/groundwater exchange occurred. Automated probe data from the middle screens are shown in Figure B-2.4-7, along with surface water discharge, precipitation, and seepage velocity in the second and third nested bromide well transects from May 24 through May 27, 2003, or Julian days 144 through 147 (the Julian day starts on the first day of the calendar year, January 1). Precipitation was measured approximately one mile to the southeast at the TA-53 gage and generally coincides with channel flow, showing a parallel response. Surface water flow was recorded at gaging station E039 at the east end of reach DP-2. The mean seepage velocity was calculated from the head differential between the upper and middle screens at nested piezometer DPPN-4.5N. The negative seepage velocity indicates upward flow as surface water infiltrates the aquifer. Bromide concentrations shift, in some cases dramatically, in response to infiltration of water from the channel at locations where direct communication occurs between the alluvial aquifer and the channel. The response of bromide to a flow event in the channel is almost immediate, exhibiting a rise or decrease in concentration as the tracer plume is displaced by infiltrating surface water. Some locations are responsive (Figure B-2.4-7, graphs b, d, and f), while others exhibit only a minimal response (Figure B-2.4-7, graphs a, c, and e). The data show that pulsed exchange between channel runoff and alluvial groundwater mobilizes solutes in the alluvial aquifer, and this mechanism provides a fast path from DP-2 to DP Spring.

Figure B-2.4-8 depicts a conceptual model of surface water/groundwater exchange in the alluvial aquifer adjacent to the channel in reach DP-2. Groundwater/surface water exchange appears to facilitate tracer migration in the aquifer close to the channel (hyporheic zone), with diminishing effects in the aquifer away from the channel. Chloride concentrations measured in groundwater as part of this study confirm this model. Chloride concentrations also decrease laterally away from the channel, indicating greater surface water/groundwater interaction adjacent to and less interaction away from the channel. Chloride from road salting is present at high concentrations in groundwater and, although more diffuse, provides an additional tracer for evaluating surface water/groundwater exchange. This “short-circuiting” effect is responsible for fast path solute transport to DP Spring.

Transducer data measured at the nested piezometers indicate that vertical hydraulic gradients are generally minimal, with upward gradients occurring during flood events and occasional, minor downward gradients occurring in response to groundwater discharge to the surface between flow events. Data from a direct current (DC) resistivity survey conducted in reach DP-2 indicate that groundwater recharge from alluvium to underlying bedrock does not occur (Figure B-2.4-9). Results of the geophysical survey and drilling information indicate that the top of the Bandelier Tuff contains copious clay weathering products and provides a barrier to downward migration of groundwater.

B-2.4.5 Summary of Tracer Study Results

Field and tracer results indicate that groundwater flow generally follows a coarse-sand horizon bound above and laterally by finer-grained sediments and below by weathered Bandelier Tuff. Groundwater flow is transient, primarily controlled by episodic recharge from townsite runoff that is routed down the channel. This study shows that the bromide tracer moved from reach DP-2 to DP Spring in less than 30 days. Surface water/groundwater exchange was identified as an important mechanism for transporting solutes from DP-2 to DP Spring and eventually to Los Alamos Canyon. Flushing of the alluvial aquifer and solute transport is dependent upon the position in the aquifer, is fastest at locations near the channel, and is affected by the magnitude and duration of runoff events.

B-3.0 BIOTA INVESTIGATIONS

This appendix contains supplemental information on biota investigations conducted to support the evaluation of potential adverse ecological impacts presented in Section 8.1.

Following the study plan in Katzman (2002, 73667), sediment characterization in support of the small mammal study involved collecting composite samples from each trapping grid or array to obtain representative concentrations of constituents within the foraging area. With the exception or the upper array in reach AC-3, each trapping array was divided into thirds, and a composite sample was obtained from each third. The upper array in AC-3 was shorter than the other arrays because of geographic restrictions and was divided in half instead of thirds. Each composite sample consisted of equal portions of sediment from a subset of the trapping locations within that area. All the sediment samples were collected from depths of 0–15 cm (0–6 in.). The specific trapping locations were selected randomly using a random number generator and included nine trapping locations per each one-third array, except for the upper array in Acid Canyon where nine locations were selected in each half array. For the typical array of 20 trapping locations, 9 out of the 20, or 45%, of the locations were sampled. At each location, field notes were taken on the geomorphic unit and sediment facies and on the percent of the sample, if any, that consisted of sediment deposited by post-fire floods. Tables B-3.0-1 through B-3.0-4 present information on the trap number, geomorphic unit, and sediment thickness for each portion of each composite sample for reaches AC-3, LA-1C, P-3W, and for the Guaje Canyon reference area, respectively. Table B-3.0-5 presents a summary of the characteristics of the sampled sediment in each composite sample.

Tables B-3.0-6 to B-3.0-10 present additional details of samples submitted for analysis associated with the biota investigation. Table B-3.0-6 presents specific information on the small mammals submitted for laboratory analyses, including sample ID, ear tag number, species, reach, and trapping array. Table B-3.0-7 lists each sediment sample submitted for laboratory analyses, including reach, location ID, sample type, depth, data collected, and analytical suite. Table B-3.0-8 presents a crosswalk between sample IDs for samples associated with earthworm mortality tests. This crosswalk is necessary because separate sample IDs were assigned for chemical analyses of sediment, chemical analyses of earthworms, and results of the mortality tests. Table B-3.0-9 lists samples of active channel (c1) sediment and surface water submitted for chemical analysis associated with the *Chironomus tentans* tests. Table B-3.0-10 presents a crosswalk between sample IDs for sediment, surface water, and *Chironomus tentans* growth and mortality toxicity bioassays.

B-4.0 POST-FIRE ASH AND SEDIMENT CHARACTERIZATION

Samples of ash and sediment were collected after the Cerro Grande fire to help evaluate the effects of the fire on the chemical composition of sediment deposits. Samples were collected from areas both

upcanyon and downcanyon from Laboratory SWMUs and AOCs, as well as from canyons not affected by Laboratory activities. The locations, analytic suites, and other information on the ash and fire-affected sediment samples collected by the Canyons investigation team are summarized in the following sections. Analytical data from these samples are presented in Appendix C, and used in other sections of this investigation report. Additional analyses from fire-affected sediment samples have been obtained from active channels by the Environmental Surveillance Program and presented in its annual reports (ESP 2001, 71301; ESP 2002, 73876; ESP 2004, 83635). Some of the composite sediment samples collected from small mammal trapping arrays also include components of fire-affected sediment deposits, as discussed in Section B-3.

B-4.1 Ash Sampling

Samples of ash were collected from 17 locations in the Cerro Grande burn area in the Chupaderos, Los Alamos, Pueblo, and Rendija watersheds in 2000 and 2001. Results of the samples from 2000 were used to help focus the analytical suites in 2001. The sample locations, dates of collection, analytical suites, and other information about these ash samples are presented in Table B-4.1-1.

B-4.2 Sediment Sampling

Samples of post-fire sediment were collected from locations within or downcanyon from the Cerro Grande burn area in 2000 and 2001, including samples from 39 “baseline” locations in parts of eight canyons that are not downcanyon from significant Laboratory SWMUs or AOCs (Garcia, Guaje, Los Alamos, Pajarito, Pueblo, Rendija, South Fork Pajarito, and Water Canyons). Included in this group are seven samples from Rendija Canyon downcanyon from some SWMUs or AOCs with no known releases of radionuclides and relatively minor concentrations of other contaminants (LANL 2001, 71060). The Rendija Canyon sample sites are also downcanyon from some developed areas in the northern part of the Los Alamos townsite. Roughly half (19) the baseline samples were collected from the Los Alamos Reservoir, including samples from all major sediment layers deposited in 2000 and 2001, which were exposed during excavation of accumulated sediment in fall 2001. The sampled sediment included a range of particle sizes and ash content, ranging from samples of “muck” (silty post-fire sediment dominated by reworked ash) to samples of coarse or very coarse sand. The sample locations, dates of collection, analytical suites, and other information about these baseline samples are presented in Table B-4.1-2.

In Los Alamos and Pueblo Canyons, post-fire samples were collected from 80 sediment layers downcanyon from SWMUs and AOCs (Tables B-4.1-3 and B-4.1-4). Half of these sediment layers (40) were in Pueblo Canyon, which is particularly susceptible to post-fire floods and which contained plutonium in sediment deposits along the channel that were partially eroded during these floods. Most of the Pueblo Canyon samples were collected from sediment deposited during the largest post-fire flood in this canyon (July 2, 2001) to determine how the concentrations of plutonium varied both within reaches and downcanyon among reaches in deposits from a single large flood. Samples were collected from six Pueblo Canyon reaches in 2001, extending from above Acid Canyon (reach P-1W) to near the confluence with Los Alamos Canyon (reach P-4E). Twenty eight sediment layers were sampled in lower Los Alamos Canyon on San Ildefonso Pueblo land near the residences at Totavi (reach LA-4FE) and immediately upcanyon from the Rio Grande (reach LA-5E). In both reaches, sampling included collecting deposits from floods in both 2000 and 2001, the latter including deposits from the July 2, 2001, flood. The remaining 12 sampled sediment layers were in upper Los Alamos Canyon behind the low-head weir near the White Rock Y (reach LA-3FE).

Particle-size and organic-matter data for fire-affected sediment samples are presented in Table B-4.1-5.

B-5.0 REFERENCES

The following list includes all documents cited in this report. Parenthetical information following each reference provides the author, publication date, and ER ID number. This information is also included in text citations. ER ID numbers are assigned by the RRES-RS Records Processing Facility (RPF) and are used to locate the document at the RPF and, where applicable, in the RRES-RS project reference set titled "Reference Set for Canyons Investigations."

Copies of the reference sets are maintained at the NMED Hazardous Waste Bureau; the DOE Los Alamos Site Office; US Environmental Protection Agency, Region 6; and RRES-RS project. The sets were developed to ensure that the administrative authority has all material needed to review this document, and they are updated periodically as needed. Documents previously submitted to the administrative authority are not included.

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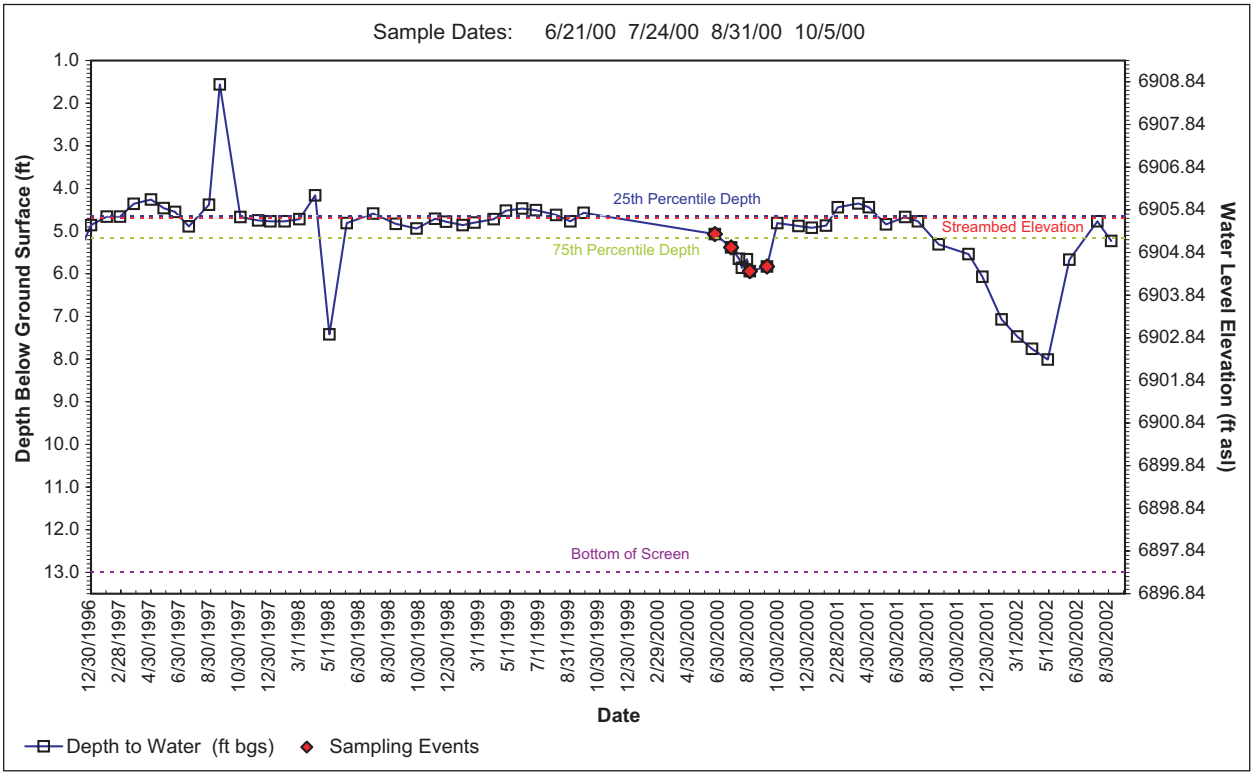


Figure B-2.2-1a. Manual water level vs. measurement date for well LAO-0.6

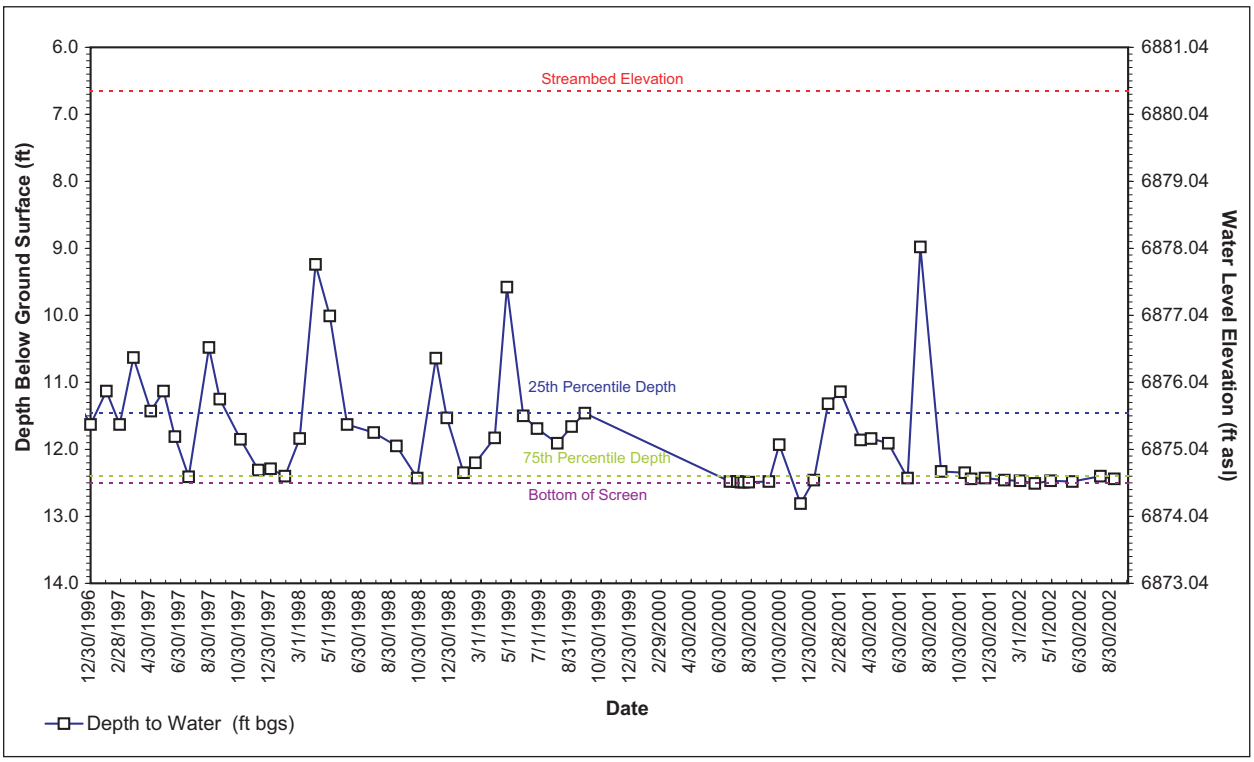


Figure B-2.2-1b. Manual water level vs. measurement date for well LAO-0.8

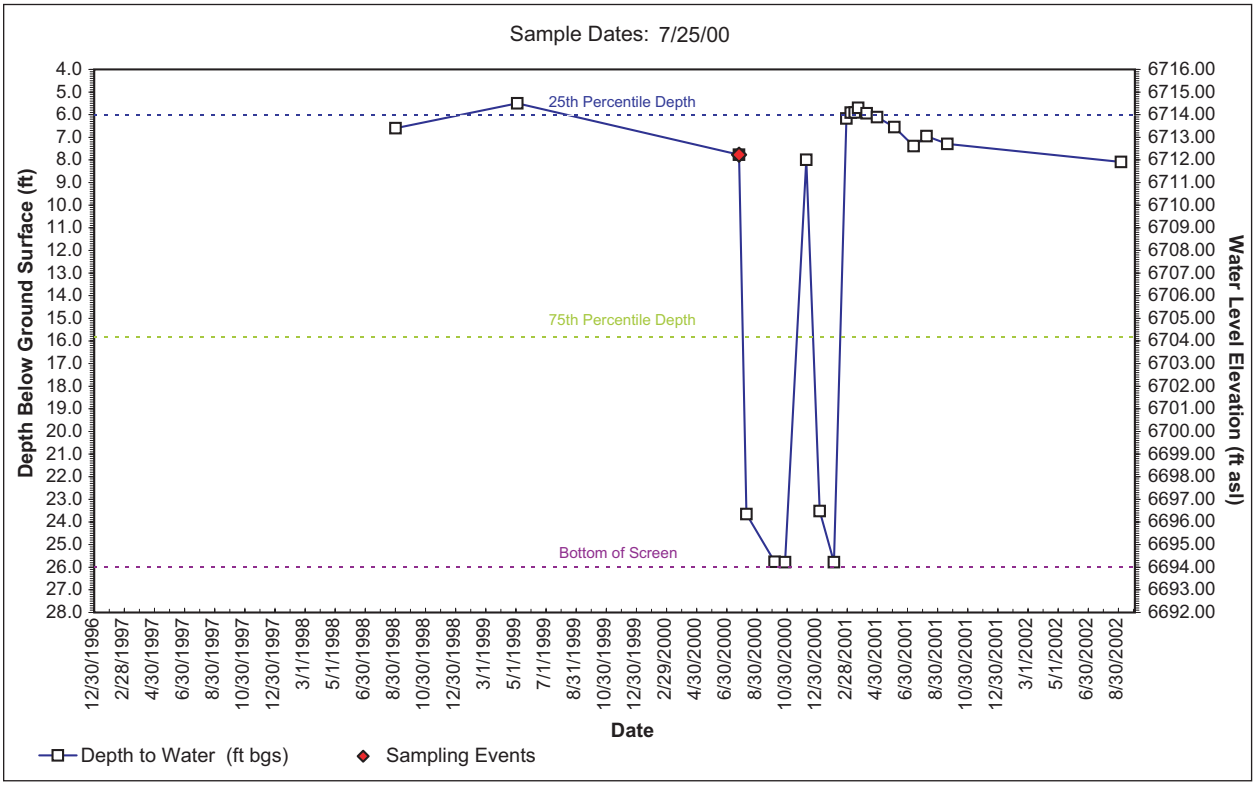


Figure B-2.2-1c. Manual water level vs. measurement date for well LAO-1.2

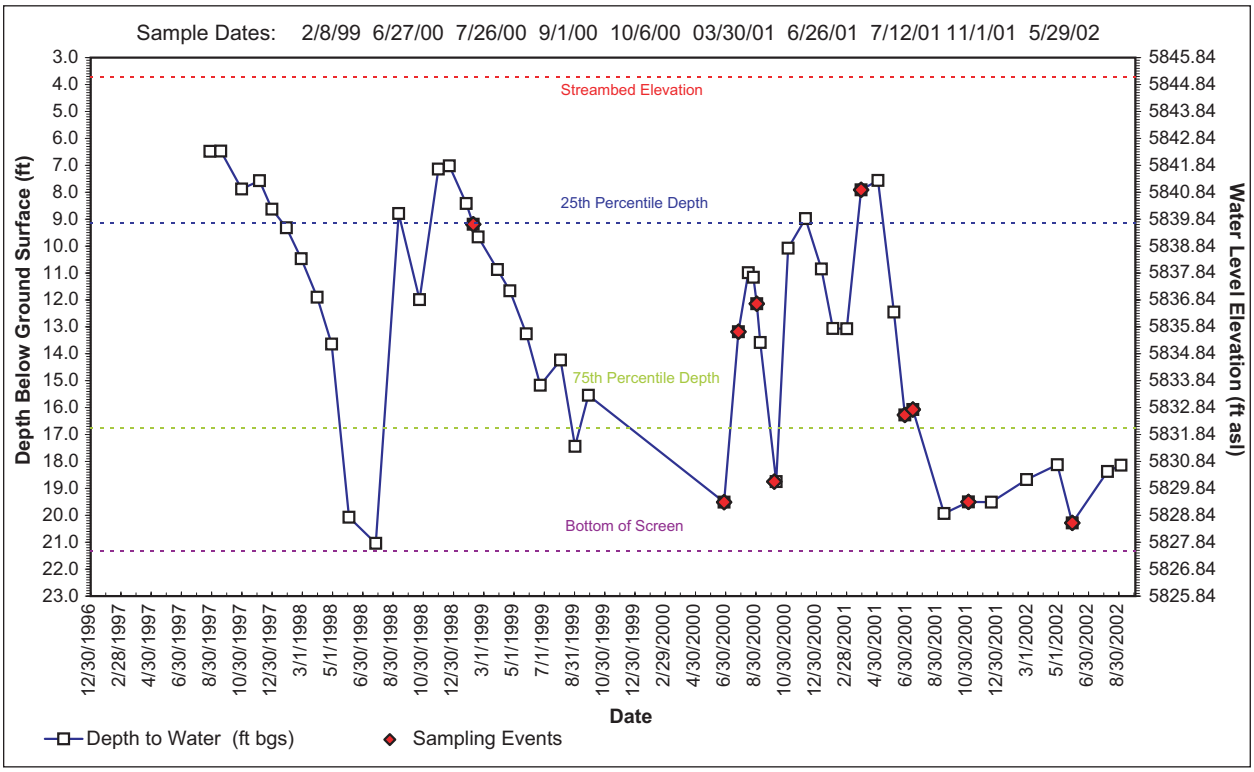


Figure B-2.2-1d. Manual water level vs. measurement date for well LLAO-1(b)

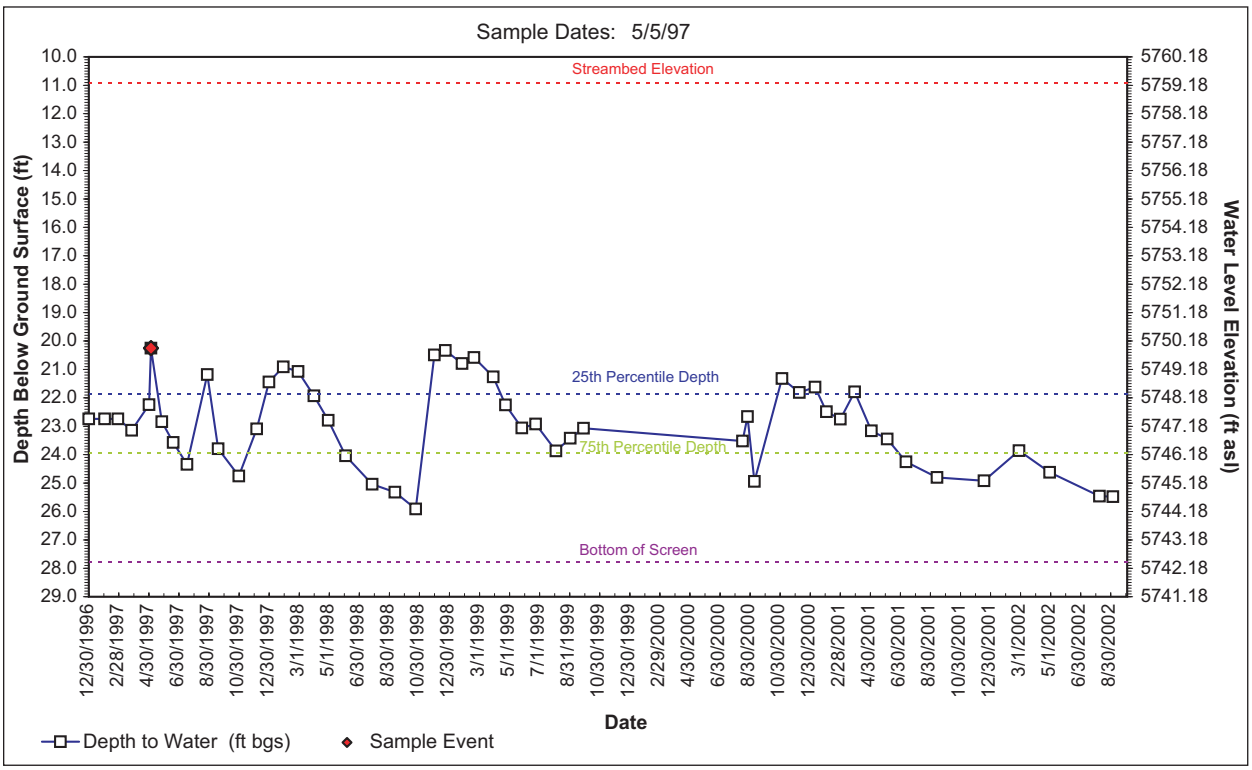


Figure B-2.2-1e. Manual water level vs. measurement date for well LLAO-2

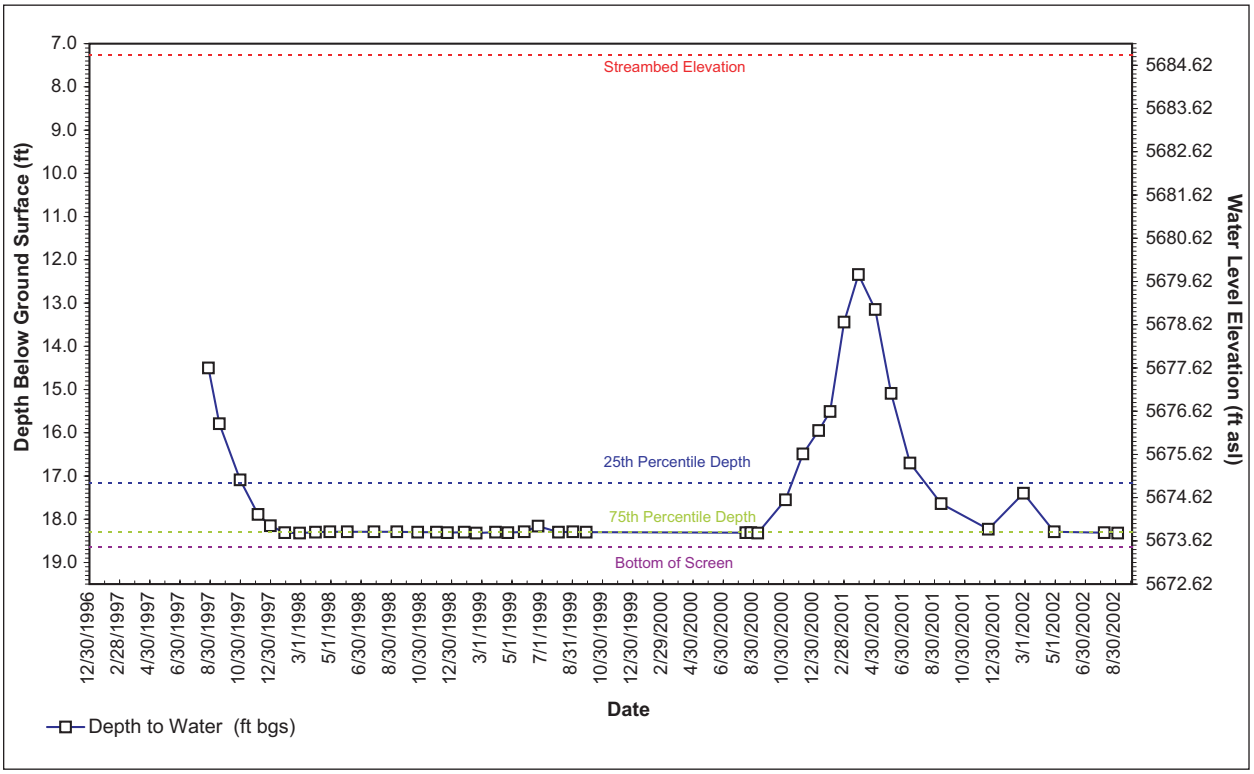


Figure B-2.2-1f. Manual water level vs. measurement date for well LLAO-3

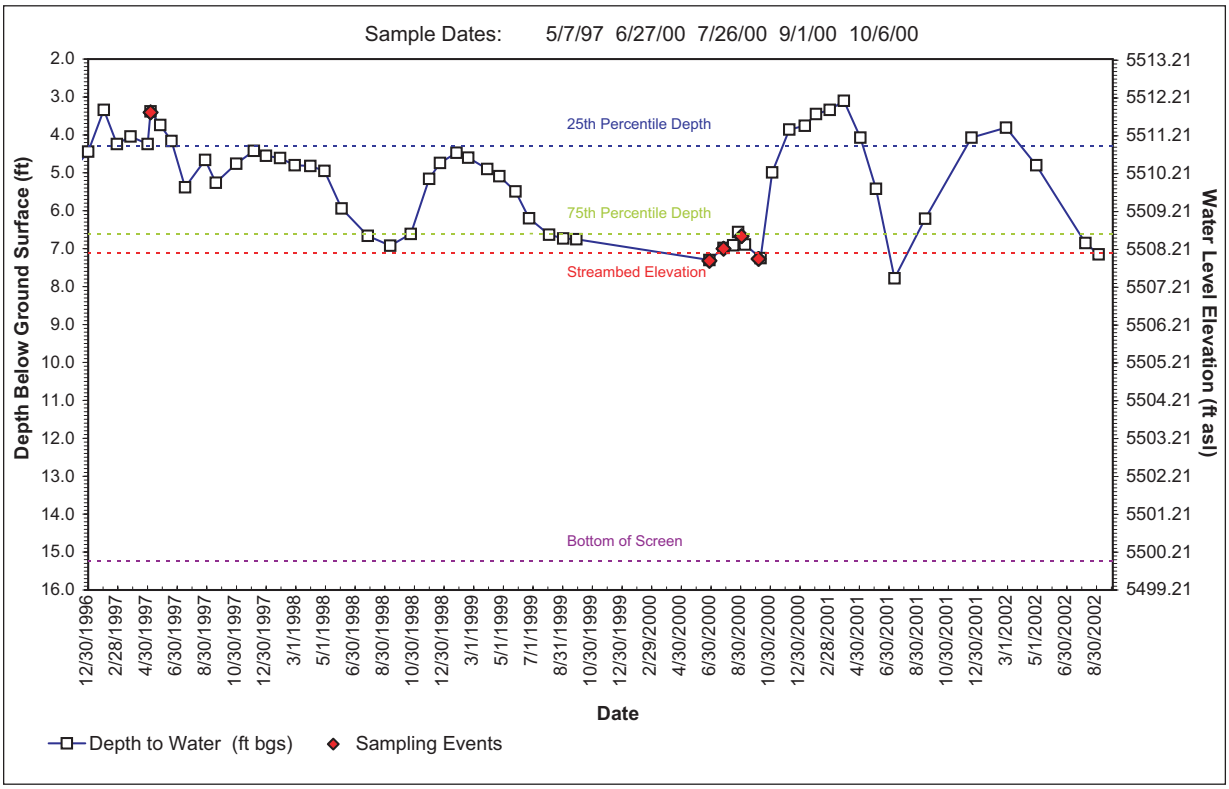
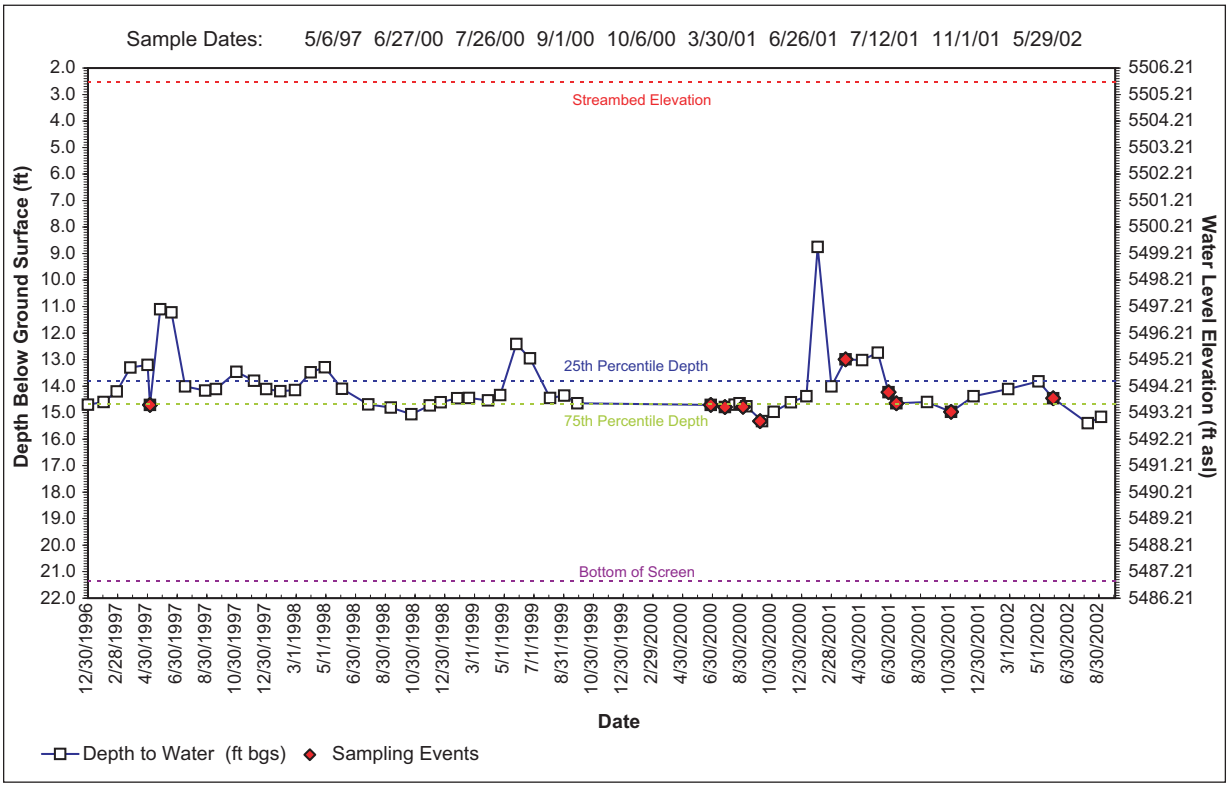


Figure B-2.2-1g. Manual water level vs. measurement date for well LLAO-4



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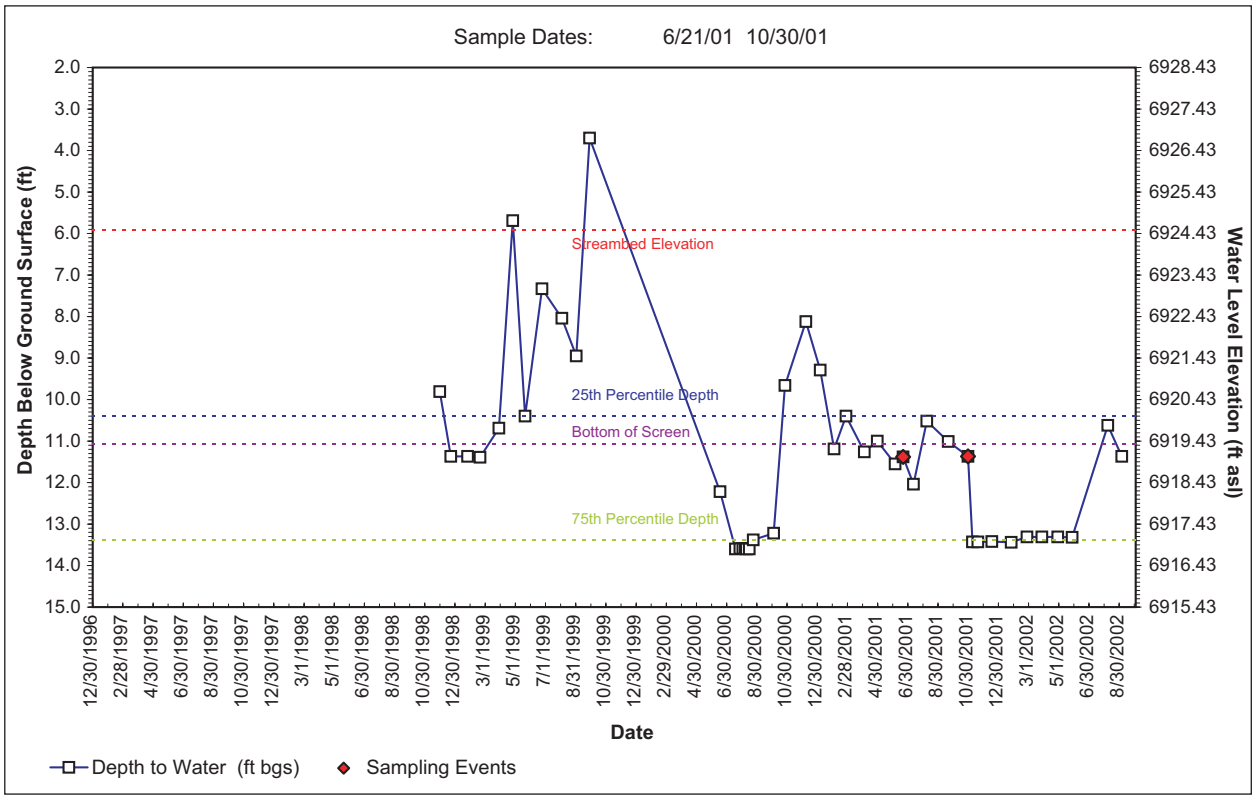


Figure B-2.2-1i. Manual water level vs. measurement date for well PAO-2

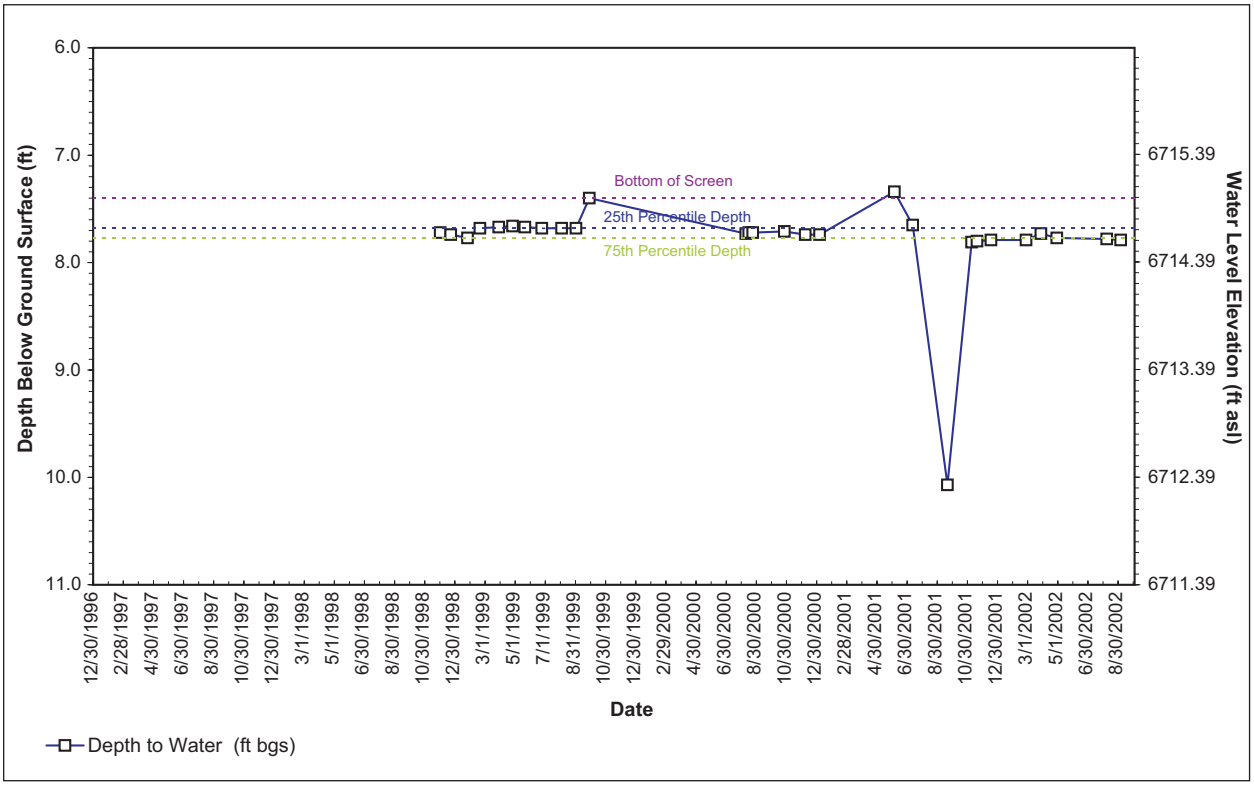
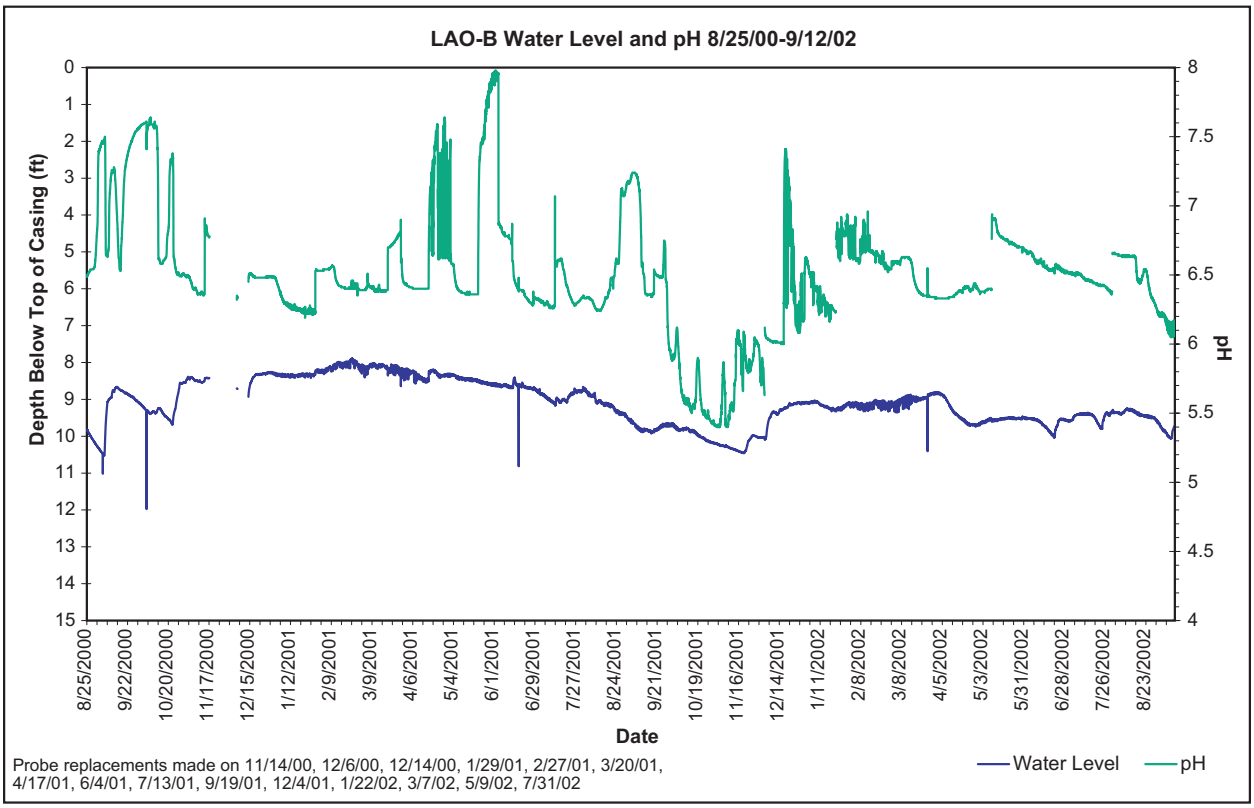


Figure B-2.2-1j. Manual water level vs. measurement date for well PAO-2.5



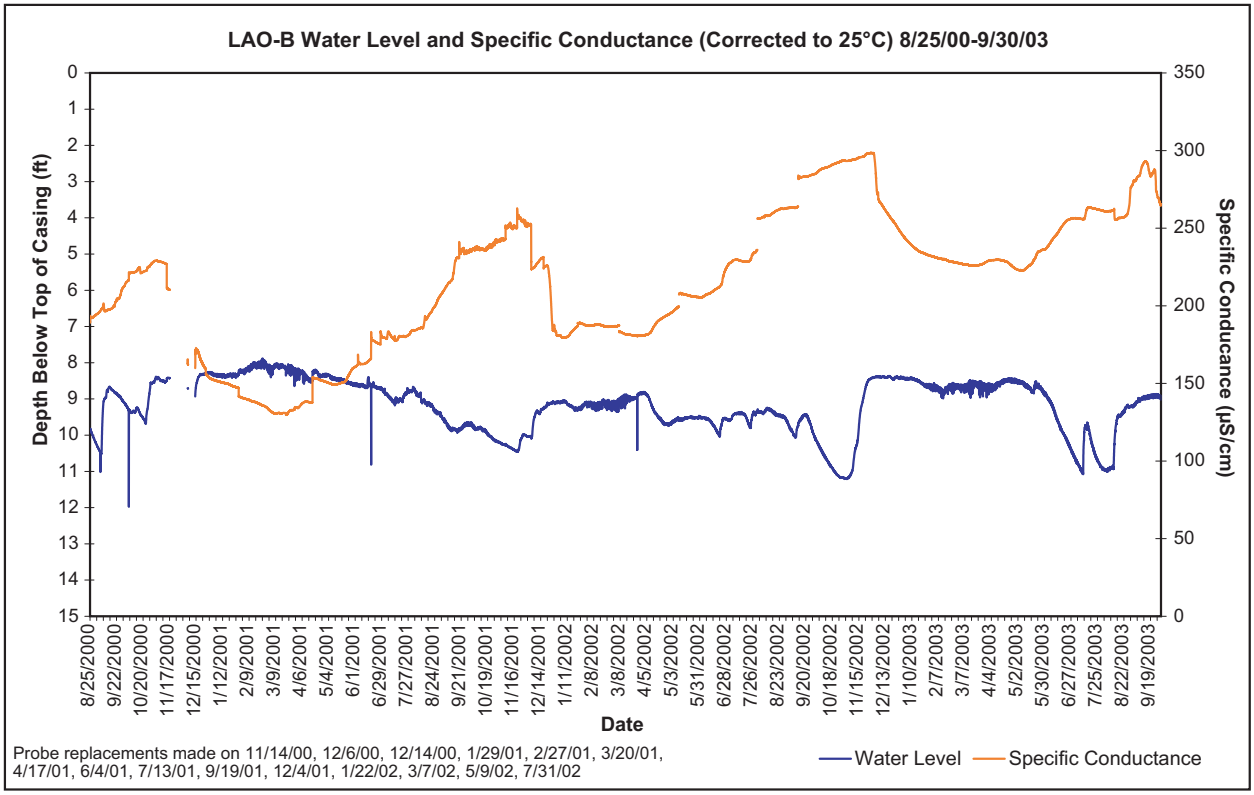
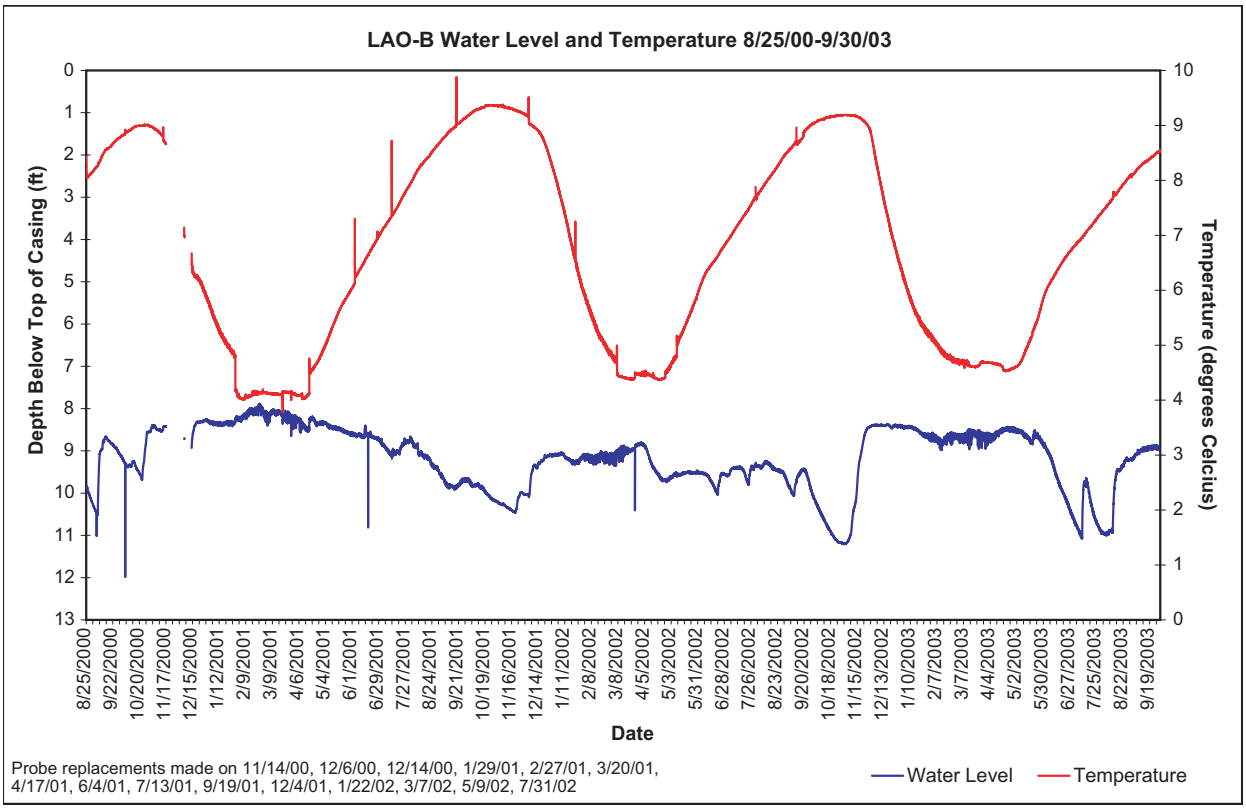


Figure B-2.2-2a. Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well LAO-B



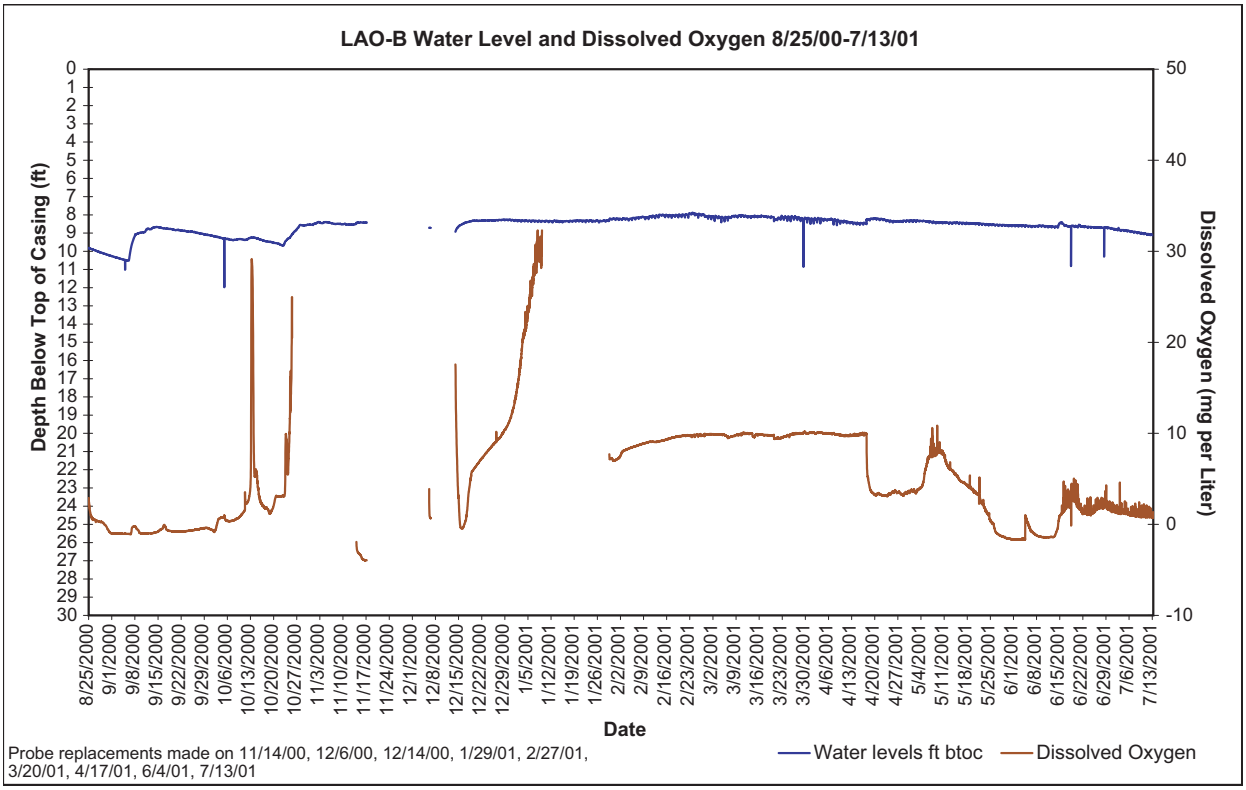
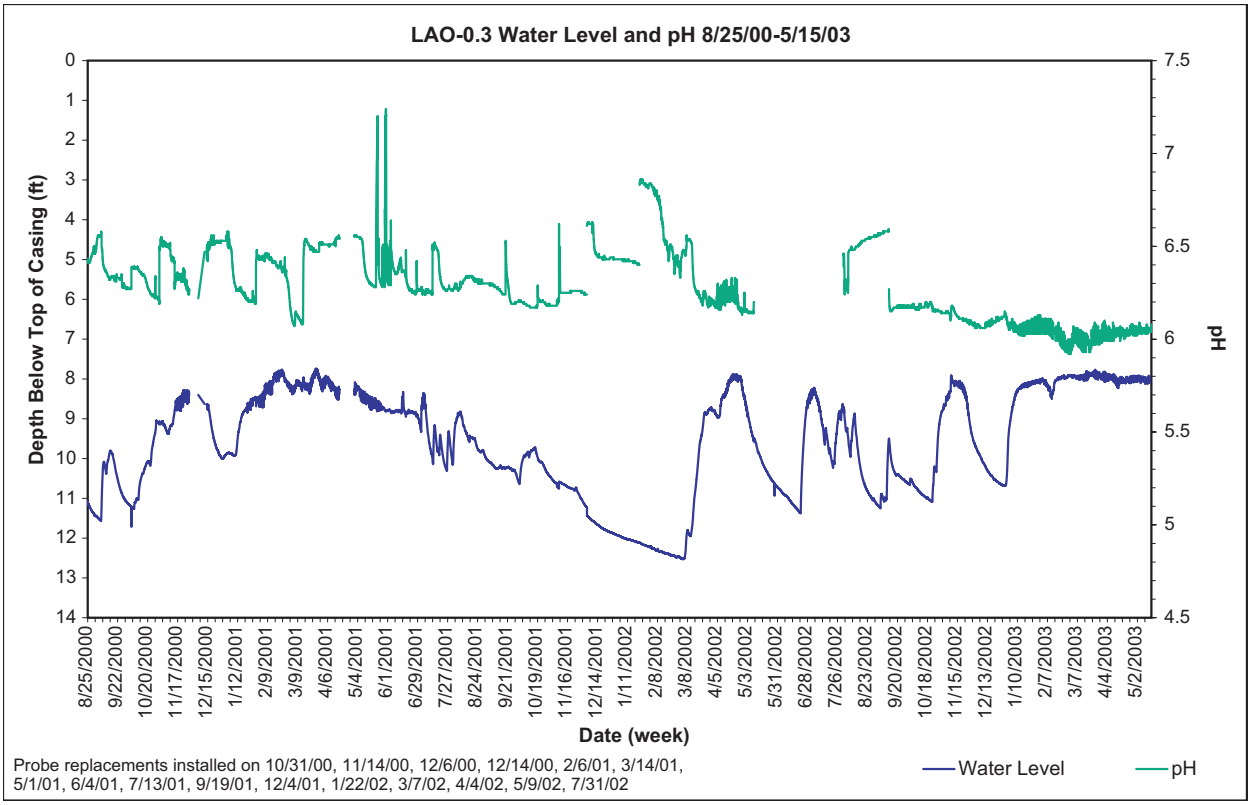


Figure B-2.2-2a (continued). Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well LAO-B



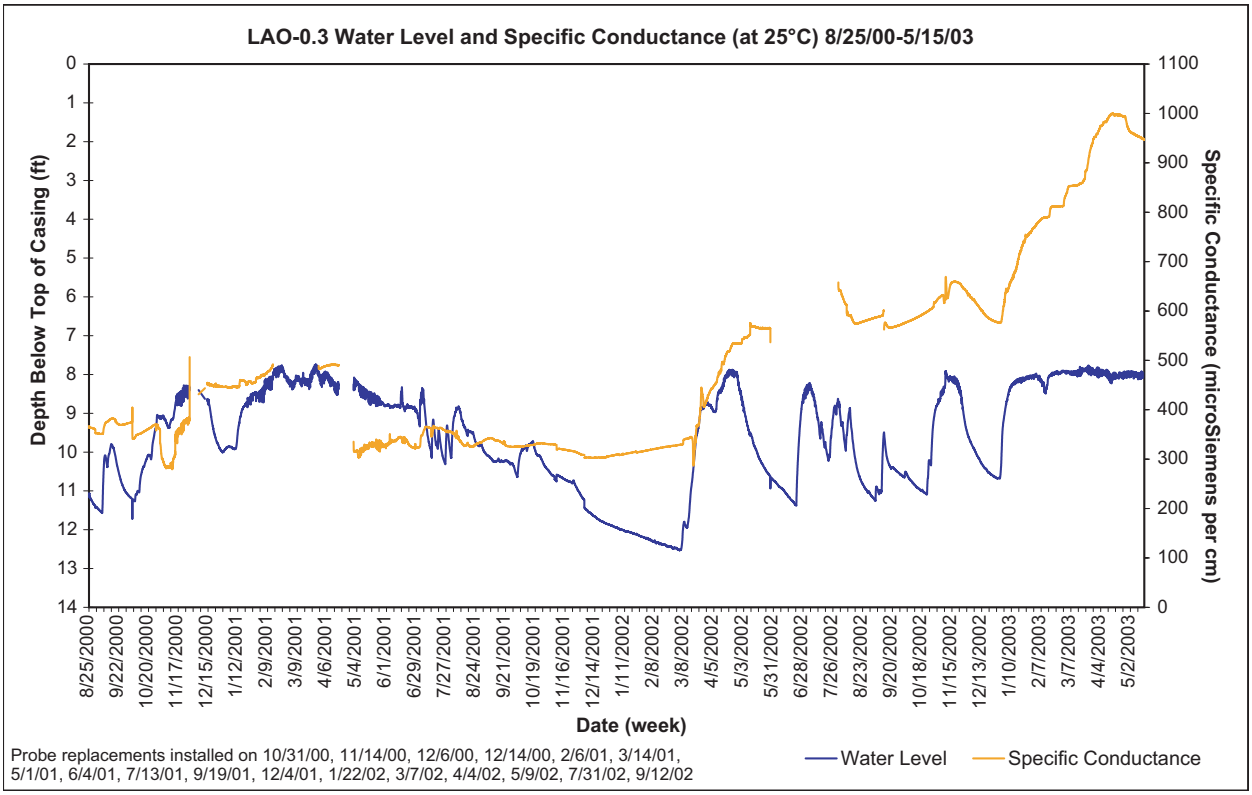
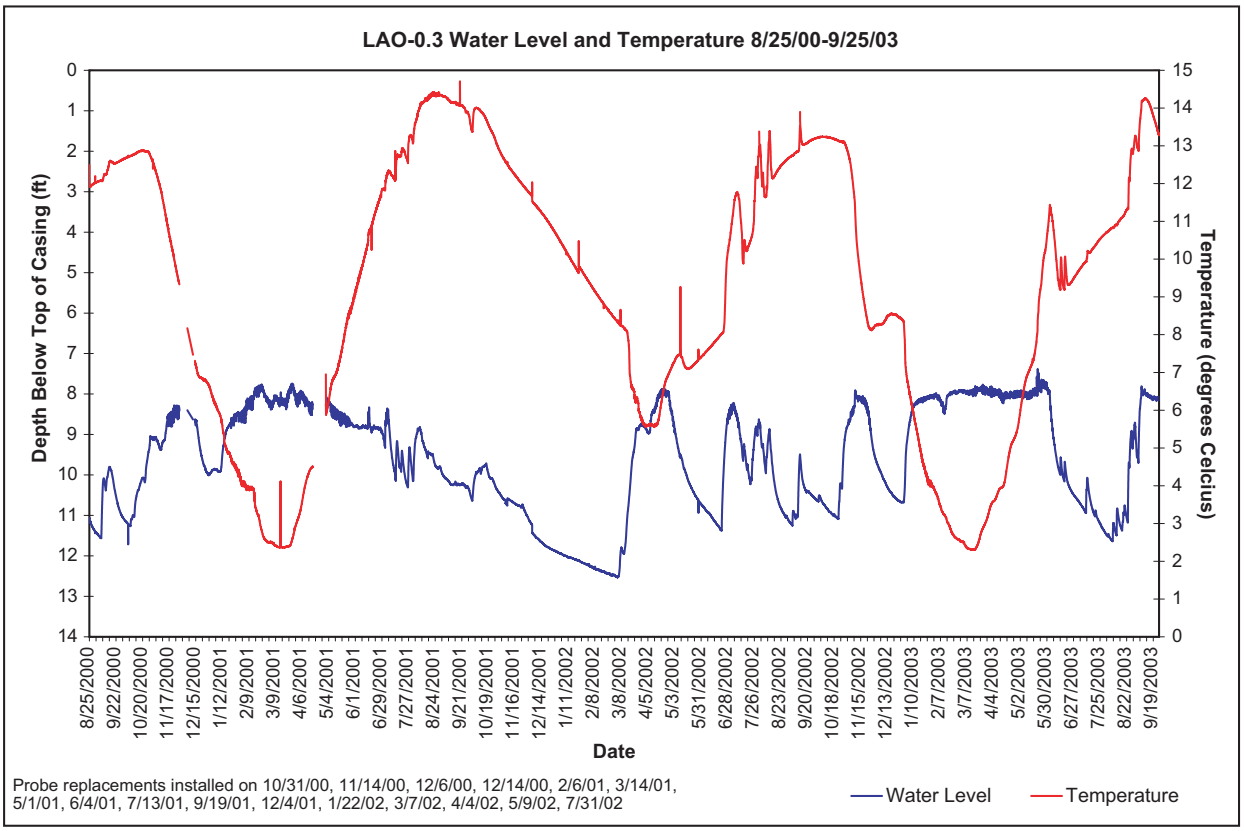


Figure B-2.2-2b. Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well LAO-0.3



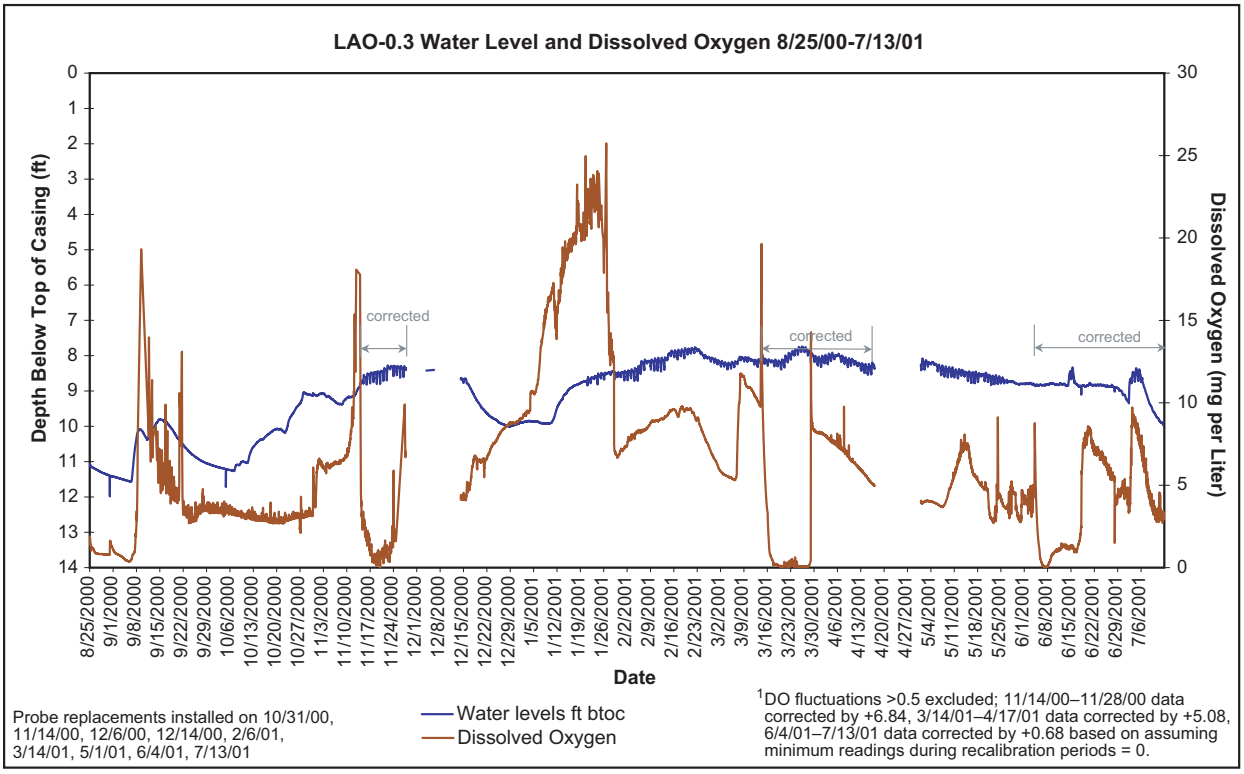
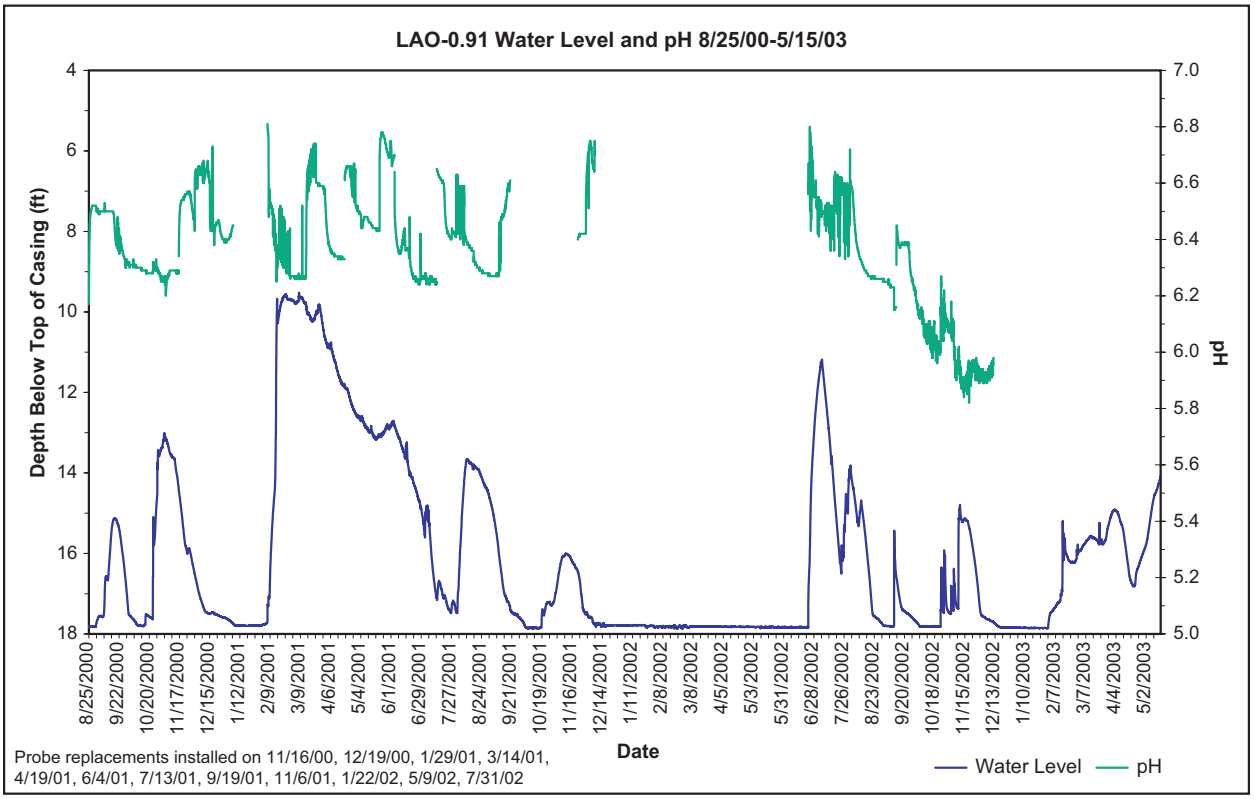


Figure B-2.2-2b (continued). Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well LAO-0.3



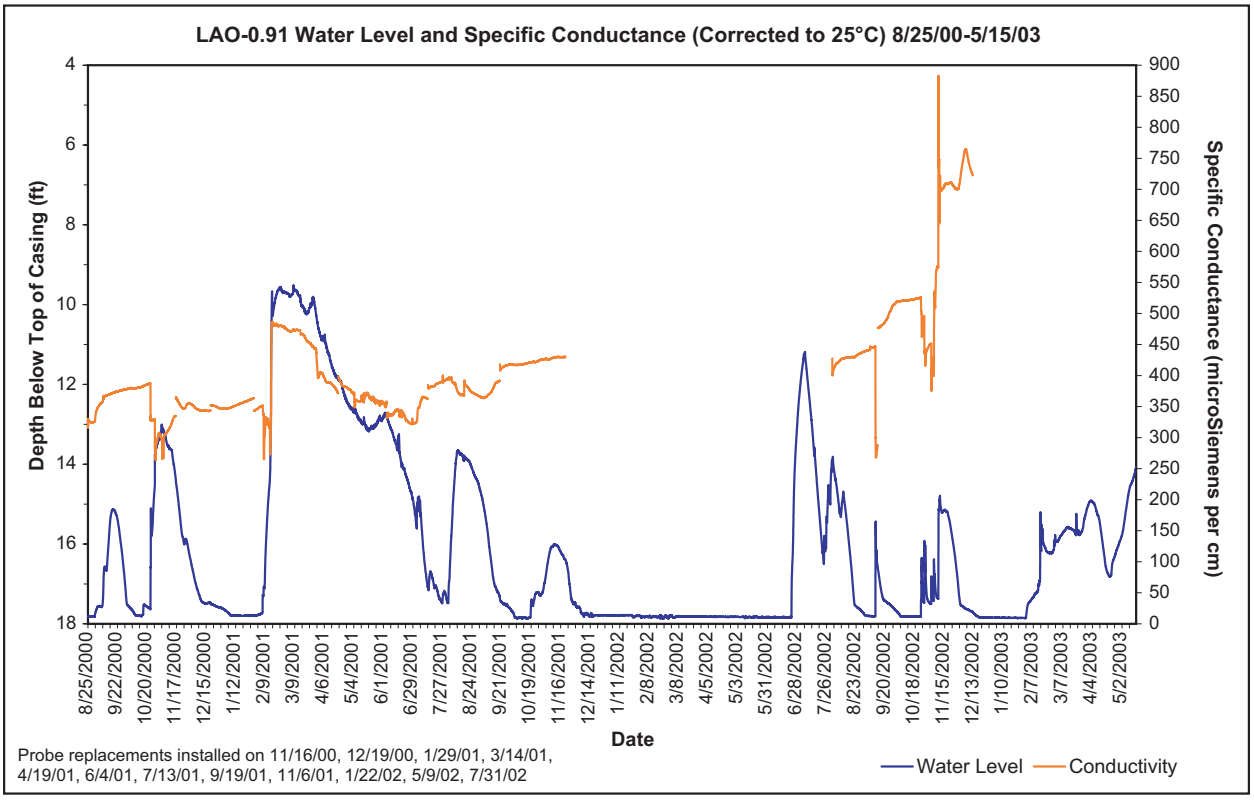
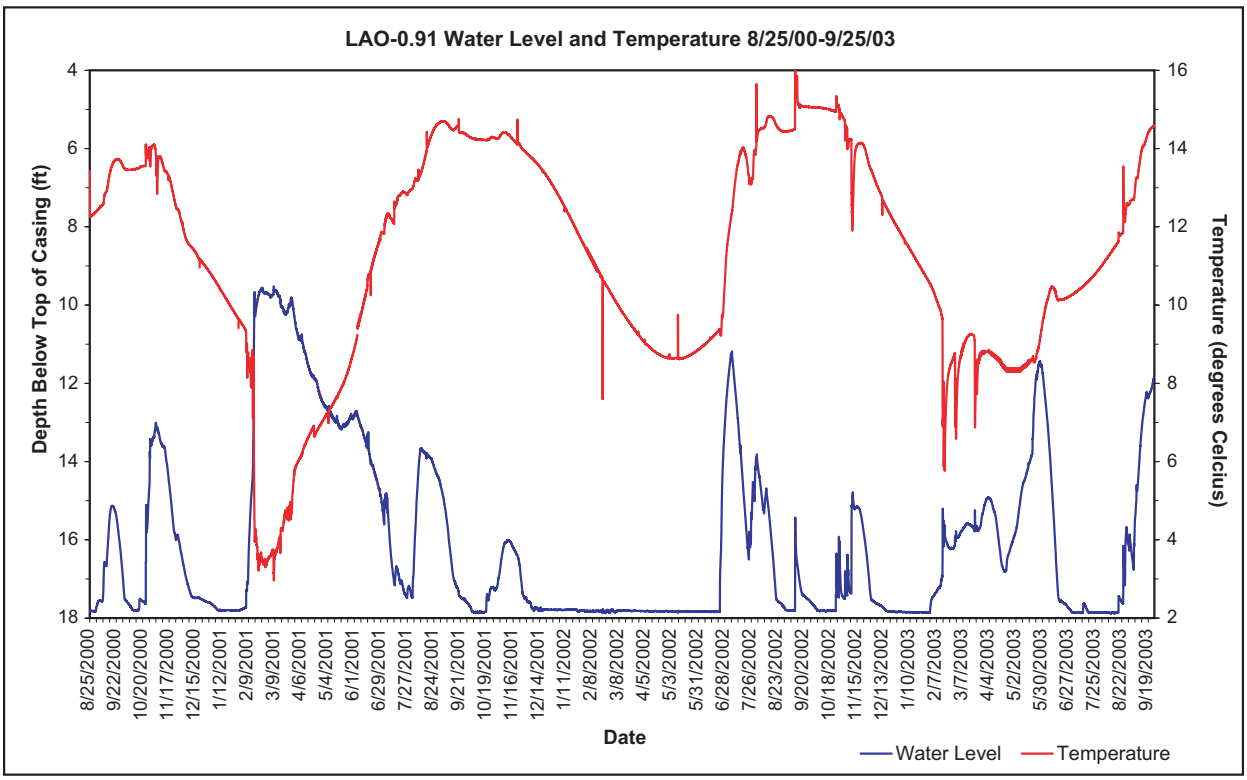


Figure B-2.2-2c. Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well LAO-0.91



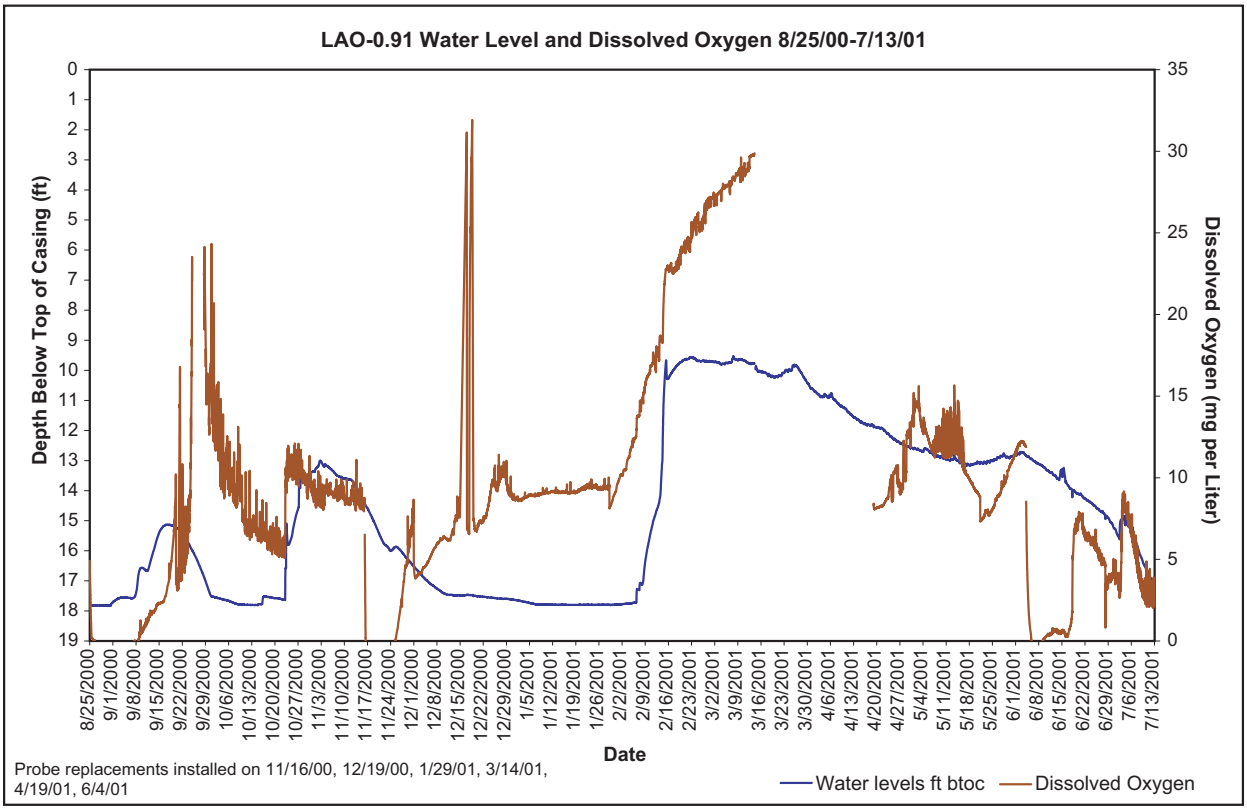
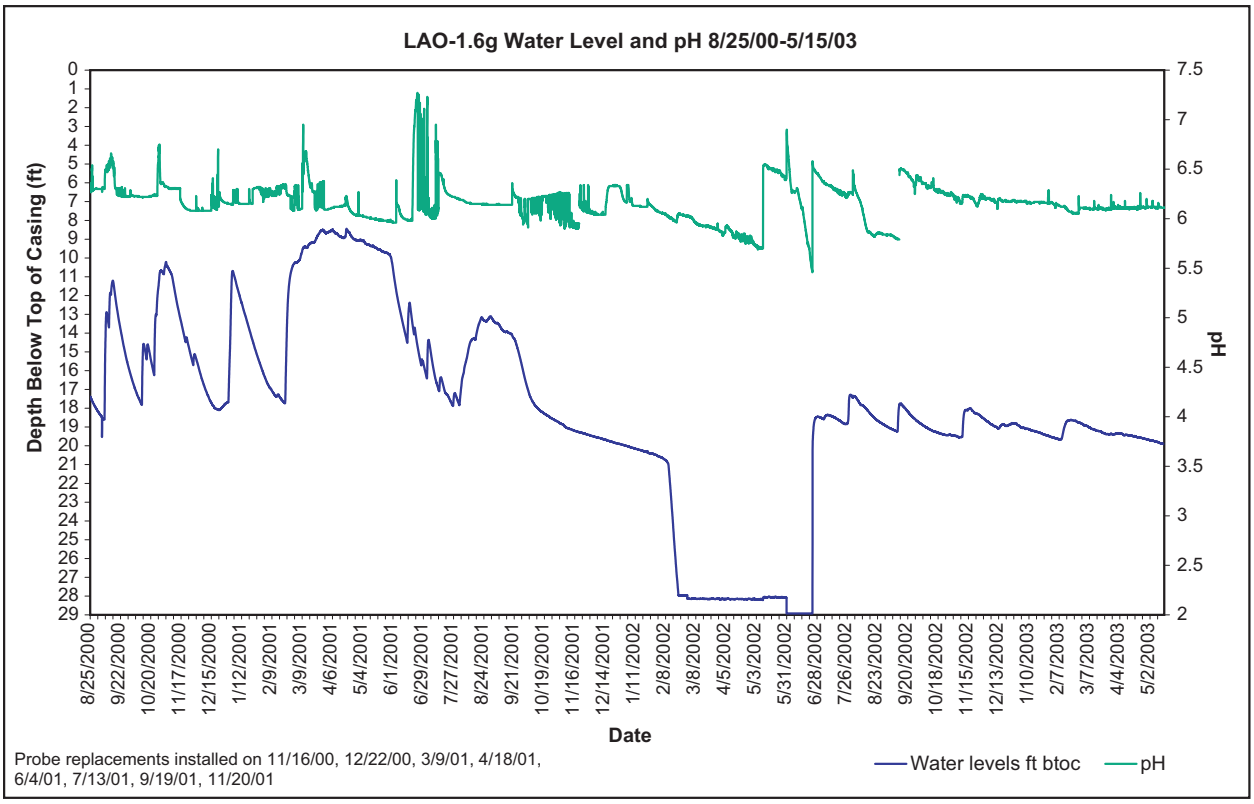


Figure B-2.2-2c (continued). Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well LAO-0.91



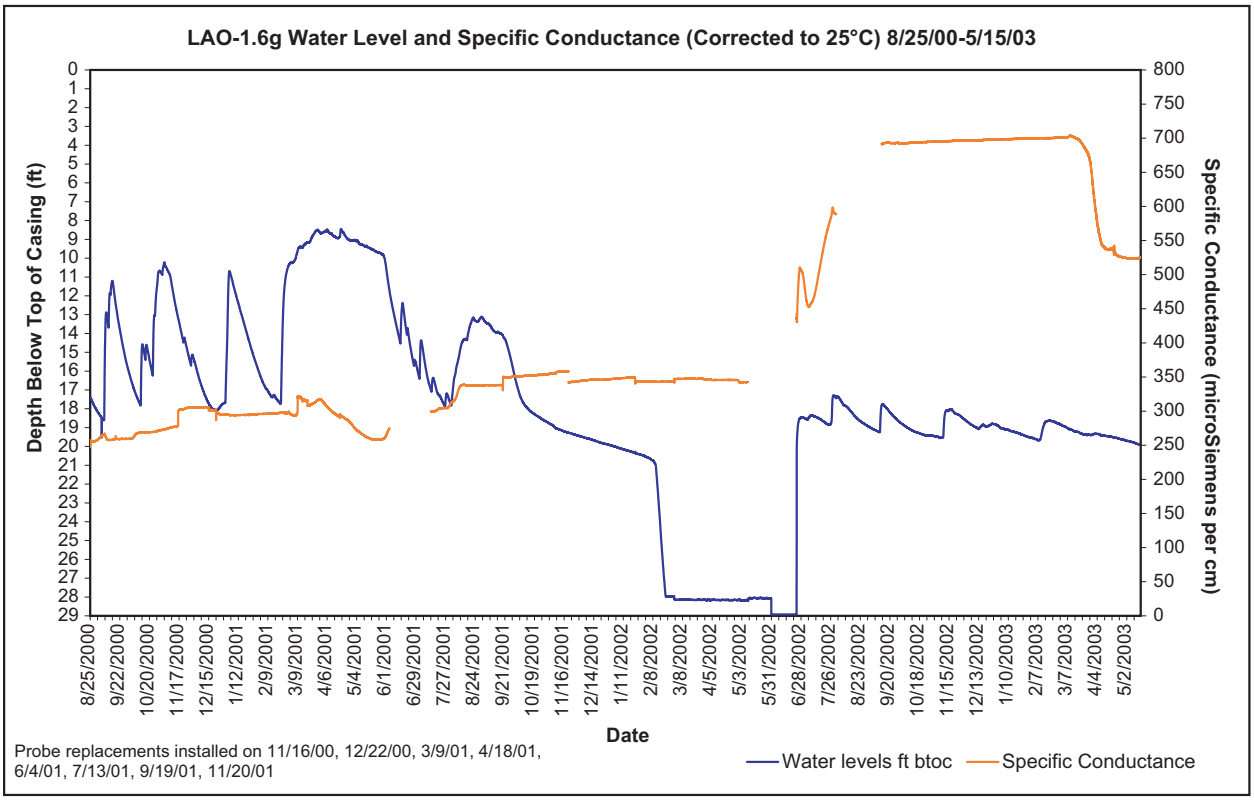
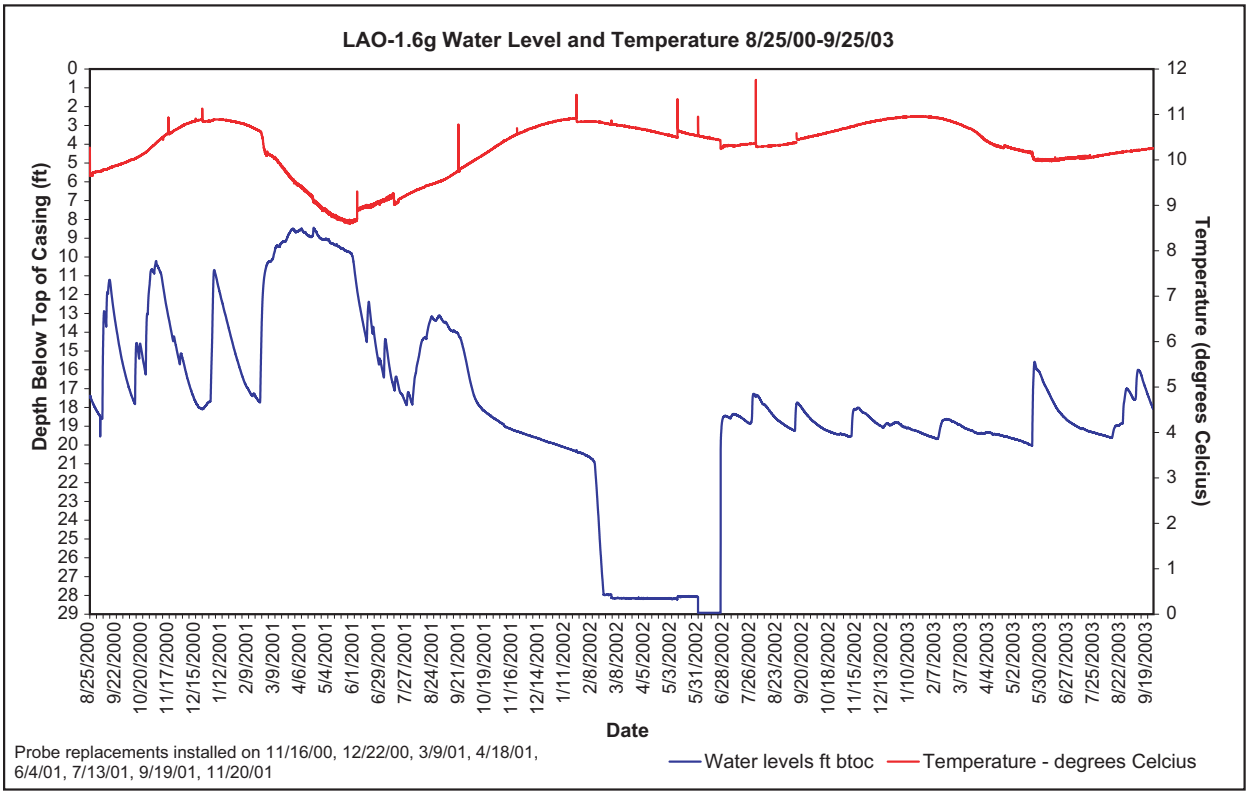


Figure B-2.2-2d. Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well LAO-1.6(g)



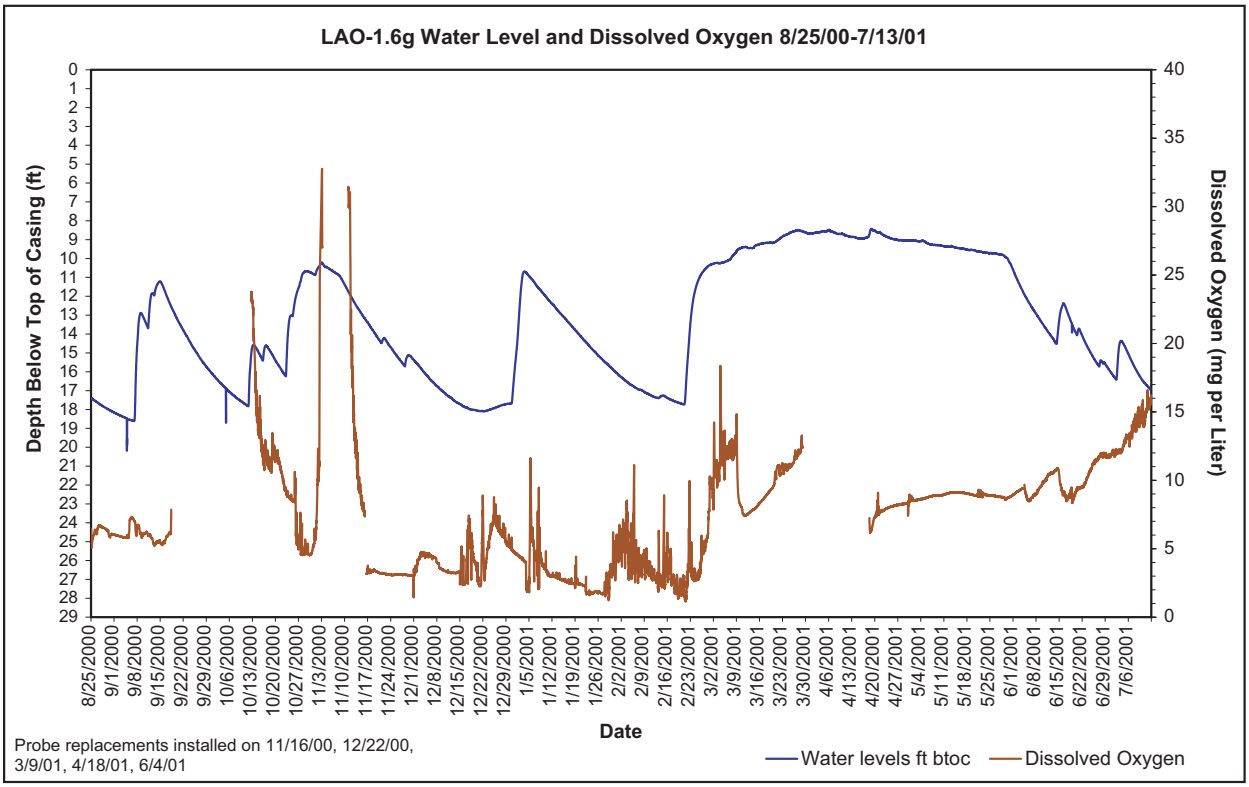
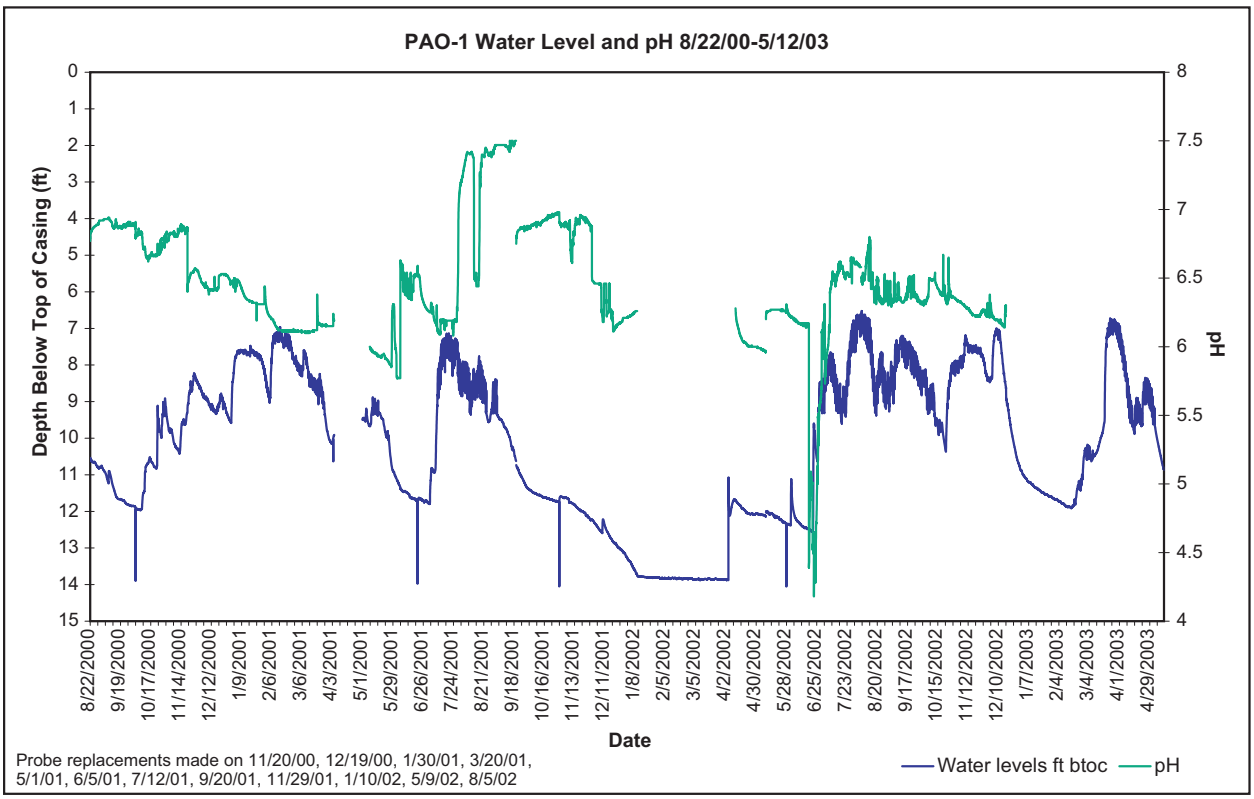


Figure B-2.2-2d (continued). Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well LAO-1.6(g)



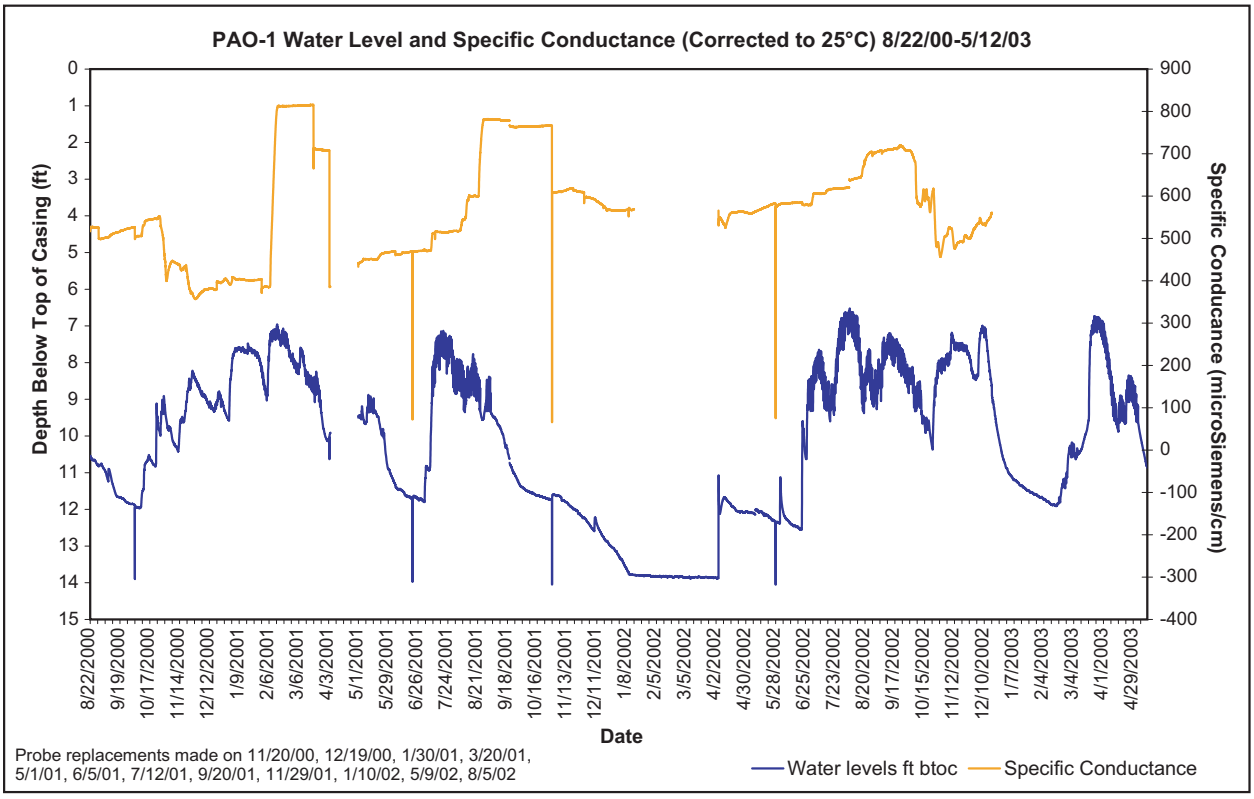
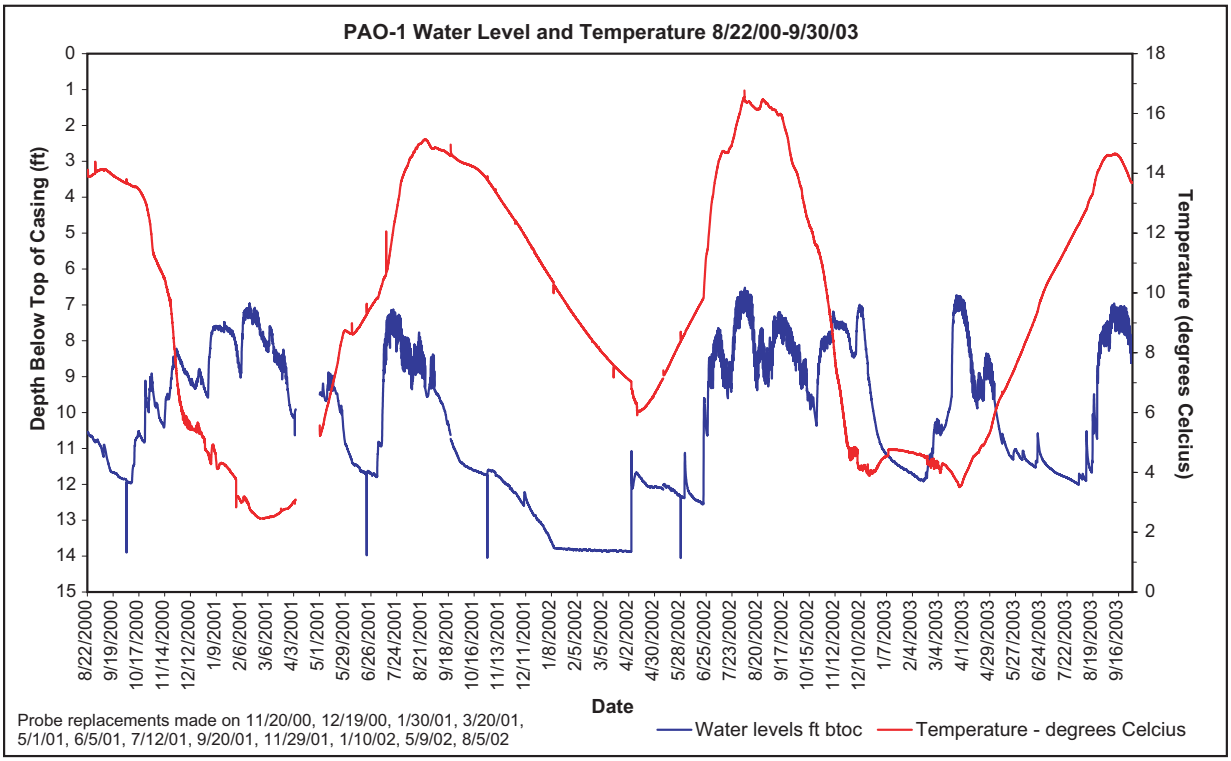


Figure B-2.2-2e. Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well PAO-1



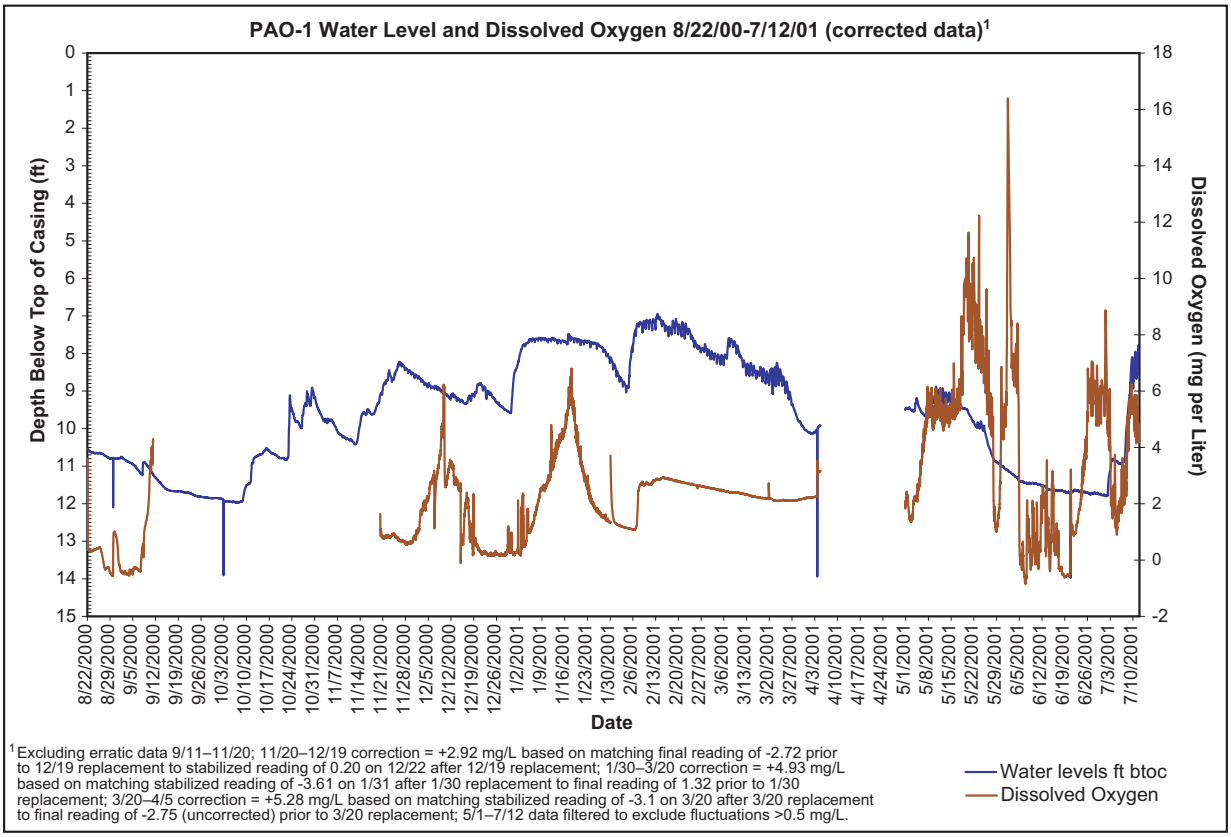
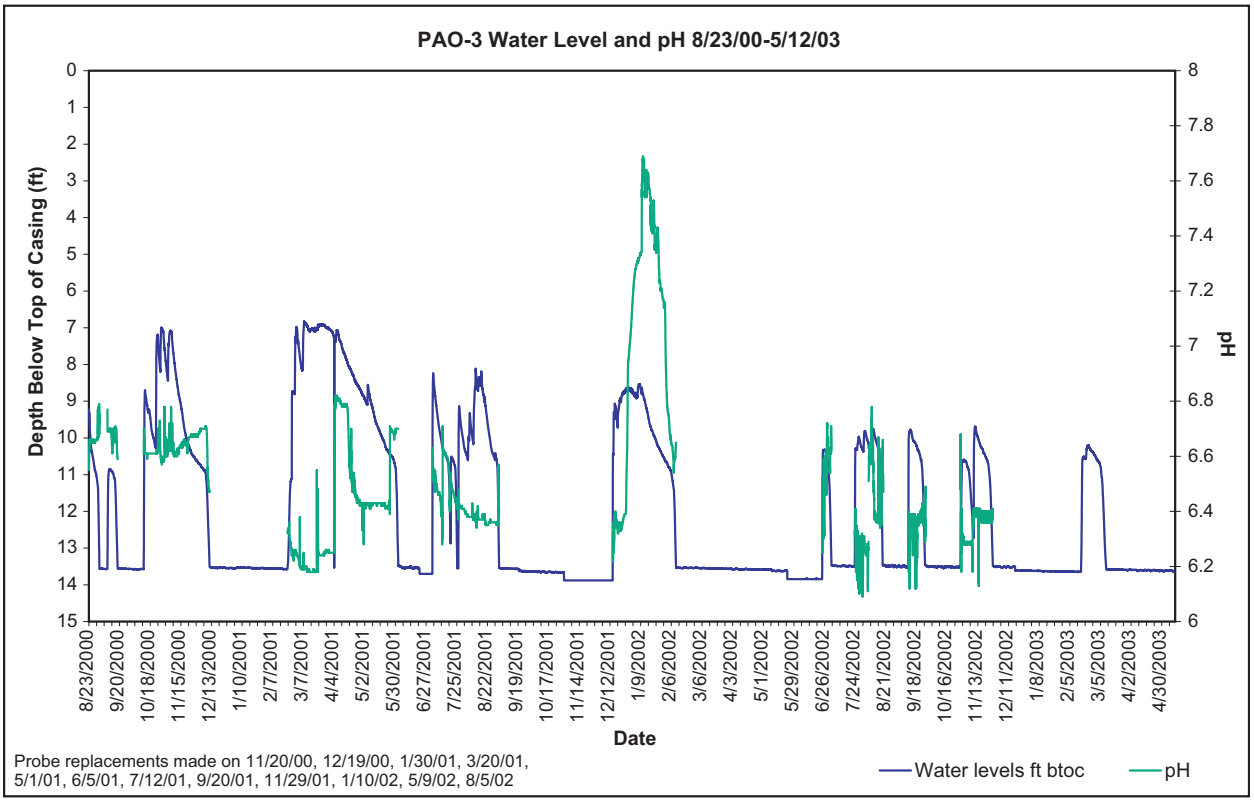


Figure B-2.2-2e (continued). Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well PAO-1



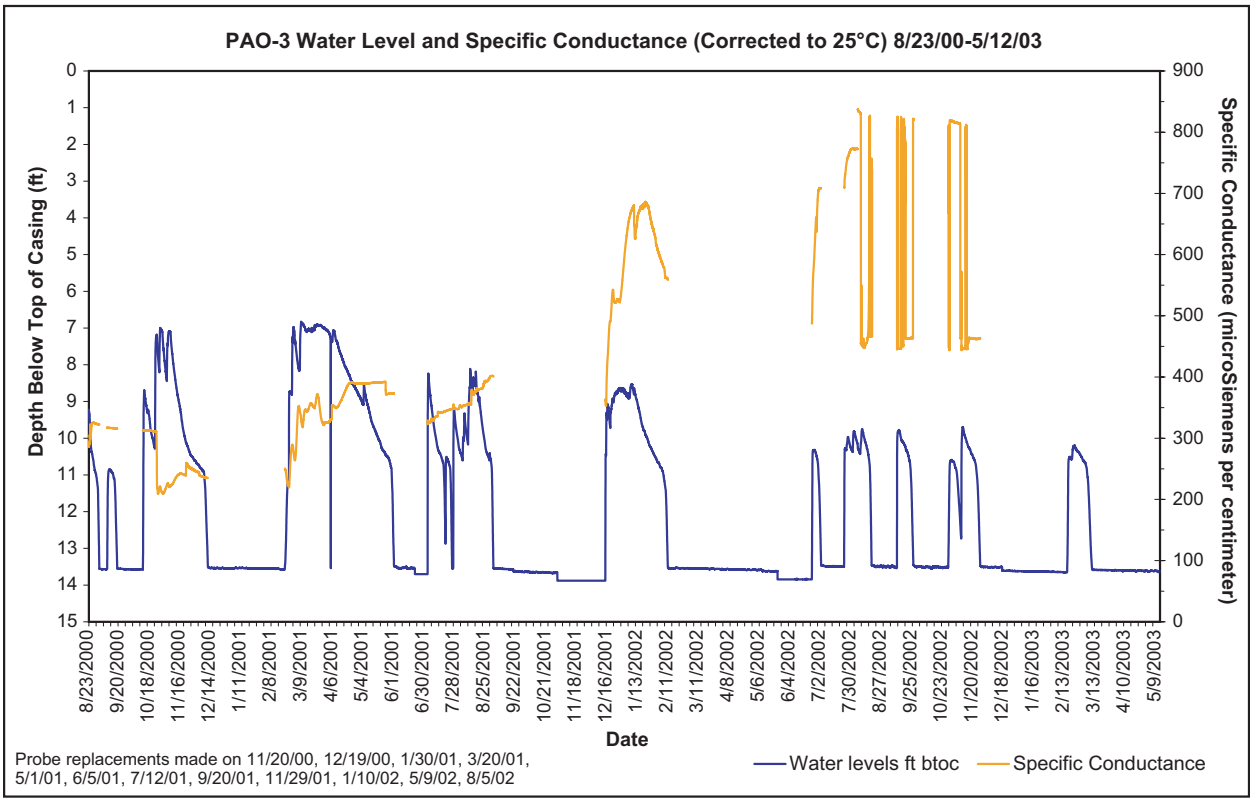
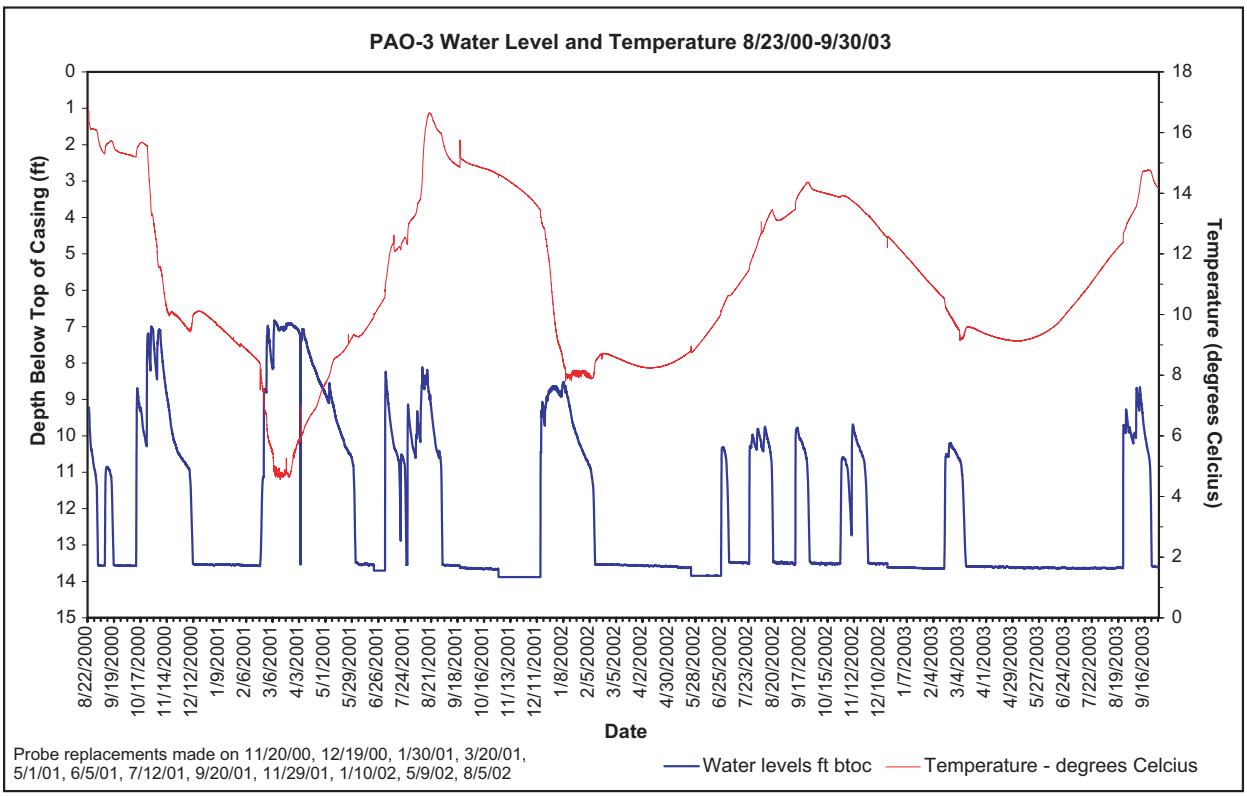


Figure B-2.2-2f. Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well PAO-3



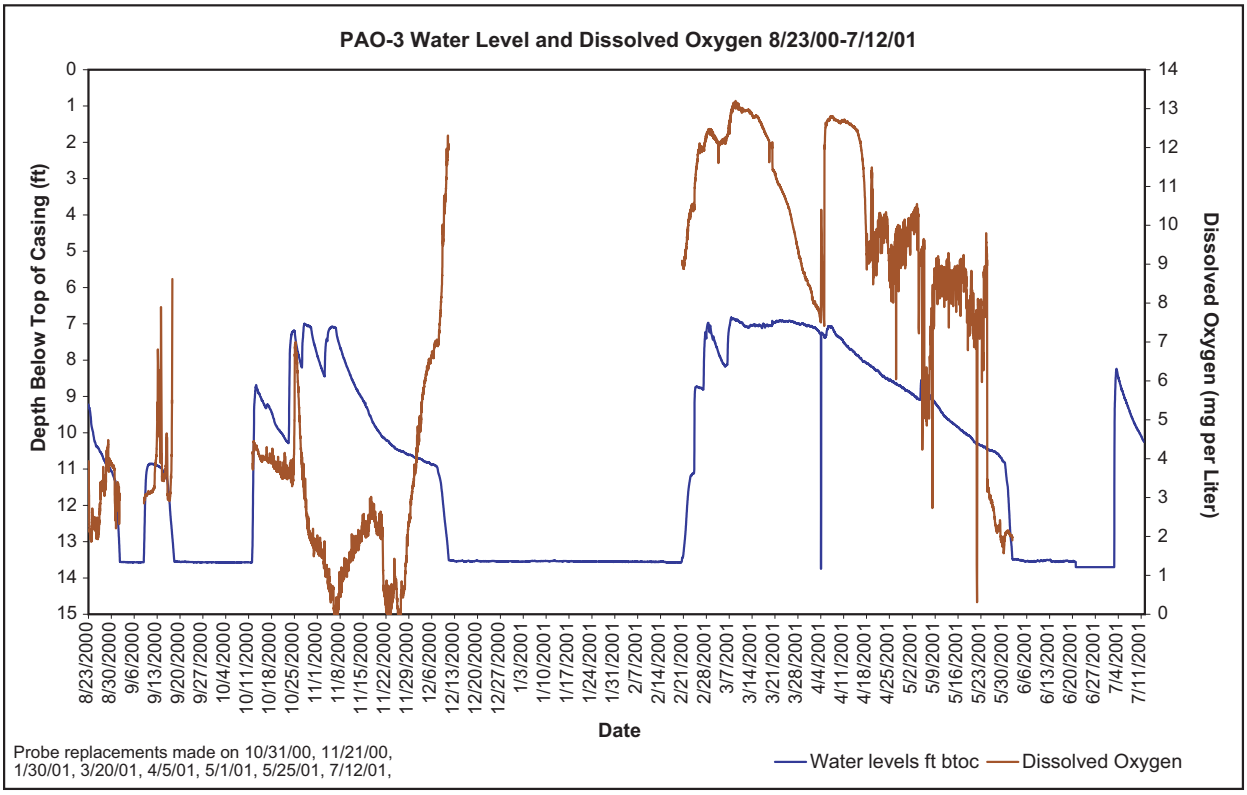
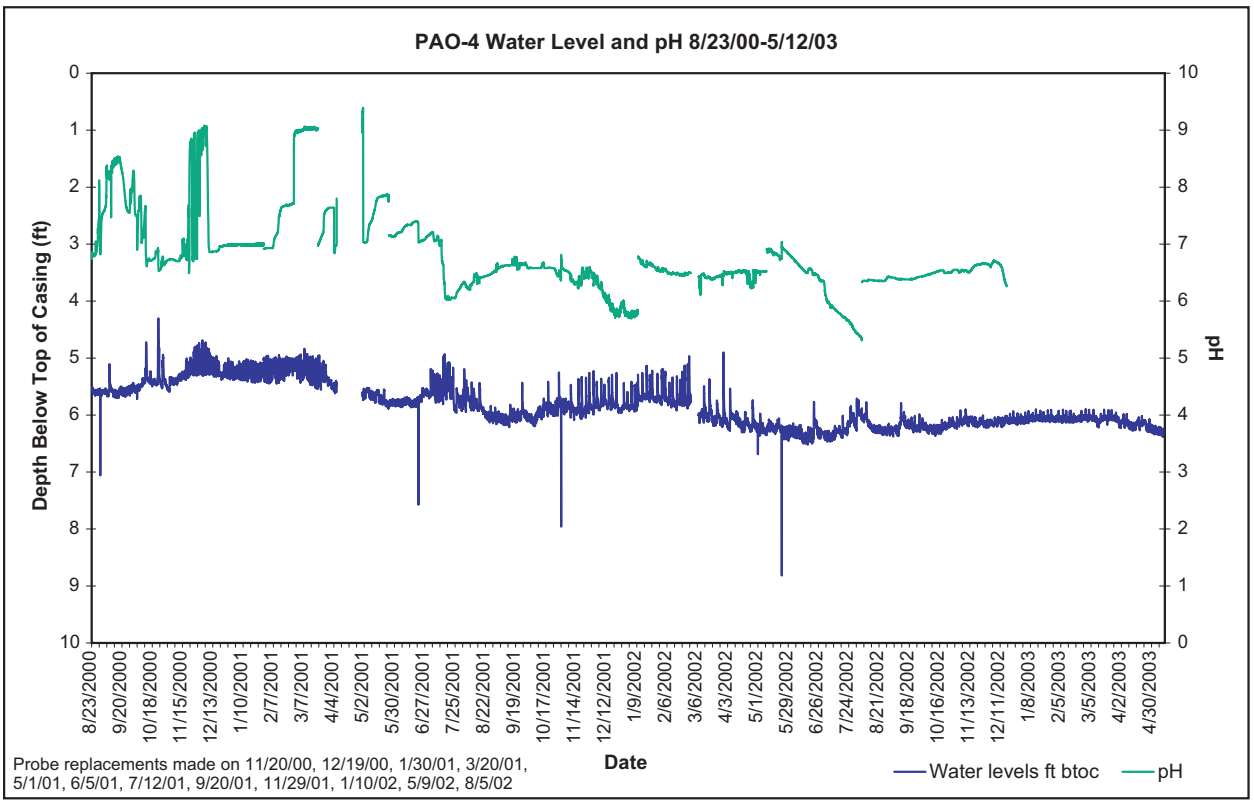


Figure B-2.2-2f (continued). Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well PAO-3



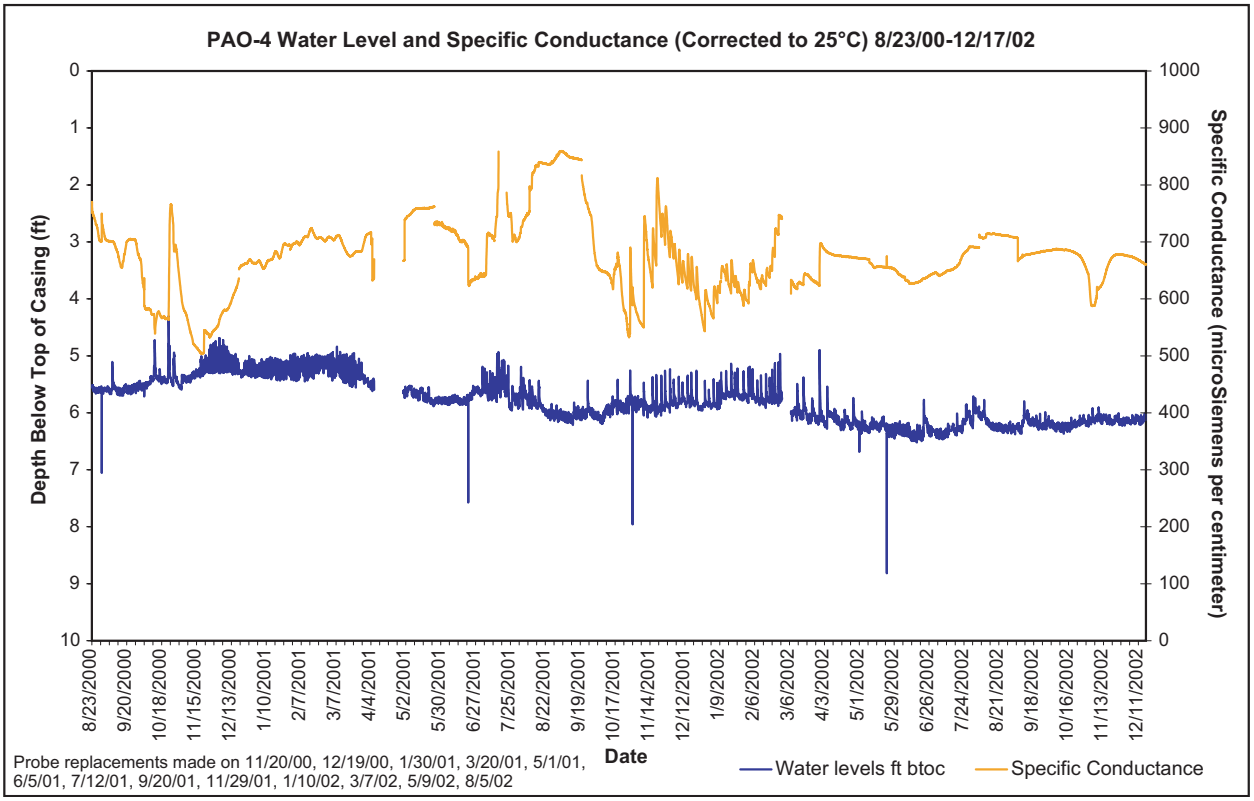
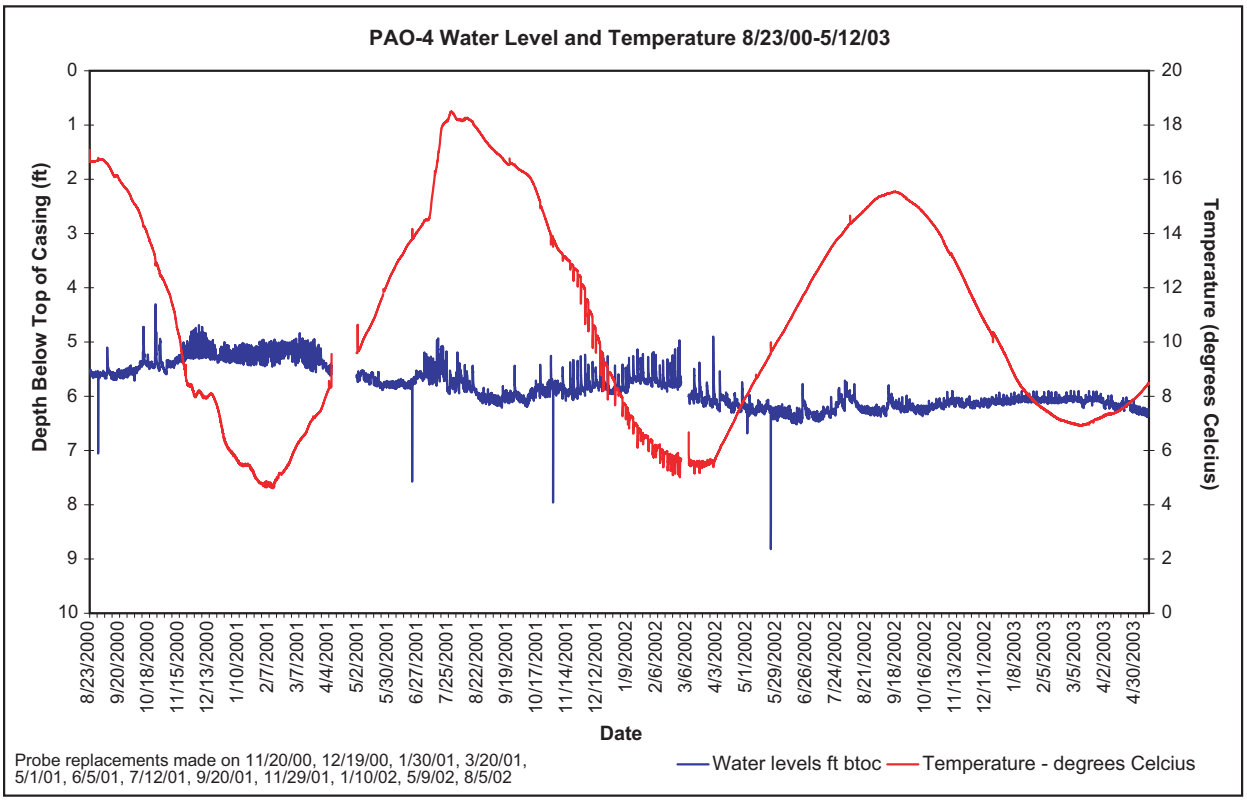


Figure B-2.2-2g. Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well PAO-4



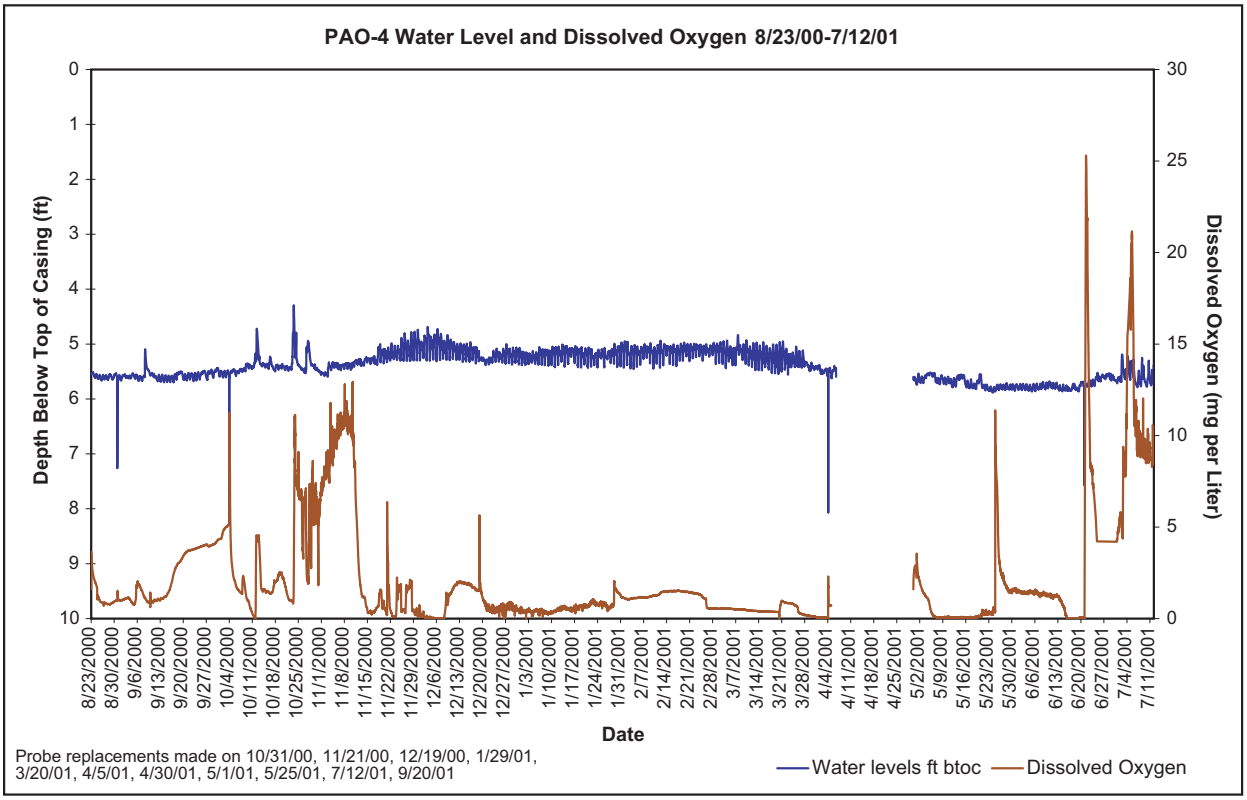
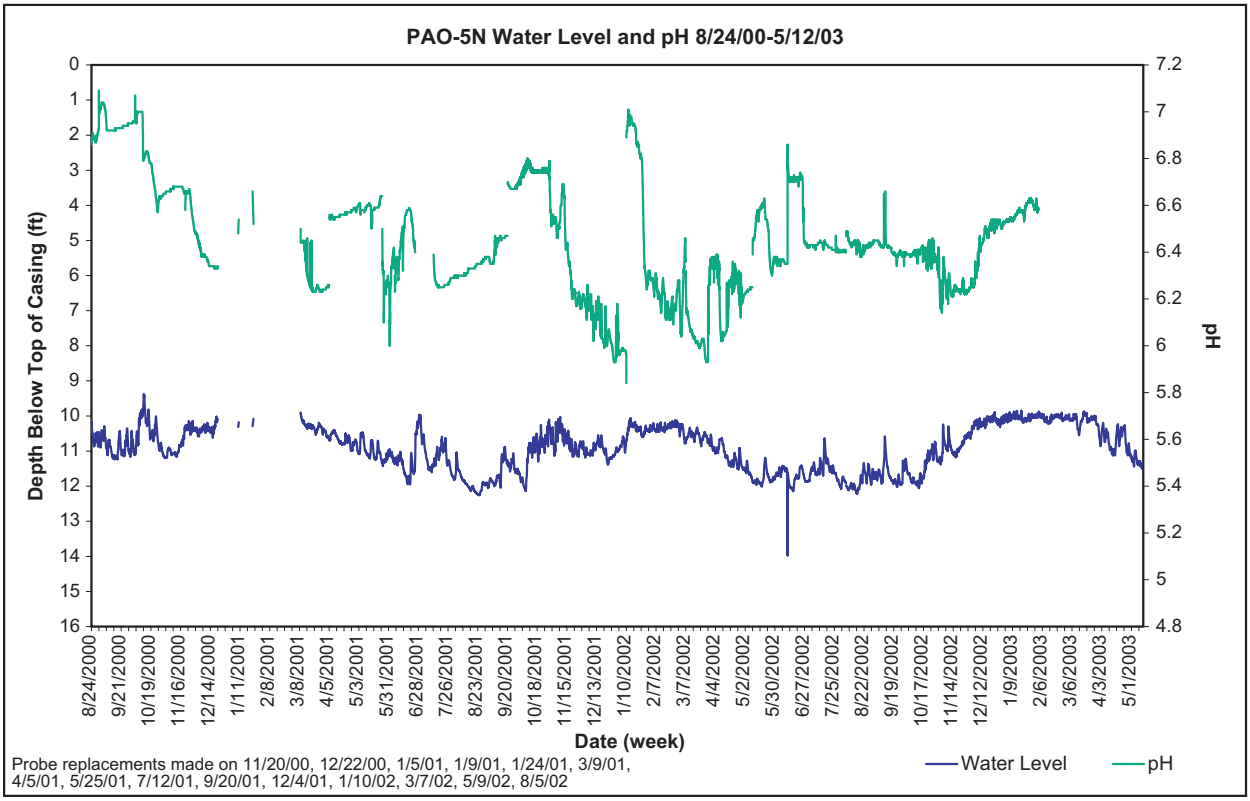


Figure B-2.2-2g (continued). Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well PAO-4



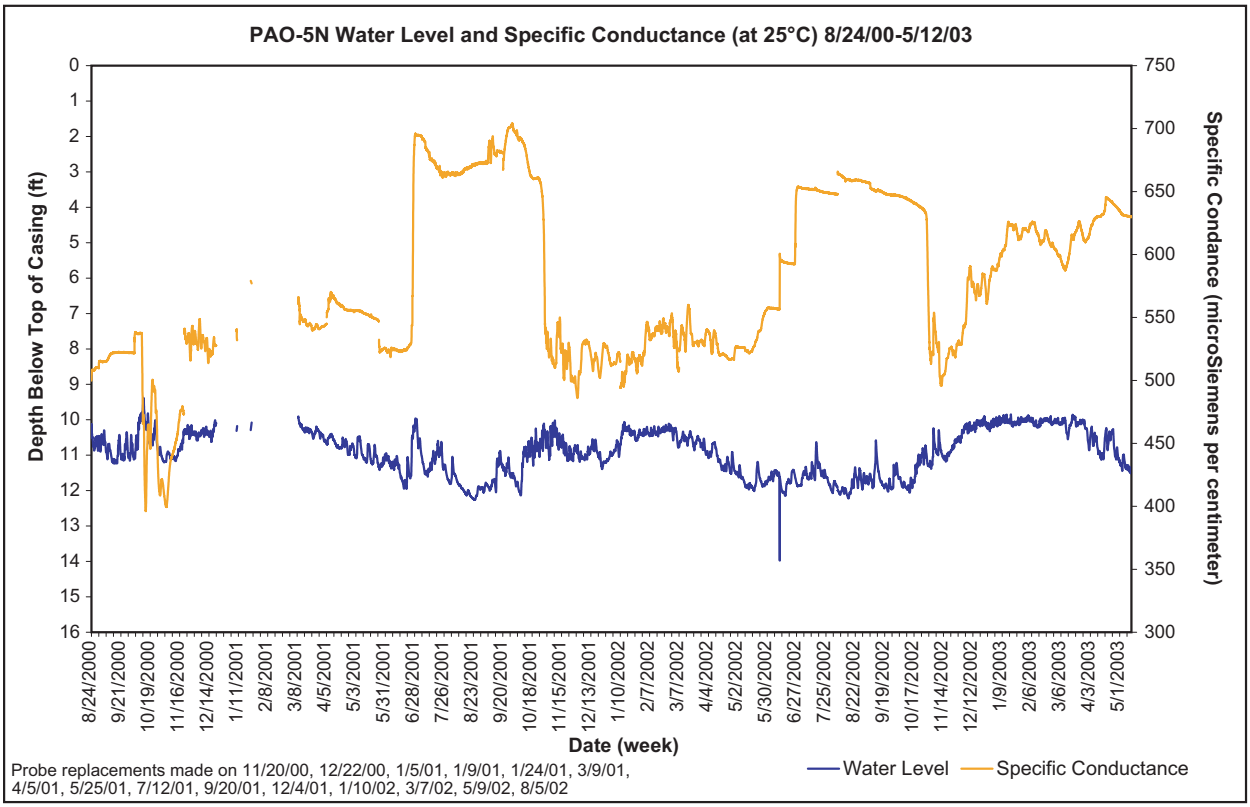
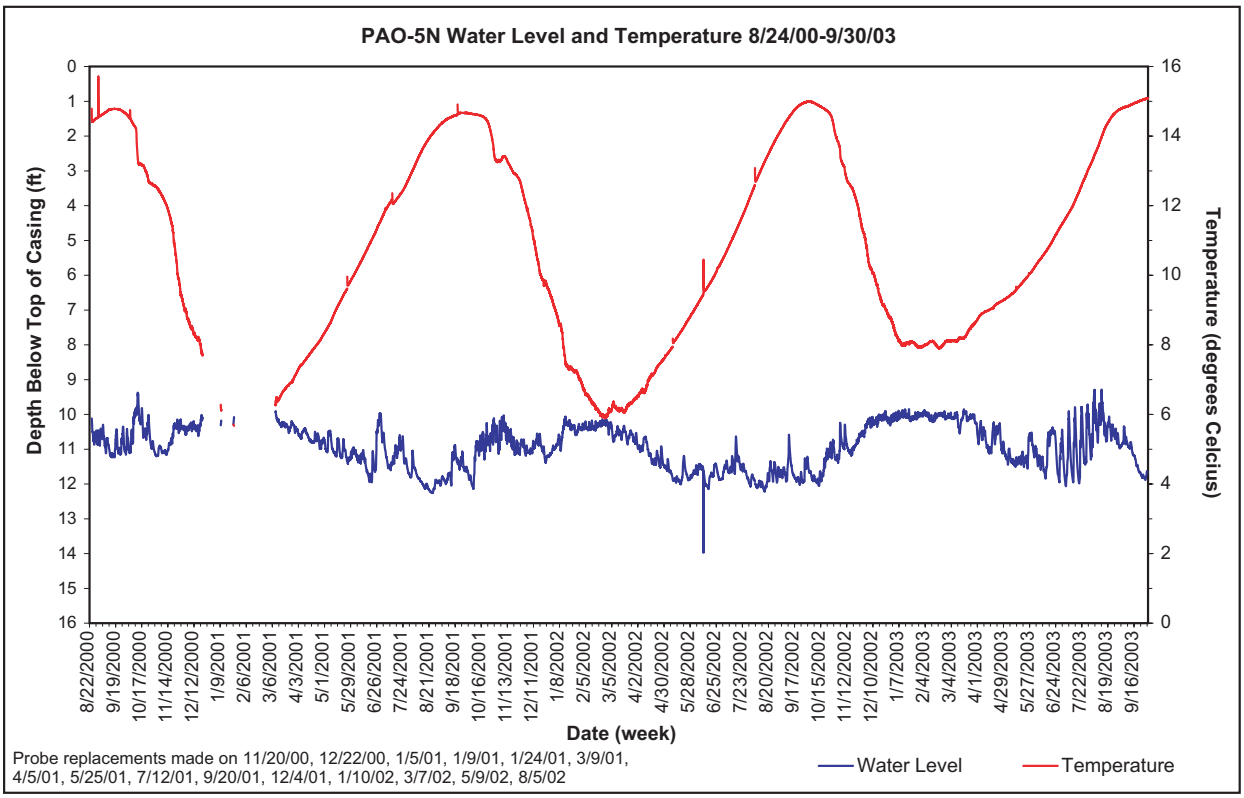


Figure B-2.2-2h. Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well PAO-5N



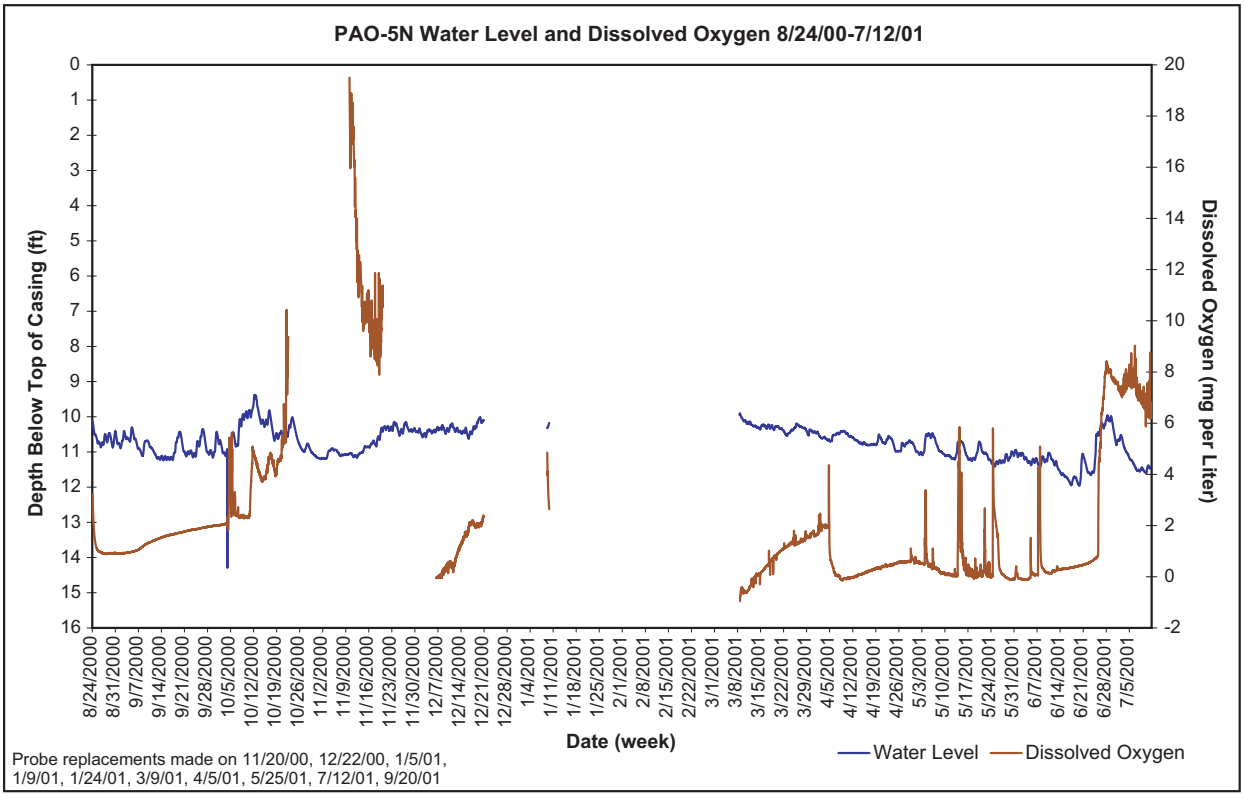


Figure B-2.2-2h (continued). Water level vs. pH, specific conductance, temperature, and dissolved oxygen for alluvial groundwater wells in Los Alamos and Pueblo Canyons collected using multi-parameter probes, well PAO-5N

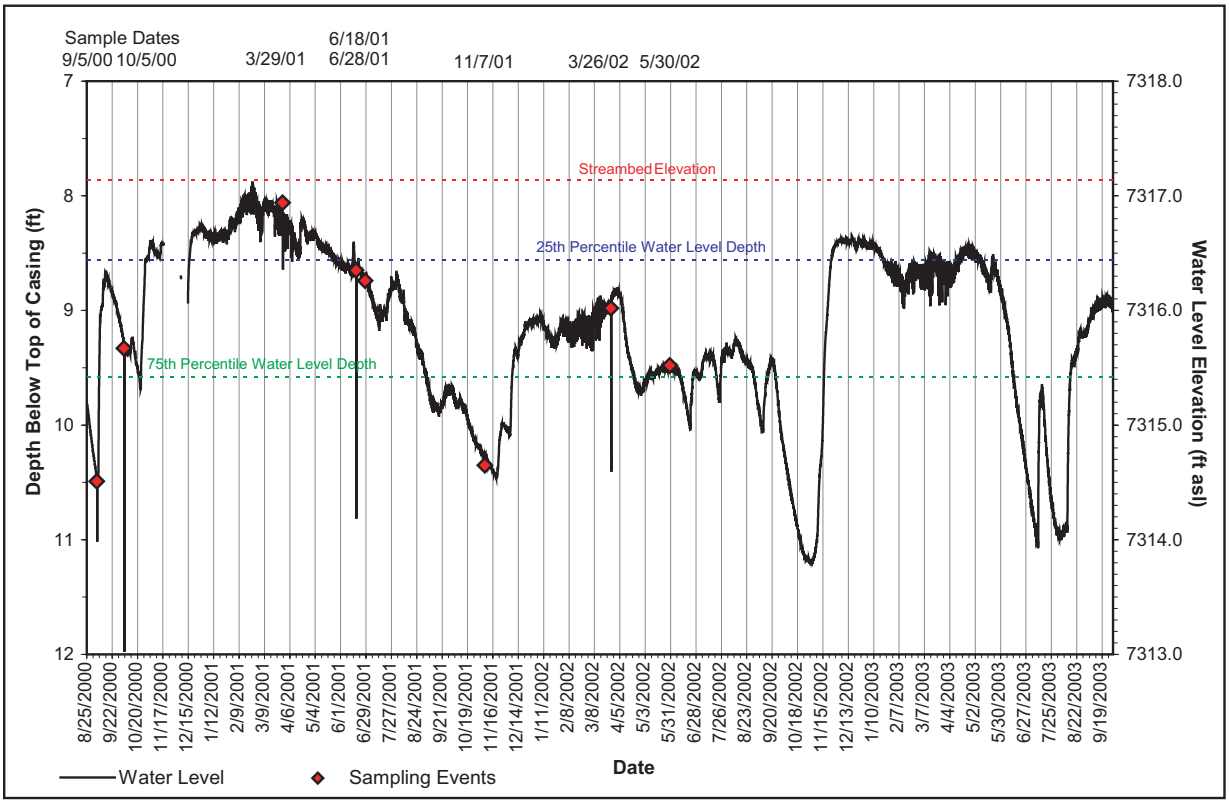


Figure B-2.2-3a. Automated water level vs. date for well LAO-B (8/25/00–9/30/03)

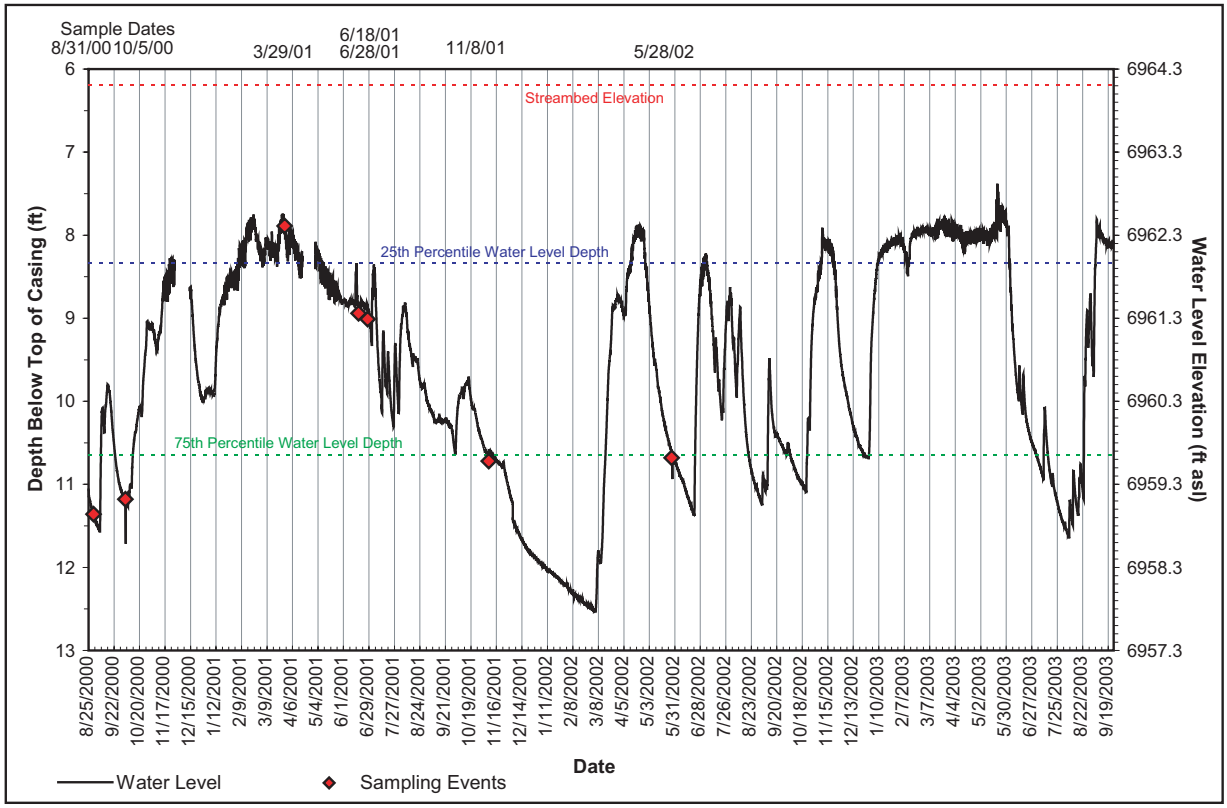


Figure B-2.2-3b. Automated water level vs. date for well LAO-0.3 (8/25/00–9/25/03)

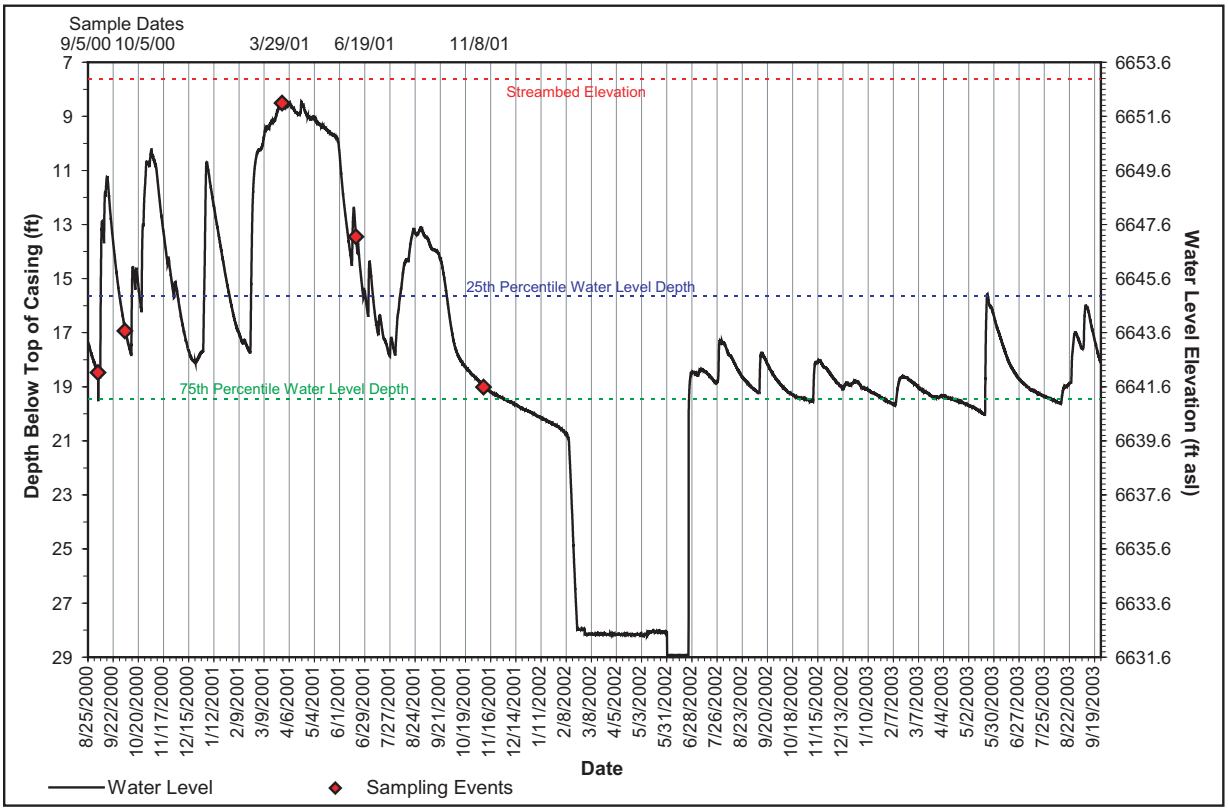


Figure B-2.2-3c. Automated water level vs. date for well LAO-1.6(g) (8/25/00–9/25/03)

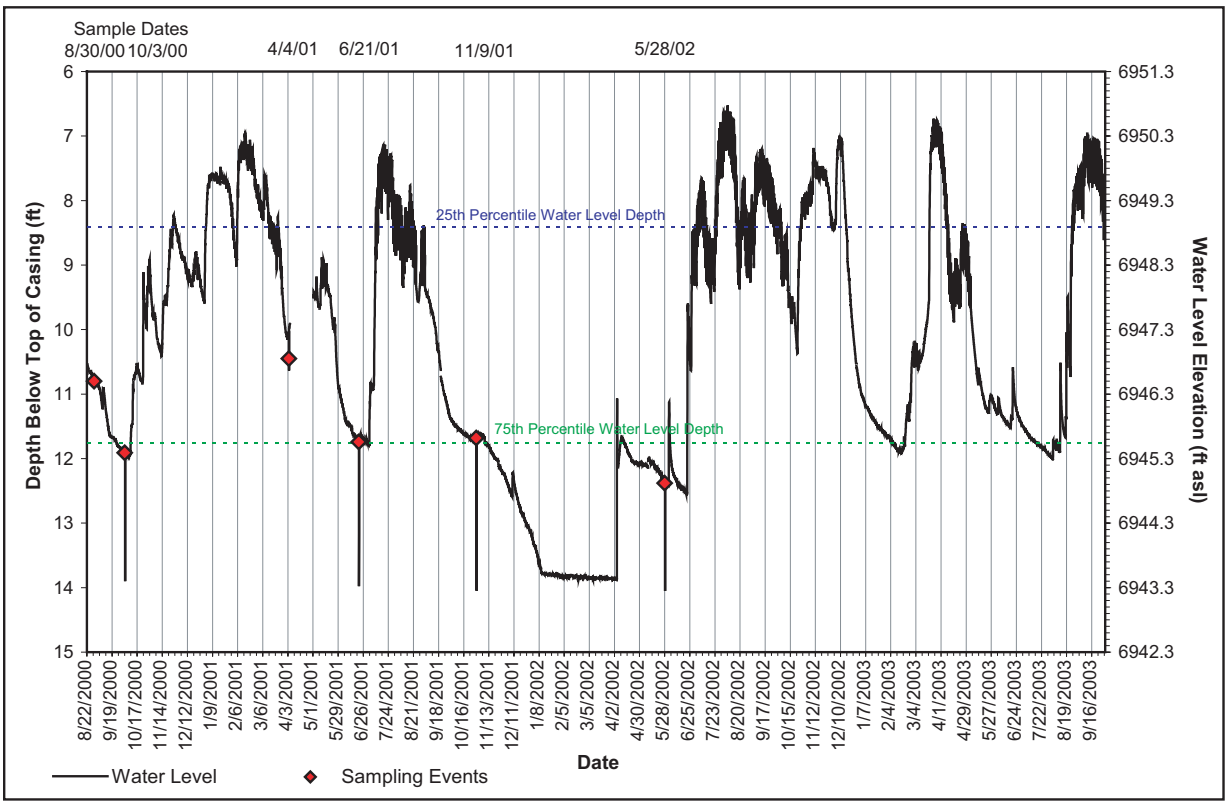


Figure B-2.2-3d. Automated water level vs. date for well PAO-1 (8/22/00–9/30/03)

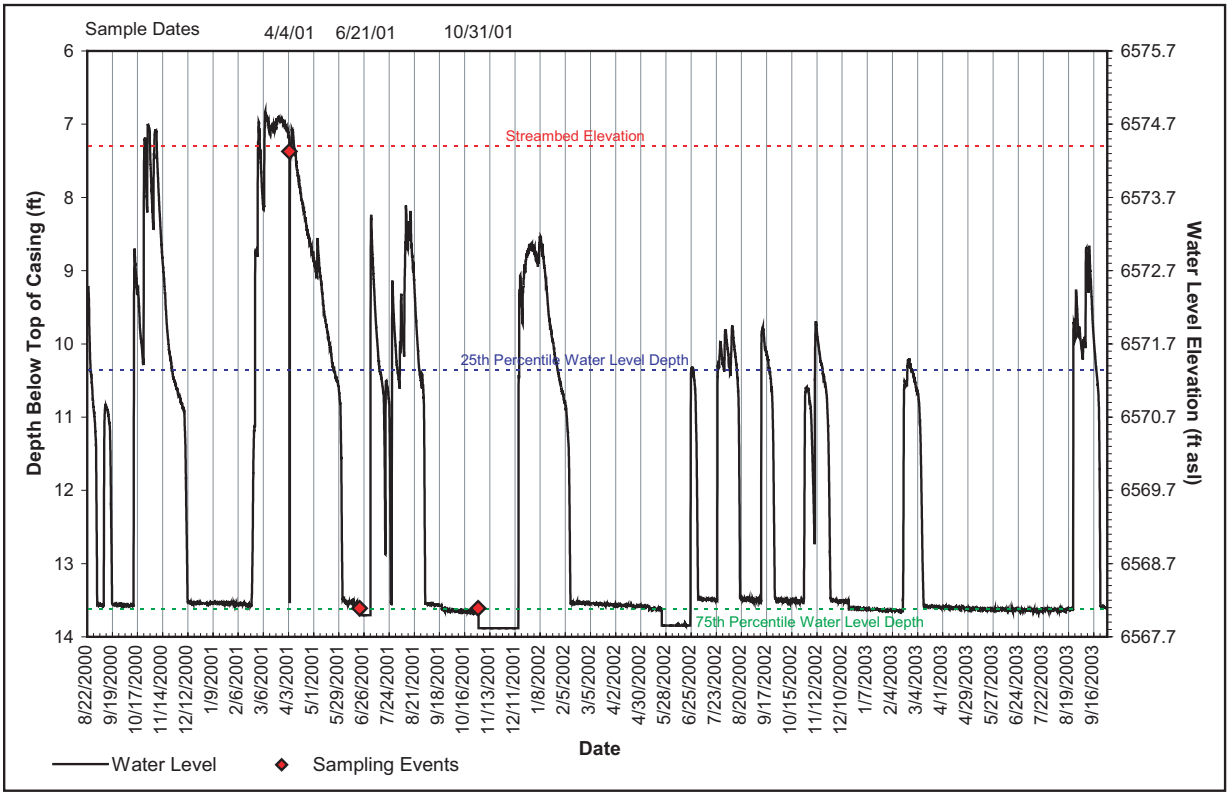


Figure B-2.2-3e. Automated water level vs. date for well PAO-3 (8/23/00–9/30/03)

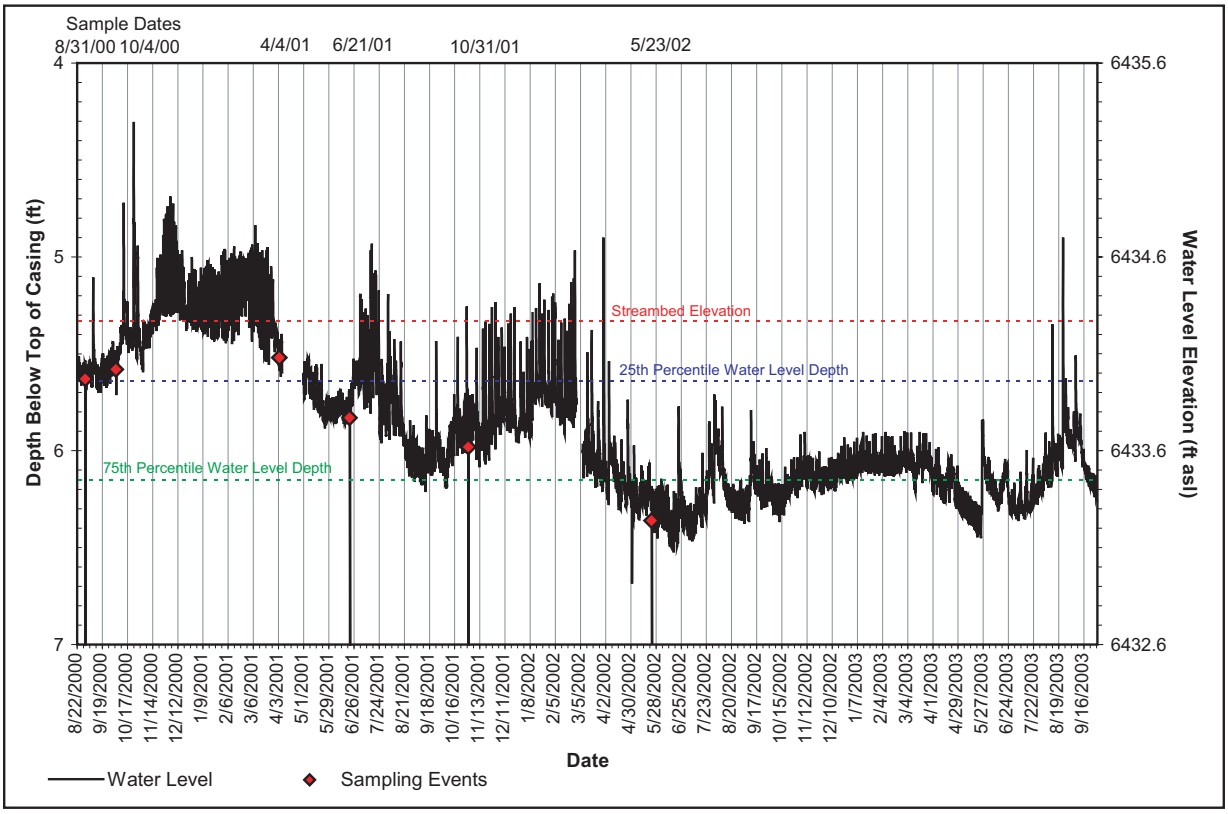


Figure B-2.2-3f. Automated water level vs. date for well PAO-4 (8/23/00–9/30/03)

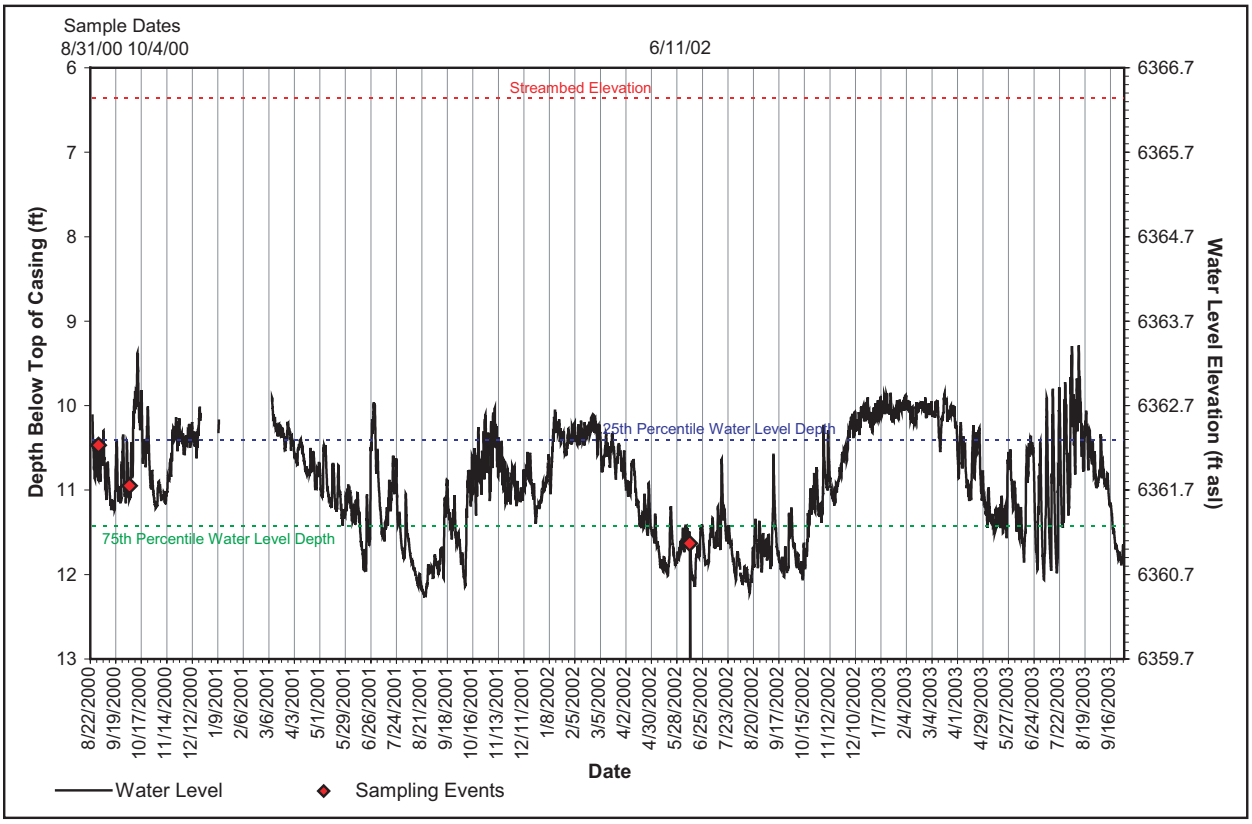


Figure B-2.2-3g. Automated water level vs. date for well PAO-5N (8/24/00–9/30/03)

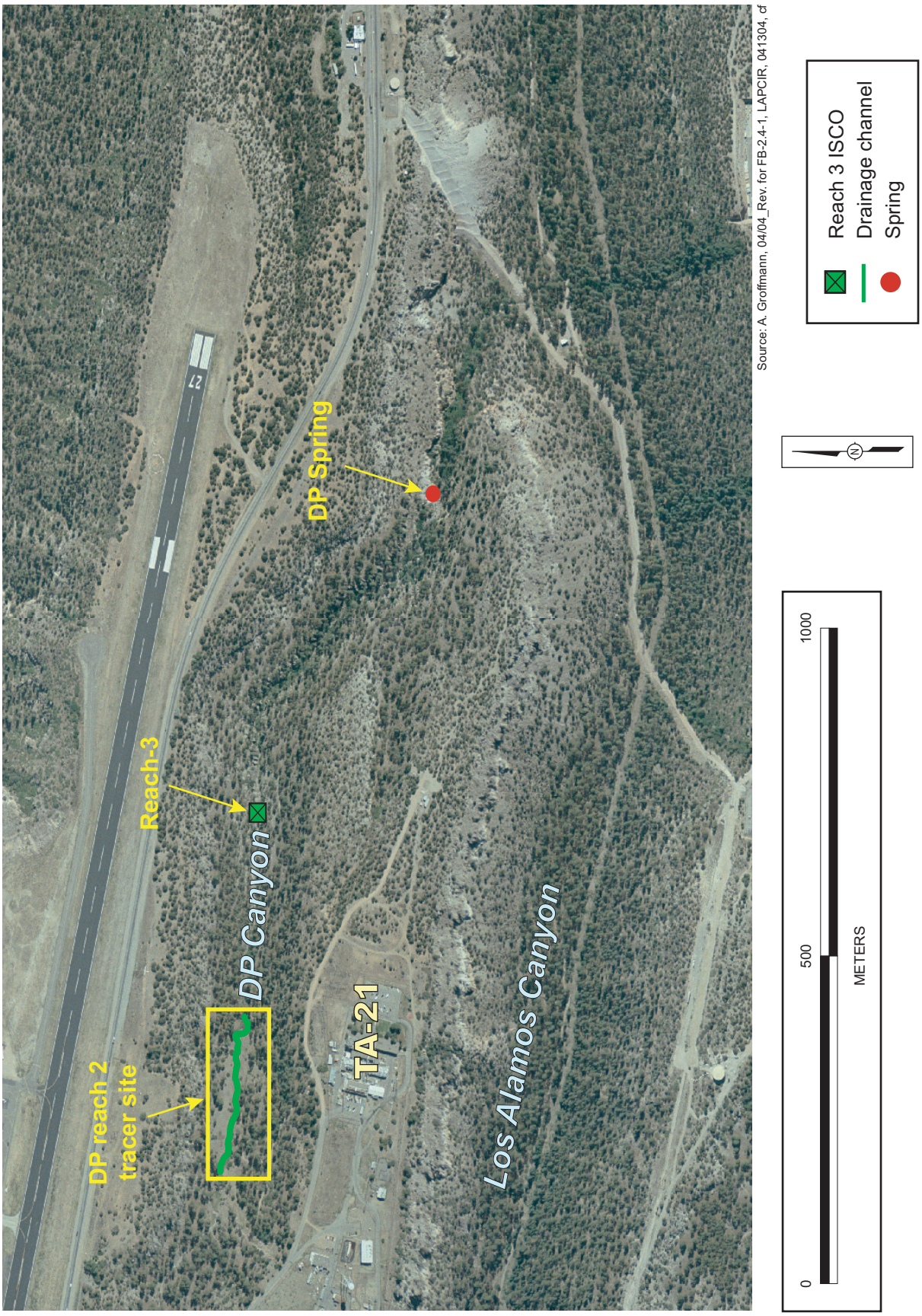


Figure B-2.4-1. DP Canyon and surroundimg environments

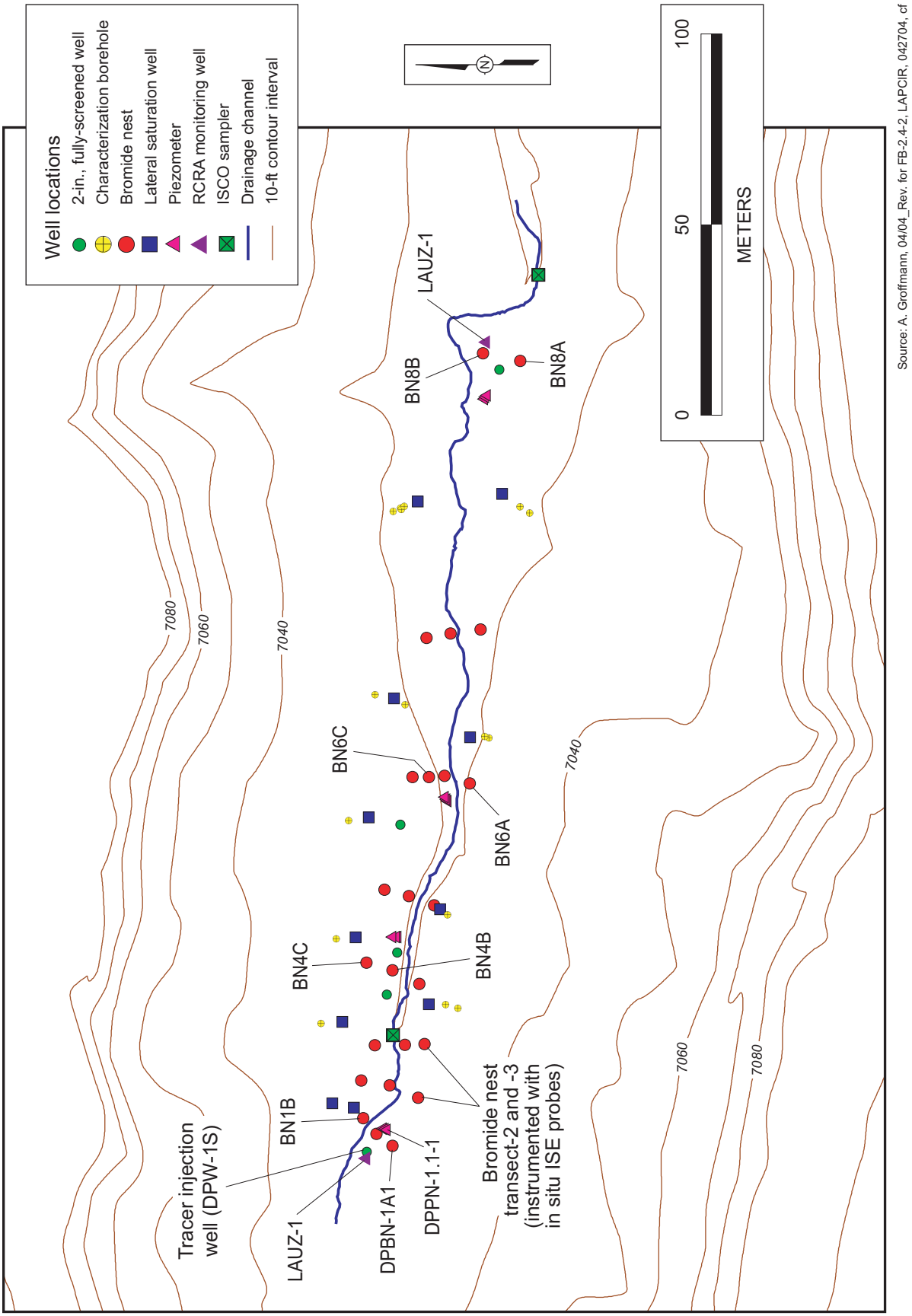


Figure B-2.4-2. Distribution of wells and sampling locations in reach DP-2

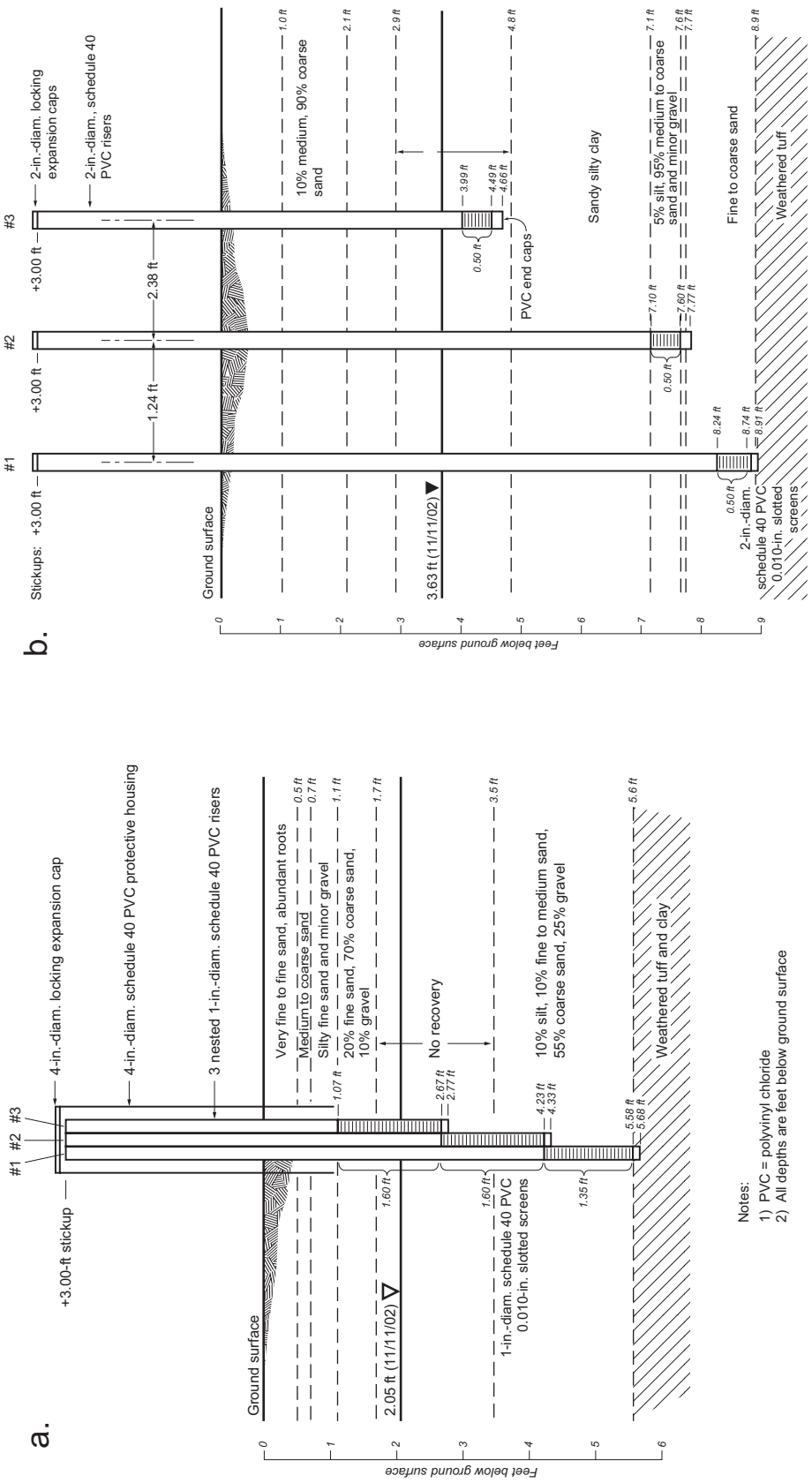
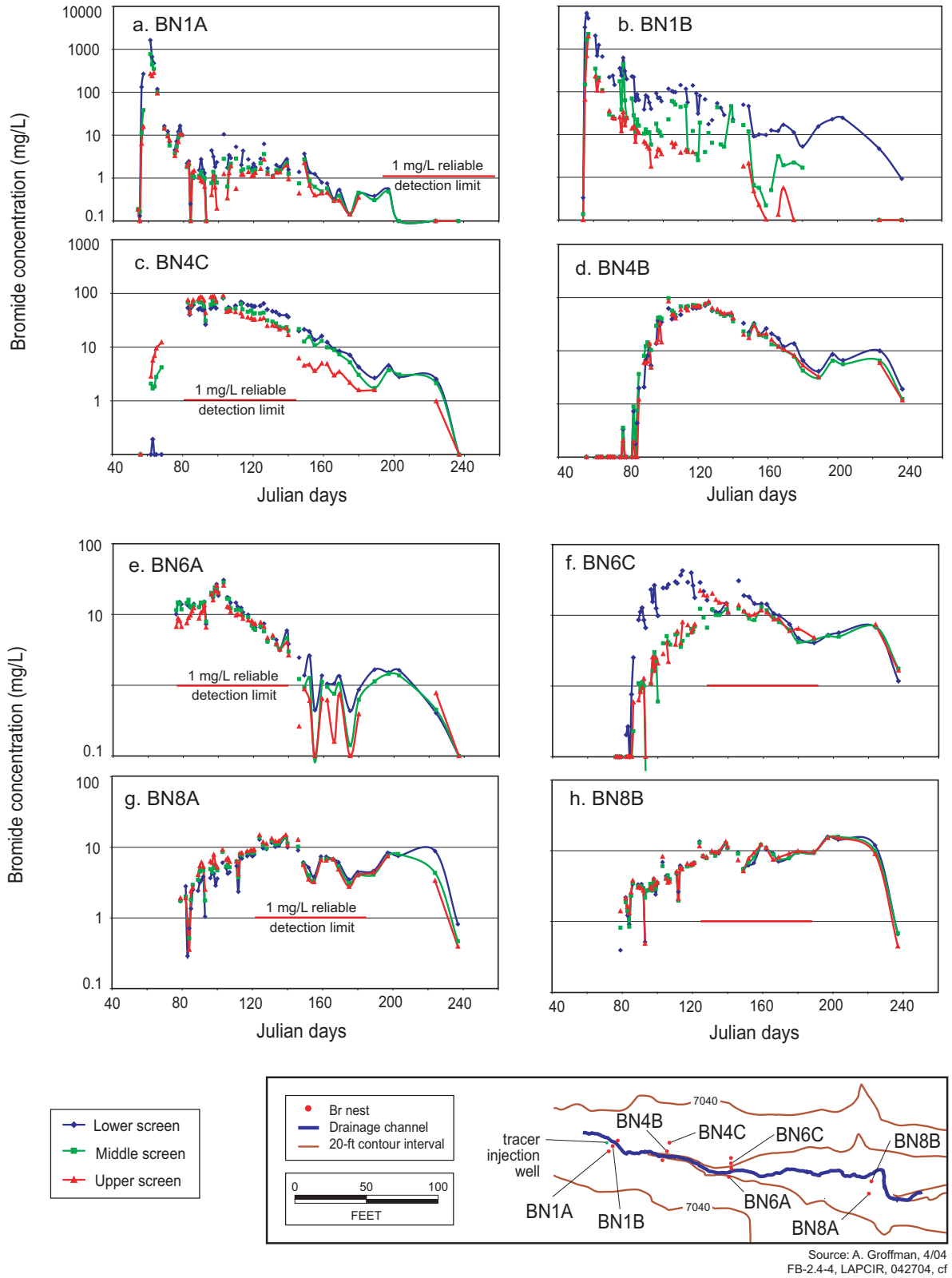


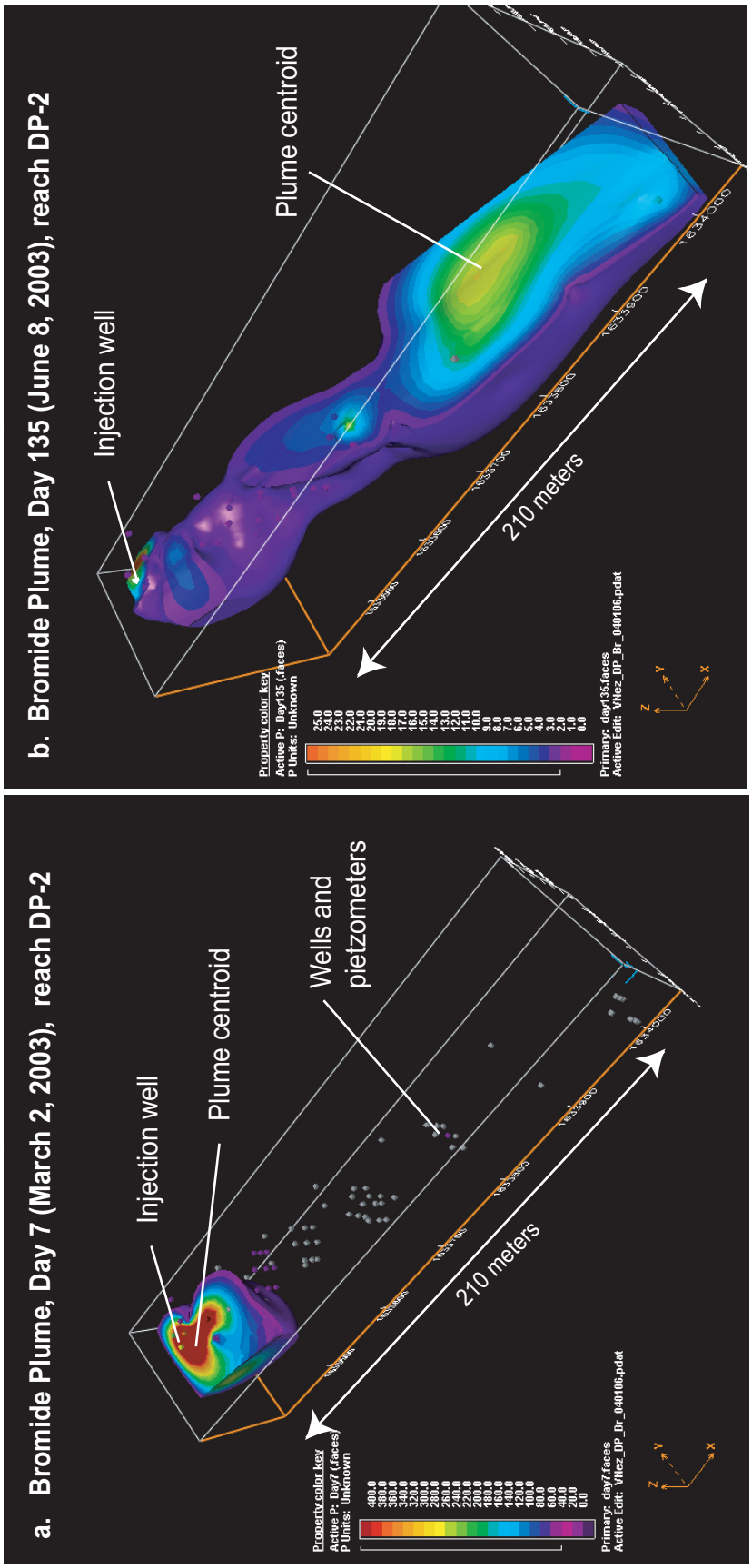
Figure B-2.4-3. Examples of well construction diagrams for nested alluvial wells and piezometers in reach DP-2



Source: A. Groffman, 4/04
FB-2.4-4, LAPCIR, 042704, cf

Note: Curves from individual screens illustrate timing and the range of tracer movement in the system. Locations are shown on the map.

Figure B-2.4-4. Bromide tracer curves from nested wells in for transects 2 and 3



Source: A. Groffman, 4/04
FB-2.4-5, LAPCIR, 042704, cf

Figure B-2.4-5. Visualization of bromide plume geometry on (a) day 7 (March 2) and (b) day 135 (June 8, 2003). The tracer was injected on February 24, 2003

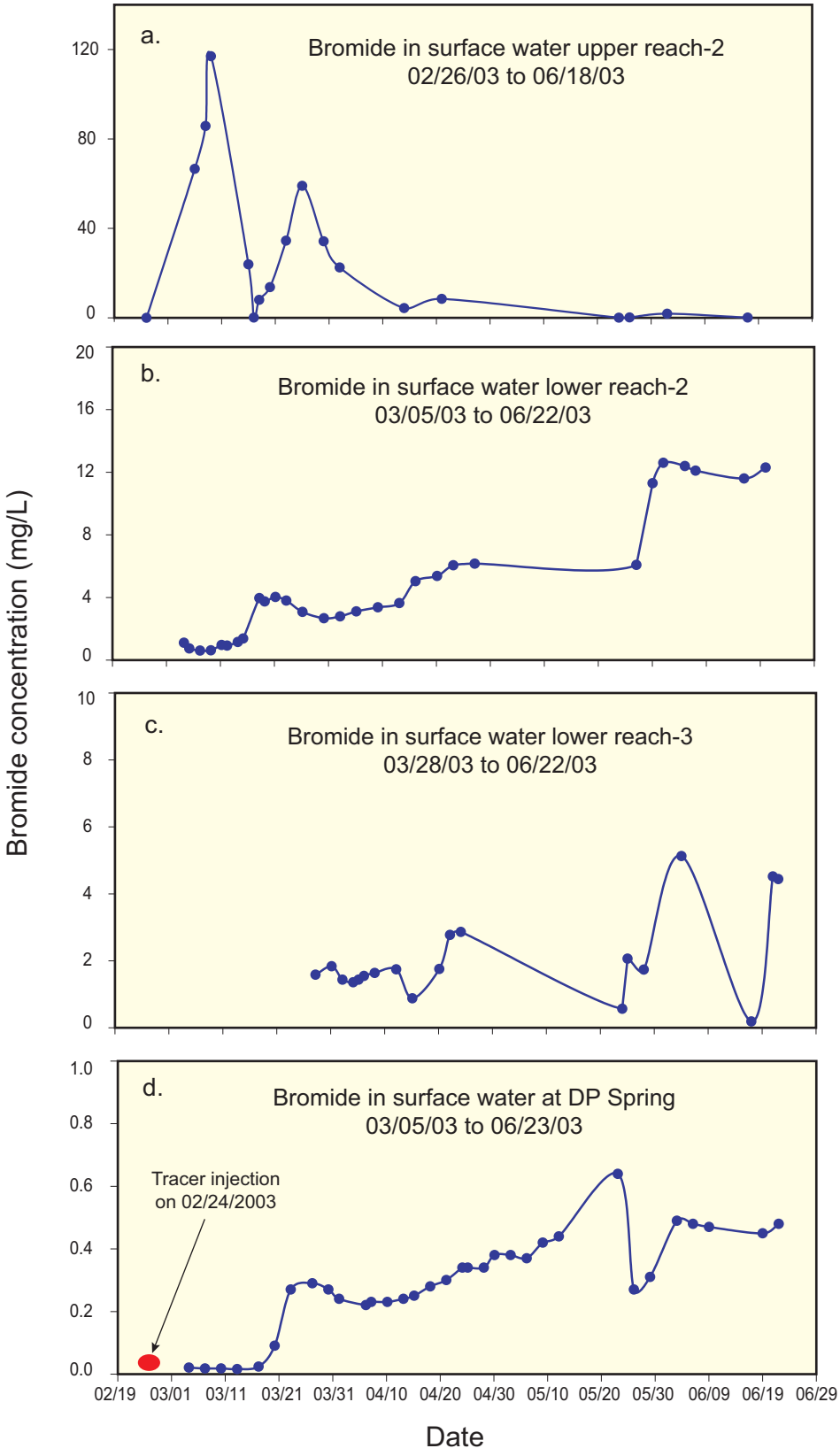
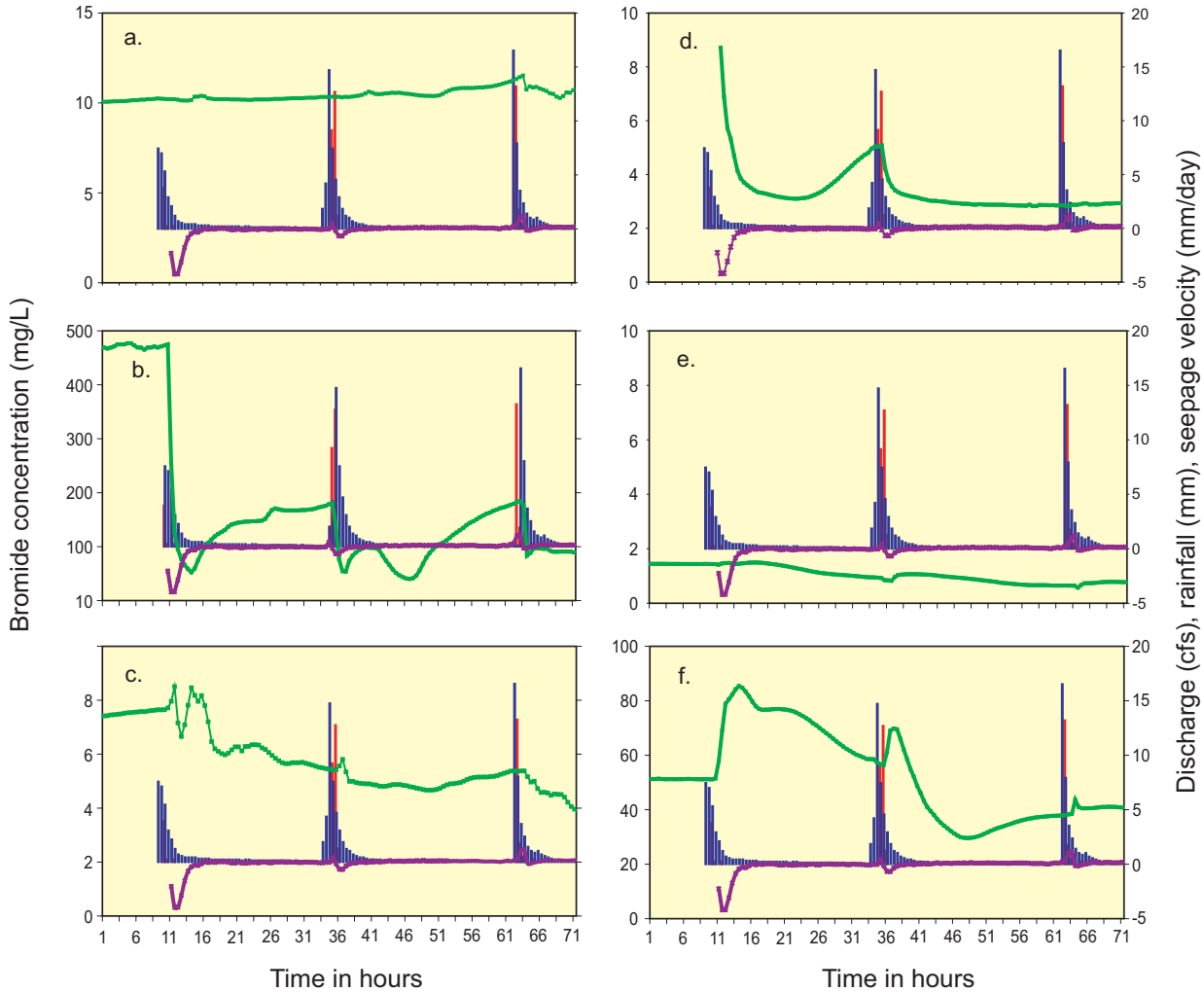
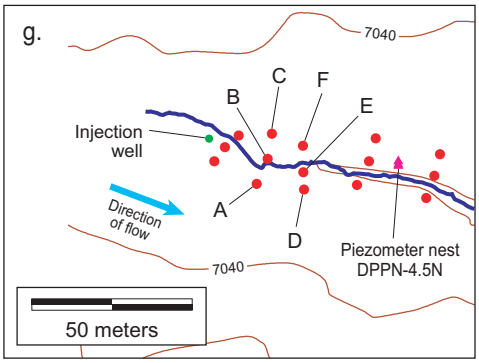
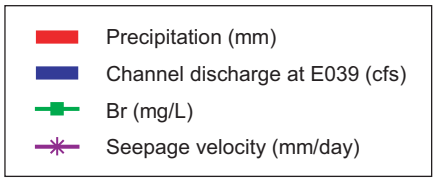


Figure B-2.4-6. Bromide is surface water at reaches 2 and 3 and at DP Spring







Schematic map of reach DP-2

Notes: Automated bromide data are from the middle screen of the bromide-nested wells, with the exception of e, from the bottom screen. Locations are shown on the map in plot g. The bromide scales on right vertical axis are different for each plot.

Figure B-2.4-7. Response of bromide at transects 2 and 3 (see map inset), and seepage velocity (at DPPN-4.5N) to precipitation and channel flow from May 24 to May 27, 2003

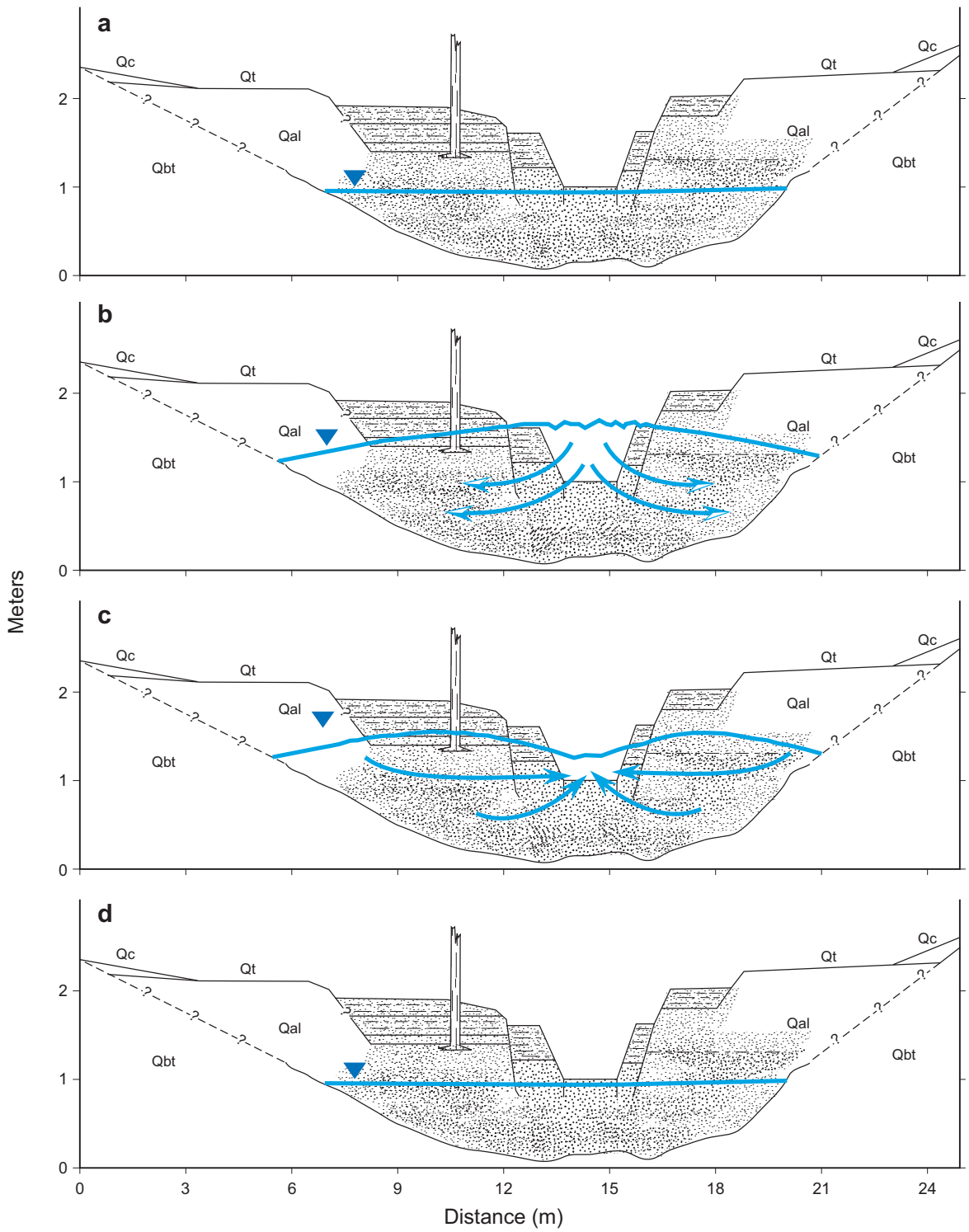


Figure B-2.4-8. **Conceptual model of surface/groundwater exchange initiated by channel flow in reach DP-2. Plot a shows the water table is generally below the channel bed throughout most of the year. Plot b shows the hydraulic gradients pushing water into the adjacent alluvial aquifer during a flood; Plot c shows the aquifer then draining back into the channel as the gradients reverse. Plot d shows equilibrium conditions re-established as the water table relaxes.**

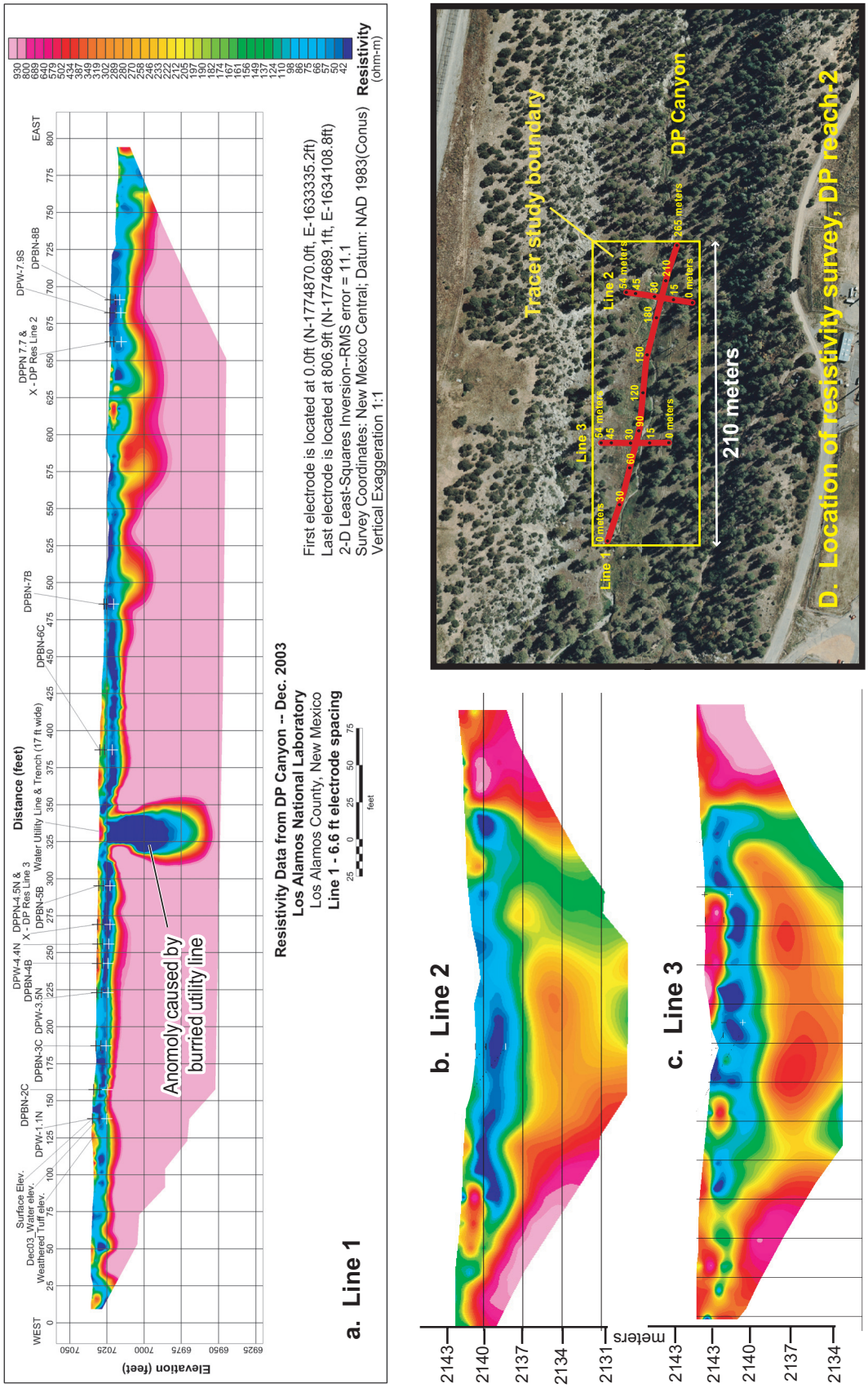


Figure B-2.4-9. Resistivity survey results in reach DP-2

Table B-1.0-1
Physical Characteristics of Post-1942 Geomorphic Units in Reaches LA-2 Far East and LA-3 West

Reach	Geomorphic Unit	Average Unit Width (m)*	Sediment Facies	Estimated Average Sediment Thickness (m)	Typical Median Particle Size Class (<2 mm fraction)	Notes
LA-2 Far East	c1	2.2	Fine	0.01	Very fine sand	Active channel
			Coarse	0.5	Coarse sand	
	c2	3.1	Fine	0.35	Very fine sand	Young abandoned channel with relatively low cesium-137
			Coarse	0.5	Coarse sand	
	c3	4.0	Fine	0.16	Very fine sand	Old abandoned channel with intermediate cesium-137
			Coarse	0.5	Coarse sand	
	c3a	0.5	Fine	0.72	Coarse silt	Old abandoned channel with relatively high cesium-137
			Coarse	0.5	Coarse sand	
	f1	6.1	Fine	0.29	Very fine sand	Post-1942 floodplain
			Coarse	0.04	Medium sand?	
	f2	4.9	Fine	0.16	Very fine sand	Possible post-1942 floodplain
			Coarse	0.05	Medium sand?	
	Total	**20.8**				
LA-3 West	c1	1.8	Coarse	0.5	Coarse sand	Active channel
	c2	2.8	Fine	0.35	Very fine sand	Young abandoned channel with relatively low cesium-137
			Coarse	0.5	Coarse sand	
	c3	3.0	Fine	0.39	Very fine sand	Intermediate-age abandoned channel with intermediate cesium-137
			Coarse	0.5	Coarse sand	
	f1	2.9	Fine	0.15	Very fine sand	Post-1942 floodplain
			Coarse	0.04	Medium sand?	
	f2	2.8	Fine	0.06	Very fine sand?	Possible post-1942 floodplain
			Coarse	0.04	Medium sand?	
	Total	**13.1**				

*Average unit width is total area of unit in reach divided by reach length.

Table B-1.0-2
Field Radiological Data Obtained from Reach LA-2 Far East

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r1	—[b]	c2	0	0–10	19120
				10–20	20900
				20–30	22800
LA2FE-r2	—	f2? (c3?)	0	0–10	13560
				10–20	14390
				20–30	15390
				30–40	16360
LA2FE-r3	LA-10139	Qt swale	8	0–10	13280
				10–20	13870
LA2FE-r4	—	c2	8	0–10	18900
				10–20	21300
				20–30	23000
				30–40	23300
				40–50	23200
				50–60	23800
LA2FE-r5	LA-10138	f2? (Qt?)	8	0–10	14700
				10–20	15500
				20–30	16410
				30–40	18870
LA2FE-r6	—	c2	50	0–10	18160
				10–20	20600
				20–30	23800
				30–40	26800
				40–50	27900
				50–60	27400
LA2FE-r7	—	f2? (Qt?)	50	0–10	13750
				10–20	14880
				20–30	15970
				30–40	16830
LA2FE-r8	—	f2? (c3?)	50	0–10	12700
				10–20	13910
				20–30	15830
				30–40	17220
				40–50	18300
				50–60	19020
				60–70	19440
LA2FE-r9	—	c2	100	0–10	19790
				10–20	22200
				20–30	24300
				30–40	26200
				40–50	26600
				50–60	25900
				60–70	27000

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r10	—	f2? (Qt?) swale	100	0–10	15690
				10–20	16900
				20–30	18010
				30–40	17770
				40–50	18820
LA2FE-r11	—	c2	100	0–10	20600
				10–20	23400
				20–30	25800
				30–40	28000
				40–50	29100
				50–60	29500
				60–70	29300
				70–80	30400
LA2FE-r12	—	Qt	100	0–10	13050
				10–20	14340
				20–30	15180
LA2FE-r13	LA-10142	c2	120	0–10	20000
				10–20	22600
				20–30	25500
				30–40	27300
LA2FE-r14	—	c2	150	0–10	17190
				10–20	20800
				20–30	20300
				30–40	19750
				40–50	18830
				50–60	19130
				60–70	19100
				70–80	19510
LA2FE-r15	LA-10143	c3	150	0–10	19770
				10–20	21100
				20–30	22600
LA2FE-r16	—	Qt	150	0–10	13930
LA2FE-r17	—	f2 swale	150	0–10	14770
				10–20	16300
				20–30	17520
				30–40	18560
				40–50	19120
LA2FE-r18	—	Qt	150	0–10	15110
				10–20	17080
				20–30	17130
				30–40	17450
				40–50	14820
				50–60	14460
				60–70	14740
				70–80	18650

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r19	—	c2	200	0–10	17930
				10–20	18540
				20–30	18100
				30–40	20000
				40–50	20500
LA2FE-r20	—	c3	200	0–10	26600
				10–20	29100
				20–30	32700
				30–40	37700
				40–50	37300
				50–60	37400
				60–70	34700
				70–80	32300
				80–90	29500
				90–100	28600
LA2FE-r21	—	c2	205	0–10	18470
				10–20	18530
				20–30	18940
				30–40	18600
				40–50	18590
				50–60	19450
				60–70	20500
				70–80	20800
LA2FE-r22	—	c3	210	0–10	23900
				10–20	27500
				20–30	29300
				30–40	28700
				40–50	27300
				50–60	24400
				60–70	22300
LA2FE-r23	LA-10145	f2	200	0–10	14850
LA2FE-r24	LA-10075	c3	240	0–10	31600
				10–20	38800
				20–30	42500
				30–40	41500
				40–50	36400
				50–60	33300
LA2FE-r25	—	c2	250	0–10	19050
				10–20	19820
				20–30	20200
				30–40	19900
				40–50	20200
				50–60	19930
				60–70	19650

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r26	LA-10077	c3a	255	0–10	40300
				10–20	51300
				20–30	59000
				30–40	67000
				40–50	72000
				50–60	71900
				60–70	51600
				70–80	33900
LA2FE-r27	—	f1? (c3?)	295	0–10	23900
				10–20	24700
				20–30	24400
				30–40	24300
				40–50	23300
				50–60	23600
				60–70	23400
LA2FE-r28	—	c2	300	0–10	17130
				10–20	20400
				20–30	21900
				30–40	22300
				40–50	22100
				50–60	22000
				60–70	22600
LA2FE-r29	—	f1	310	0–10	36000
				10–20	41100
				20–30	39300
				30–40	33700
				40–50	28900
				50–60	25500
				60–70	23800
LA2FE-r30	LA-10081	c3a swale	310	0–10	79000
				10–20	91500
				20–30	65900
				30–40	104400
				40–50	86100
				50–60	118800
				60–70	111800
				70–80	102800
				80–90	76700
				90–100	95400
				100–110	96700
				110–120	99600
				120–130	100400
				130–140	83700
				140–150	80000
				150–160	76800

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r31	—	f1	310	0–10	29200
				10–20	29200
				20–30	28200
				30–40	26500
				40–50	24900
				50–60	24200
				60–70	23600
LA2FE-r32	—	c3a swale	335	0–10	59100
				10–20	64800
				20–30	62500
				30–40	72000
				40–50	75100
				50–60	76400
				60–70	75000
				70–80	77200
				80–90	78000
				90–100	79100
				100–110	61700
				110–120	71100
LA2FE-r33	LA-10082	f1A	340	0–10	46000
				10–20	51500
				20–30	52900
				30–40	47900
				40–50	41500
LA2FE-r34	—	f1	330	0–10	27600
				10–20	27100
				20–30	25700
LA2FE-r35	—	f1	330	0–10	23400
				10–20	21900
				20–30	21500
				30–40	21800
LA2FE-r36	—	c2	340	0–10	20200
				10–20	20500
				20–30	21100
				30–40	22500
				40–50	22800
				50–60	23400
LA2FE-r37	—	c1	350	0–10	15330
				10–20	15270
				20–30	15890
				30–40	16300
				40–50	17330
LA2FE-r38	—	Qt	356	0–10	14150
				10–20	14580
LA2FE-r39	—	f1	355	0–10	28600
				10–20	28900
				20–30	27900

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r40	LA-10085	c3	360	0–10	19950
				10–20	18830
				20–30	18670
				30–40	18600
				46–56	19640
				56–66	20400
				66–76	21300
LA2FE-r41	—	f1	360	0–10	30300
				10–20	31100
				20–30	30000
LA2FE-r42	—	f1	360	0–10	41800
				10–20	42400
				20–30	39500
				30–40	36100
				40–50	30000
				50–60	28400
				60–70	27700
				70–80	26800
				80–90	27400
LA2FE-r43	—	c2	405	0–10	21400
				10–20	24300
				20–30	26600
				30–40	27200
				40–50	26200
				50–60	25900
LA2FE-r44	—	Qt	390	0–10	15000
				10–20	15960
				20–30	16340
LA2FE-r45	LA-10086	f2? (Qt?)	390	0–10	16350
				10–20	17530
				20–30	18390
				30–40	18900
				40–50	19820
				50–60	20100
				60–70	20300
LA2FE-r46	—	f1	390	0–10	32200
				10–20	32200
				20–30	31300
				30–40	29200
				40–50	26000
				50–60	25300
				60–70	23600
				70–80	23100
				80–90	22500
LA2FE-r47	—	f1	410	0–10	20700
				10–20	21100
				20–30	22100
LA2FE-r48	—	c1	450	0–10	16150

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r49	—	c2	450	0–10	14430
				10–20	15580
				20–30	16730
				30–40	21900
				40–50	22400
LA2FE-r50	—	f2? (Qt?)	455	0–10	16940
				10–20	18200
				20–30	19730
				30–40	20300
				40–50	20800
				50–60	21500
LA2FE-r51	—	c2	455	0–10	18630
				10–20	19380
				20–40	20600
				40–50	19990
LA2FE-r52	—	f2? (Qt?)	450	0–10	18720
				10–20	19560
				20–30	19800
				30–40	20200
LA2FE-r53	—	c2	500	0–10	18600
				10–20	19030
				20–30	20800
				30–40	21900
				40–50	23100
				50–60	23500
				60–70	23200
				70–80	22500
				80–90	22300
LA2FE-r54	—	c2	500	0–10	16800
				10–20	17530
				20–30	19190
				30–40	19690
				40–50	22100
				50–60	23200
				60–70	25200
				70–80	24700
LA2FE-r55	—	f2? (Qc?)	505	0–10	15210
				10–20	15840
LA2FE-r56	—	c2	550	0–10	20500
				10–20	21400
				20–30	24400
				30–40	26600
				40–70	27000
LA2FE-r57	—	f2? (f1?)	550	0–10	15770
				10–20	16990
				20–30	18040
				30–40	18670

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r58	—	c2	555	0–10	18920
				10–20	21200
				20–30	23100
				30–50	24000
				50–60	24400
LA2FE-r59	—	Qt	555	0–10	15230
				10–20	15500
				20–30	15950
LA2FE-r60	—	f1? (f2?)	560	0–10	16450
				10–20	18040
				20–30	19210
				30–40	19830
				40–50	20300
				50–60	20500
LA2FE-r61	LA-10087	c2	594	0–10	24500
				10–20	28300
				20–30	28600
				30–40	32700
				40–50	34600
				50–60	35700
				60–70	35500
				70–80	34900
LA2FE-r62	—	f2? (f1?)	588	0–10	14460
				10–20	15110
LA2FE-r63	—	c2	600	0–10	20500
				10–20	23000
				20–30	24300
				30–40	25400
				40–50	25000
				50–60	25200
				60–70	25400
LA2FE-r64	LA-10088	f2? (Qt?)	600	0–10	14440
				10–20	14870
LA2FE-r65	—	c2	648	0–10	17700
				10–20	19870
				20–30	24400
				30–50	25300
				50–60	24700
				60–70	24300
LA2FE-r66	—	Qt swale	650	0–10	15070
				10–20	16190
				20–30	17030
LA2FE-r67	LA-10092	f2? (Qt?)	660	0–10	14870
				10–20	16890
				20–30	18610

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r68	LA-10089	f2? (Qt?)	660	0–10	15050
				10–20	16910
				20–30	17850
				30–40	18660
				40–50	20300
				50–60	21500
				60–70	22300
				70–80	22700
LA2FE-r69	—	c2	695	0–10	19560
				10–20	20800
				20–30	20900
				30–40	21300
				40–50	20500
				50–60	21100
LA2FE-r70	—	c2	700	0–10	19740
				10–20	20800
				20–30	22700
				30–40	23300
				40–50	22400
				50–60	21600
				60–70	21700
				70–80	21500
LA2FE-r71	—	Qt	705	0–10	13690
				10–20	14060
LA2FE-r72	—	f2 swale	705	0–10	14390
				10–20	15480
				20–30	17100
LA2FE-r73	—	Qt+Qc	710	0–10	15570
				10–20	16060
				20–30	17460
LA2FE-r74	—	f2? (f1?)	710	0–10	14970
				10–20	17040
				20–30	18180
LA2FE-r75	LA-10093	f1	740	0–10	25400
				10–20	27600
				20–30	26500
				30–40	25100
LA2FE-r76	—	c2	750	0–10	19450
				10–20	21100
				20–30	21600
				30–40	23300
				40–50	24100
				50–60	24000
				60–70	22600
LA2FE-r77	—	f1	750	0–10	16830
				10–20	18710
				20–30	20000

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r78	—	Qt swale	770	0–10	15610
				10–20	16540
				20–30	17830
				30–40	18390
				40–50	18910
LA2FE-r79	—	c2	800	0–10	20200
				10–20	22400
				20–30	26900
				30–40	28400
				40–50	29200
				50–60	29600
				60–70	29400
LA2FE-r80	LA-10094	f1	800	0–10	15670
				10–20	16960
				20–30	17220
LA2FE-r81		f2? (Qt?)	800	0–10	14220
				10–20	14810
LA2FE-r82	LA-10095	f2	800	0–10	15800
				10–20	17220
				20–30	17900
				30–40	18320
LA2FE-r83	LA-10096	f1	840	0–10	20400
				10–20	21400
				20–30	22300
LA2FE-r84	LA-10097	c2	855	0–10	16580
				10–20	17500
				20–30	18710
				30–40	18960
LA2FE-r85	LA-10098	f1	860	0–10	24100
				10–20	26000
				20–30	26600
				30–40	25900
				40–50	24600
				50–60	24100
LA2FE-r86	—	c2? (c3?)	865	0–10	25200
				10–20	27100
				20–30	29500
				30–40	30800
				40–50	30700
LA2FE-r87	—	c2	900	0–10	17880
				10–20	18850
				20–30	21300
				30–40	24500
				40–50	26700
				50–60	28400

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r88	—	c3	900	0–10	16120
				10–20	15400
				20–30	16230
				30–40	17570
				40–50	17940
				50–60	20300
LA2FE-r89	—	f2	910	0–10	14580
				10–20	15140
LA2FE-r90	—	f1	930	0–10	18090
				10–20	20300
				20–30	22200
				30–40	22700
				40–50	23400
LA2FE-r91	—	c2	955	0–10	17450
				10–20	17990
				20–30	19760
				30–40	21000
				40–50	22400
				50–60	22800
				60–70	23200
LA2FE-r92	—	c2	995	0–10	17880
				10–20	19920
				20–30	20000
				30–40	21300
				40–50	22700
				50–60	24200
				60–70	25000
LA2FE-r93	—	c3 + disturbed	995	0–10	19520
				10–20	22800
				20–30	24900
				30–40	27900
				40–50	30900
LA2FE-r94	—	c3	995	0–10	17990
				10–20	18480
				20–40	20000
				40–50	20400
				50–60	21200
LA2FE-r95	LA-10141	Qt	100	0–10	12540
				10–20	13680
				20–30	14140
LA2FE-r96	—	c3	186	0–10	20800
				10–20	23100
				20–30	26200
				30–40	27600
				40–50	27400

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r97	LA-10144	c3	188	0–10	22000
				10–20	25300
				20–30	30600
				30–40	33100
				40–50	33600
LA2FE-r98	—	f1	224	0–10	28500
				10–20	28200
				20–30	26900
				30–40	24800
				40–50	23400
				50–60	22700
LA2FE-r99	—	c3	228	0–10	23100
				10–20	25500
				20–30	27200
				30–40	27600
LA2FE-r100	—	c3	227	0–10	23700
				10–20	26000
				20–30	26900
				30–40	26300
				40–50	24000
				50–60	20800
				60–70	19300
LA2FE-r101	—	c3	241	0–10	24500
				10–20	26200
				20–30	28400
				30–40	29700
				40–50	28800
				50–60	26900
LA2FE-r102	—	c3	249	0–10	27200
				10–20	30000
				20–30	29300
				30–40	26100
				40–50	23700
				50–60	22400
				60–70	21300
LA2FE-r103	—	c3 swale	262	0–10	29400
				10–20	30700
				20–30	29700
				30–40	27600
				40–50	25600
				50–60	23800
				60–70	23500
				70–80	22600

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r104	LA-10076	c3a	238	0–10	26800
				10–20	31000
				20–30	36700
				30–40	43600
				40–50	51000
				50–60	57300
				60–70	55600
				70–80	49700
LA2FE-r105	—	c3	219	0–10	21200
				10–20	24300
				20–30	25600
				30–40	26200
LA2FE-r106	—	c3 swale	258	0–10	34700
				10–20	41700
				20–30	43100
				30–40	36600
LA2FE-r107	—	f1	287	0–10	33700
				10–20	34800
				20–30	31900
				30–40	28300
				40–50	24800
				50–60	22900
				60–70	22000
				70–80	21200
				80–90	21000
				90–100	21100
LA2FE-r108	—	c3 swale	245	0–10	27700
				10–30	30700
				20–30	30700
				40–50	26500
LA2FE-r109	—	c3	274	0–10	36300
				10–20	44600
				20–30	45500
				30–40	42800
				40–50	39400
LA2FE-r110	—	c3	269	0–10	22600
				10–20	25400
				20–30	27200
				30–40	27600
				40–50	27400
				50–60	27100
LA2FE-r111	LA-10079	c3 channel	290	0–10	20300
				10–20	21100
				20–30	21400
				30–50	20900

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r112	—	c3 channel	331	0–10	38000
				10–20	44200
				20–30	49300
				30–40	49600
				40–50	46000
LA2FE-r113	—	f1	318	0–10	38800
				10–20	42000
				20–30	41500
				30–40	36700
				40–50	32600
				50–60	28900
				60–70	26900
				70–80	25400
LA2FE-r114	LA-10080	c3 swale	297	0–10	24600
				10–20	26400
				20–30	28900
				30–40	29600
				40–50	27000
				50–60	26600
				60–70	26700
				70–80	26800
				80–90	27000
				90–100	27700
LA2FE-r115	—	f1 channel	350	0–10	32600
				10–20	31000
				20–30	27900
				30–40	25200
				40–50	23600
				50–60	23200
LA2FE-r116	—	f1	346	0–10	28000
				10–20	26300
				20–30	24300
				30–40	22600
				40–50	21900
LA2FE-r117	—	f1	350	0–10	26800
				10–20	27000
				20–30	25300
				30–40	24500
				40–50	24100
				50–60	23500
LA2FE-r118	—	f1	371	0–10	27500
				10–20	27900
				20–30	27000
				30–40	25800
				40–50	24500

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r119	—	f1	383	0–10	29800
				10–20	31000
				20–30	27000
				30–40	24400
				40–50	23600
				50–60	23300
LA2FE-r120	—	f1	372	0–10	40500
				10–20	43200
				20–30	39300
				30–40	35500
				40–50	31500
				50–60	27900
				60–70	26000
				70–80	25300
LA2FE-r121	LA-10083	f1	403	0–10	34900
				10–20	36800
				20–30	35200
				30–40	31500
				40–50	28600
				50–70	26900
LA2FE-r122	—	f1	412	0–10	30500
				10–20	32700
				20–30	32200
				30–40	30800
				40–50	29100
LA2FE-r123	—	c3a	365	0–10	49500
				10–20	54900
				20–30	54500
				30–40	45600
				40–50	38400
				50–60	31300
				60–70	28400
				70–80	27800
LA2FE-r124	LA-10084	c3a	355	0–10	43400
				10–20	53100
				20–30	54200
				30–40	47600
				40–50	39900
				50–60	33300
				60–70	31800
				70–80	30500
LA2FE-r125	LA-10078	f1? (c3?)	287	0–10	35100
				10–20	33900
				20–30	32000
				30–40	29400
				40–50	27000
				50–60	25500
				60–70	25300

Table B-1.0-2 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA2FE-r126	—	f1 swale	313	0–10	25000
				10–20	24700
				20–30	24000
				30–40	24500
				40–50	24400
				50–60	24700

[a] cpm = Counts per minute.
[b] — = No location ID.

Table B-1.0-3
Field Radiological Data Obtained from Reach LA-3 West

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA3W-r1	—[b]	c3	50	0–10	19720
				10–20	21400
				20–30	24000
				30–40	25400
				40–50	27500
				50–60	28400
				60–70	28800
				70–80	29100
LA3W-r2	—	c2	50	0–10	17960
				10–20	19590
				20–30	21700
				30–40	22800
				40–50	23000
				50–60	24100
LA3W-r3	—	c3	55	0–10	19710
				10–20	22700
				20–30	24500
				30–40	25500
				40–50	25800
				50–60	25100
				60–70	23400
LA3W-r4	—	f1? (f2?)	60	0–10	15860
				10–20	16410
LA3W-r5	—	f1? (f2?)	60	0–10	15480
				10–20	15960
LA3W-r6	—	c2	109	0–10	14260
				10–20	15200
LA3W-r7	—	c2	109	0–10	14510
				10–20	15170
				20–30	15660

Table B-1.0-3 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Shielded Gamma Radiation (cpm[a])
LA3W-r8	LA-10099	c3	105	0–10	21000
				10–20	24400
				20–30	25000
				30–40	23500
				40–50	23800
				50–60	22800
LA3W-r9	—	f1? (f2?)	105	0–10	17700
				10–20	19060
				20–30	19960
				30–40	20000
				40–50	20500
LA3W-r10	—	c3	130	0–10	24100
				10–20	28000
				20–30	29900
				30–40	29400
LA3W-r11	—	c2	152	0–10	17640
				10–20	20600
				20–30	22600
				30–40	23200
				40–50	24700
				50–60	25900
				60–70	26600
				70–80	26900
LA3W-r12	—	c2	200	0–10	17550
				10–20	20200
				20–30	21400
LA3W-r13	—	c3	202	0–10	18690
				10–20	22200
				20–30	25000
				30–40	26000
				40–50	26100
LA3W-r14	LA-10100	f1? (f2?)	194	0–10	15450
				10–20	16540
LA3W-r15	—	f2? (Qt?)	205	0–10	14500
				10–20	15890
LA3W-r16	LA-10102	c2	250	0–10	14400
				10–20	15280
				20–30	15810
LA3W-r17	—	c2	252	0–10	16100
				10–20	16710
				20–30	15110
				30–40	16230
LA3W-r18	LA-10101	c3	248	0–10	23300
				10–20	28400
				20–30	32800
				30–40	35900
				40–50	34900

Table B-1.0-3 (continued)

LA3W-r19	—	f1	249	0–10	15580
				10–20	16540
				20–30	18010
				30–40	18740
LA3W-r20	—	f2? (Qt?)	254	0–10	15280
				10–20	16800
				20–30	17120
LA3W-r21	—	f2? (Qt?)	252	0–10	14890
				10–20	15930
				20–30	17660
LA3W-r22	—	c2	299	0–10	17550
				10–20	18630
				20–30	20400
				30–40	21100
LA3W-r23	—	c2	300	0–10	19030
				10–20	20800
				20–30	20600
				30–40	18090
LA3W-r24	LA-10103	f1	299	0–10	16200
				10–20	17090
				20–30	18510
LA3W-r25	—	Qt? (f2?)	300	0–10	15120
				10–20	17290
				20–30	18770
				30–40	19520
LA3W-r26	LA-10104	f2? (Qt?) swale	300	0–10	15150
				10–20	16600
LA3W-r27	—	c2	348	0–10	17650
				10–20	19600
				20–50	20600
				50–60	20700
				60–70	18520
LA3W-r28	—	c3	336	0–10	17110
				10–20	18600
				20–30	19270
				30–40	20800
LA3W-r29	—	c2	350	0–10	17540
				10–20	18390
				20–30	17910
				30–40	17770
LA3W-r30	—	Qt? (f2?)	350	0–10	14120
LA3W-r31	—	c2	400	0–10	16610
				10–20	18640
				20–30	18760
LA3W-r32	—	c2	400	0–10	17490
				10–20	18870
				20–30	19290
LA3W-r33	—	c3	394	0–10	22700
				10–20	24900
				20–30	25900
LA3W-r34	LA-10106	Qt? (f2?)	394	0–10	18220

Table B-1.0-3 (continued)

LA3W-r35	—	c3	443	0–10	22300
				10–20	24200
				20–30	24900
				30–40	24300
				40–50	22700
				50–60	22400
LA3W-r36	LA-10107	f1	441	0–10	17930
				10–20	18830
				20–30	19740
				30–40	19430
				40–50	19580
LA3W-r37	—	c2	443	0–10	16990
				10–20	18540
				20–30	19020
LA3W-r38	—	c2	447	0–10	16510
				10–20	17450
				20–30	17510
LA3W-r39	—	c2	494	0–10	19350
				10–20	21500
				20–30	24600
				30–40	25400
				40–50	25900
				50–60	26000
LA3W-r40	—	f1	493	0–10	16220
				10–20	17450
				20–30	18530
				30–40	19480
				40–50	20300
LA3W-r41	—	c2	499	0–10	20200
				10–20	22200
				20–30	23100
				30–40	24400
				40–50	24800
LA3W-r42	LA-10105	c2	365	0–10	17910
				10–20	19630
				20–30	21800

[a] cpm = Counts per minute.
[b] — = No location ID.

Table B-1.0-4
Sediment Thickness Measurements from Reach LA-2 Far East

Distance from Upstream End of Reach (m)	Side of Channel	Geomorphic Unit	Fine Facies Thickness (cm)	Coarse Facies Thickness (cm)	Fixed-Point Site	Location ID
0	S	c2	28	>12	LA2FE-r1	
0	S	f2? (c3?)	9	27	LA2FE-r2	
8	N	c2	25	>37	LA2FE-r4	
8	N	f2? (c3?)	20	0	LA2FE-r5	LA-10138
50	N	c2	56	>10	LA2FE-r6	
50	N	f2? (Qt?)	31	0	LA2FE-r7	
50	S	f2	27	59	LA2FE-r8	
100	N	c2	43	>45	LA2FE-r11	
100	S	c2	46	>29	LA2FE-r9	
100	S	f2? (Qt?)	32	0	LA2FE-r10	
120	N	c2	24	>10	LA2FE-r13	LA-10142
150	S	c2	31	>55	LA2FE-r14	
150	S	c3	10	15	LA2FE-r15	LA-10143
150	S	f2	28	12	LA2FE-r17	
186	S	c3	13	30	LA2FE-r96	
188	S	c3	14	36	LA2FE-r97	LA-10144
200	N	c2	18	>37	LA2FE-r19	
200	N	c3	57	18	LA2FE-r20	
200	S	f2	5	0	LA2FE-r23	LA-10145
205	S	c2	12	>64	LA2FE-r21	
210	S	c3	21	24	LA2FE-r22	
219	N	c3	0	35	LA2FE-r105	
224	S	f1	13	0	LA2FE-r98	
227	S	c3	0	22	LA2FE-r100	
228	S	c3	14	14	LA2FE-r99	
238	N	c3a	33	48	LA2FE-r104	LA-10076
240	S	c3	48	12	LA2FE-r24	LA-10075
241	S	c3	6	37	LA2FE-r101	
245	N	c3	25	8	LA2FE-r108	
249	S	c3	18	34	LA2FE-r102	
250	N	c2	32	>43	LA2FE-r25	
255	N	c3a	34	22	LA2FE-r26	LA-10077
258	N	c3	0	6	LA2FE-r106	
262	S	c3	15	17	LA2FE-r103	
269	N	c3	0	60	LA2FE-r110	
274	N	c3	8	24	LA2FE-r109	
287	N	f1	39	0	LA2FE-r107	
287	S	f1	34	0	LA2FE-r125	LA-10078

Table B-1.0-4 (continued)

Distance from Upstream End of Reach (m)	Side of Channel	Geomorphic Unit	Fine Facies Thickness (cm)	Coarse Facies Thickness (cm)	Fixed-Point Site	Location ID
290	N	c3	4	17	LA2FE-r111	LA-10079
295	S	f1	29	31	LA2FE-r27	
297	N	c3	10	100	LA2FE-r114	LA-10080
300	S	c2	21	>54	LA2FE-r28	
310	N	c3a	120	>40	LA2FE-r30	LA-10081
310	N	f1	34	0	LA2FE-r29	
310	N	f1	23	0	LA2FE-r31	
313	S	f1	27	9	LA2FE-r126	
318	N	f1	39	0	LA2FE-r113	
330	N	f1	7	0	LA2FE-r35	
330	N	f1	11	19	LA2FE-r34	
331	N	c3	33	>22	LA2FE-r112	
335	N	c3a	103	>16	LA2FE-r32	
340	N	c2	18	>42	LA2FE-r36	
340	N	f1	28	0	LA2FE-r33	LA-10082
346	N	f1	18	0	LA2FE-r116	
350	NA	c1	0	>48		
350	N	f1	35	0	LA2FE-r115	
350	N	f1	32	0	LA2FE-r117	
355	S	c3a	68	>24	LA2FE-r124	LA-10084
355	N	f1	24	3	LA2FE-r39	
360	S	c3	35	23	LA2FE-r40	LA-10085
360	N	f1	34	0	LA2FE-r42	
360	S	f1	14	0	LA2FE-r41	
365	S	c3a	71	>9	LA2FE-r123	
371	N	f1	32	12	LA2FE-r118	
372	N	f1	55	10	LA2FE-r120	
383	N	f1	33	9	LA2FE-r119	
390	N	f1	54	16	LA2FE-r46	
390	S	f2? (Qt?)	11	0	LA2FE-r45	LA-10186
403	N	f1	67	0	LA2FE-r121	LA-10083
405	S	c2	22	>38	LA2FE-r43	
410	N	f1	13	0	LA2FE-r47	
412	N	f1	32	0	LA2FE-r122	
450	NA	c1	0	>7		
450	S	c2	24	>26	LA2FE-r49	
450	S	f2? (Qt?)	23	0	LA2FE-r52	
455	N	c2	36	>16	LA2FE-r51	
455	N	f2? (Qt?)	32	0	LA2FE-r50	
500	N	c2	67	>21	LA2FE-r53	

Table B-1.0-4 (continued)

Distance from Upstream End of Reach (m)	Side of Channel	Geomorphic Unit	Fine Facies Thickness (cm)	Coarse Facies Thickness (cm)	Fixed-Point Site	Location ID
500	S	c2	53	>17	LA2FE-r54	
505	S	f2	14	0	LA2FE-r55	
550	N	c2	34	>38	LA2FE-r56	
550	N	f2? (f1?)	9	0	LA2FE-r57	
555	S	c2	53	>8	LA2FE-r58	
560	S	f1	14	0	LA2FE-r60	
588	N	f2? (f1?)	12	0	LA2FE-r62	
594	N	c2	30	>47	LA2FE-r61	LA-10087
600	S	c2	38	>31	LA2FE-r63	
600	S	f2? (Qt?)	7	0	LA2FE-r64	LA-10088
648	N	c2	42	>22	LA2FE-r65	
660	N	f2? (Qt?)	17	0	LA2FE-r67	LA-10092
660	S	f2? (Qt?)	7	0	LA2FE-r68	LA-10089
695	S	c2	28	>34	LA2FE-r69	
700	N	c2	37	>43	LA2FE-r70	
705	N	f2	11	0	LA2FE-r72	
710	S	f2? (f1?)	8	0	LA2FE-r74	
740	S	f1	19	0	LA2FE-r75	LA-10093
750	N	c2	58	>18	LA2FE-r76	
750	N	f1	8	0	LA2FE-r77	
800	N	c2	40	>30	LA2FE-r79	
800	S	f1	19	0	LA2FE-r80	LA-10094
800	N	f2? (Qt?)	5	5	LA2FE-r81	
800	N	f2	15	0	LA2FE-r82	LA-10095
840	N	f1	16	0	LA2FE-r83	LA-10096
855	N	c2	20	>15	LA2FE-r84	LA-10097
860	S	f1	45	0	LA2FE-r85	
865	S	c2? (c3?)	26	10	LA2FE-r86	
900	N	c2	38	>32	LA2FE-r87	
900	N	c3	14	9	LA2FE-r88	
910	S	f2	4	0	LA2FE-r89	
930	S	f1	35	0	LA2FE-r90	
955	N	c2	34	>32	LA2FE-r91	
995	S	c2	46	>29	LA2FE-r92	
995	S	c3	9	20	LA2FE-r93	
995	N	c3	21	>49	LA2FE-r94	

Table B-1.0-5
Sediment Thickness Measurements from Reach LA-3 West

Distance from Upstream End of Reach (m)	Side of Channel	Geomorphic Unit	Fine Facies Thickness (cm)	Coarse Facies Thickness (cm)	Fixed-Point Site	Location ID
50	N	c2	15	>60	LA3W-r2	
50	S	c3	72	>11	LA3W-r1	
55	N	c3	40	>34	LA3W-r3	
60	N	f1? (f2?)	5	0	LA3W-r4	
60	S	f1? (f2?)	5	0	LA3W-r5	
105	N	c3	15	>53	LA3W-r8	LA-10099
105	N	f1? (f2?)	36	19	LA3W-r9	
109	N	c2	30	>7	LA3W-6	
109	S	c2	11	>21	LA3W-7	
130	N	c3? (f1?)	56	0	LA3W-r10	
152	N	c2	38	>52	LA3W-11	
194	N	f1? (f2?)	4	5	LA3W-r14	LA-10100
200	N	c2	49	>7	LA3W-12	
202	N	c3	33	>22	LA3W-r13	
205	N	f2? (Qt?)	0	8	LA3W-r15	
248	N	c3	50	0	LA3W-r18	LA-10101
249	S	f1	23	5	LA3W-r19	
250	S	c2	56	>1	LA3W-16	LA-10102
252	N	c2	74	>1	LA3W-17	
252	N	f2? (Qt?)	0	7	LA3W-r21	
254	S	f2? (Qt?)	18	0	LA3W-r20	
299	N	c2	48	>1	LA3W-22	
299	N	f1	10	0	LA3W-r24	LA-10103
300	S	c2	30	>20	LA3W-23	
300	S	f2? (Qt?)	7	0	LA3W-r26	
336	N	c3	39	0	LA3W-r28	
348	S	c2	19	>45	LA3W-27	
350	N	c2	16	>29	LA3W-29	
365	S	c2	34	>1	LA3W-42	LA-10105
394	S	c3	23	>1	LA3W-r33	
400	S	c2	62	>1	LA3W-31	
400	N	c2	25	>10	LA3W-32	
441	N	f1	28	0	LA3W-r36	LA-10107
443	N	c2	30	>6	LA3W-37	
443	N	c3	27	>39	LA3W-r35	
447	S	c2	21	>9	LA3W-38	
493	N	f1	8	0	LA3W-r40	
494	S	c2	41	>22	LA3W-39	
499	N	c2	37	>12	LA3W-41	

Table B-1.0-6
Particle-Size and Organic-Matter Data from Reaches LA-2 Far East and LA-3 West

Sample ID	Reach	Gravel (> 2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Median Particle Size Class*	Total Silt + Clay (wt%)	Organic Matter (wt %)
CALA-01-0067	LA-2FE	0.3	0.0	0.2	1.1	4.0	13.9	44.8	20.2	15.7	csi	80.7	4.0
CALA-01-0068	LA-2FE	3.1	3.6	6.7	15.8	22.1	17.2	18.0	7.8	8.6	vfs	34.4	2.3
CALA-01-0069	LA-3W	0.9	0.0	1.1	2.8	9.1	23.4	40.6	10.8	11.7	csi	63.1	4.0
CALA-01-0070	LA-3W	2.5	1.7	7.4	18.7	22.0	16.4	21.3	2.8	9.4	vfs	33.5	3.7
CALA-01-0071	LA-2FE	2.0	0.5	2.4	11.4	18.4	20.1	26.3	8.6	12.1	vfs	47.0	4.4
CALA-01-0072	LA-2FE	2.8	3.8	3.4	9.3	24.8	23.2	21.7	3.7	9.8	vfs	35.3	2.0
CALA-01-0073	LA-2FE	2.9	0.3	1.0	6.2	15.3	21.6	36.1	9.0	10.4	csi	55.5	6.6
CALA-01-0074	LA-2FE	0.6	0.4	0.7	5.3	19.8	26.0	32.0	5.8	10.0	vfs	47.8	3.4
CALA-01-0075	LA-3W	1.4	0.6	2.6	7.7	13.2	18.4	35.7	10.0	11.7	csi	57.4	3.7
CALA-01-0076	LA-3W	2.5	0.4	1.5	9.9	19.2	22.5	28.0	7.4	10.8	vfs	46.3	3.6
CALA-01-0077	LA-3W	2.1	1.8	4.9	12.9	15.3	15.4	26.1	12.2	11.3	vfs	49.6	3.5
CALA-01-0078	LA-3W	4.2	5.7	12.7	20.6	19.1	14.7	14.1	5.2	7.7	fs	27.1	2.2
CALA-01-0080	LA-2FE	1.0	0.9	2.6	7.3	10.7	14.5	34.2	17.7	12.1	csi	64.0	4.8
CALA-01-0083	LA-2FE	2.2	2.4	3.9	11.6	15.5	17.0	32.8	8.4	8.3	vfs	49.6	3.2
CALA-01-0084	LA-2FE	3.0	6.3	21.8	28.3	14.3	9.0	11.7	4.0	4.5	ms	20.2	2.3
CALA-01-0085	LA-2FE	4.3	6.5	11.3	18.4	18.3	13.5	19.4	6.3	6.2	fs	31.9	2.4
CALA-01-0086	LA-2FE	2.5	4.4	8.4	14.7	17.0	17.9	23.6	7.3	6.6	vfs	37.5	2.5
CALA-01-0087	LA-2FE	1.9	5.8	7.3	15.4	24.5	16.9	19.9	4.9	5.2	fs	30.0	1.9
CALA-01-0088	LA-2FE	8.4	28.8	41.0	21.1	3.1	1.4	2.7	1.0	0.9	cs	4.6	0.6
CALA-01-0089	LA-2FE	3.8	4.3	6.6	10.6	16.6	17.0	29.9	7.9	7.0	vfs	44.8	3.8
CALA-01-0090	LA-2FE	0.6	1.0	1.8	3.7	16.8	28.4	35.5	6.5	6.2	vfs	48.2	3.0
CALA-01-0091	LA-2FE	10.8	29.1	22.9	19.3	13.2	5.9	5.7	0.9	2.9	cs	9.4	0.9
CALA-01-0092	LA-2FE	1.2	1.1	2.6	15.7	32.6	21.4	18.2	3.3	5.1	fs	26.6	2.3
CALA-01-0093	LA-2FE	1.5	0.4	1.5	5.8	10.3	16.3	44.0	11.3	10.4	csi	65.7	4.1
CALA-01-0094	LA-2FE	0.4	0.6	2.0	7.0	17.8	22.4	31.9	8.8	9.4	csi	50.1	2.7
CALA-01-0095	LA-2FE	13.6	29.5	39.8	23.0	4.0	0.9	0.0	0.1	2.6	cs	2.6	0.5
CALA-01-0096	LA-2FE	0.5	1.2	2.0	6.6	17.4	23.8	32.5	7.4	9.2	vfs	49.1	2.2
CALA-01-0097	LA-2FE	0.8	1.0	2.2	6.7	13.2	20.5	36.5	10.4	9.2	csi	56.1	2.3
CALA-01-0098	LA-2FE	4.2	4.8	6.0	16.3	24.3	18.4	18.5	5.8	5.7	fs	30.0	2.3
CALA-01-0099	LA-2FE	5.1	9.3	24.7	32.5	14.9	5.9	5.0	3.5	4.1	ms	12.5	5.6
CALA-01-0100	LA-2FE	9.6	5.2	2.3	5.2	14.5	24.5	33.4	9.2	5.8	vfs	48.3	2.5
CALA-01-0101	LA-2FE	1.2	0.2	0.6	1.2	5.0	24.0	54.7	5.0	9.3	csi	69.0	2.7
CALA-01-0102	LA-2FE	7.2	7.5	8.8	7.6	11.7	16.0	29.5	10.0	8.6	vfs	48.1	3.0
CALA-01-0103	LA-2FE	1.2	4.8	6.0	5.9	12.4	19.1	35.7	5.4	10.7	csi	51.8	2.4
CALA-01-0104	LA-2FE	26.8	29.4	35.0	17.9	5.8	2.8	3.8	5.2	0.1	cs	9.0	0.8
CALA-01-0105	LA-2FE	35.9	41.9	32.9	12.9	3.4	1.6	1.0	2.0	4.4	cs	7.4	0.9
CALA-01-0106	LA-2FE	2.5	1.6	2.3	3.2	7.1	16.3	41.9	15.0	12.5	csi	69.4	7.4

Table B-1.0-6 (continued)

Sample ID	Reach	Gravel (> 2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Median Particle Size Class*	Total Silt + Clay (wt%)	Organic Matter (wt %)
CALA-01-0107	LA-2FE	5.5	19.7	31.7	23.8	7.6	4.0	3.9	4.8	4.5	cs	13.2	0.9
CALA-01-0108	LA-2FE	3.1	0.2	0.6	2.2	8.7	17.5	39.2	16.1	14.3	csi	69.6	5.7
CALA-01-0109	LA-2FE	1.1	0.0	0.5	1.2	3.8	10.4	44.5	23.2	16.2	csi	83.9	4.8
CALA-01-0110	LA-2FE	3.5	4.0	5.4	10.1	17.6	19.6	26.0	9.5	7.6	vfs	43.1	2.4
CALA-01-0111	LA-2FE	4.5	3.2	3.5	6.2	12.9	18.8	34.5	10.9	10.0	csi	55.4	2.4
CALA-01-0112	LA-2FE	8.9	9.0	9.3	12.2	18.8	19.3	21.4	3.7	6.4	vfs	31.5	1.8
CALA-01-0113	LA-2FE	1.9	2.1	6.7	20.4	21.0	15.8	19.8	6.2	7.8	vfs	33.8	3.9
CALA-01-0114	LA-2FE	1.2	0.6	1.8	7.2	20.7	26.6	30.0	4.3	8.9	vfs	43.2	2.5
CALA-01-0115	LA-2FE	4.1	4.6	13.8	27.7	19.6	12.1	11.9	4.7	5.6	fs	22.1	1.6
CALA-01-0116	LA-2FE	1.0	1.8	4.8	16.0	18.3	17.0	25.9	9.4	6.5	vfs	41.9	2.8
CALA-01-0117	LA-2FE	6.2	5.9	8.7	15.6	19.2	14.0	21.3	9.7	5.6	vfs	36.6	2.3
CALA-01-0118	LA-2FE	0.3	1.9	5.8	13.0	22.4	21.5	25.4	5.7	4.2	vfs	35.3	2.2
CALA-01-0119	LA-2FE	2.1	10.8	46.7	32.9	4.1	1.3	1.7	3.3	0.0	cs	5.0	0.5
CALA-01-0120	LA-2FE	15.9	9.3	8.4	11.6	13.7	13.3	27.6	8.3	7.7	vfs	43.5	6.3
CALA-01-0121	LA-2FE	12.0	17.9	25.4	16.2	9.1	6.4	13.6	6.3	4.9	ms	24.9	1.7
CALA-01-0122	LA-2FE	18.1	18.3	20.8	15.6	10.4	8.9	11.7	10.8	3.4	ms	26.0	1.7
CALA-01-0123	LA-2FE	44.8	40.0	33.9	15.5	4.6	1.0	2.3	1.3	1.3	cs	4.9	0.6
CALA-01-0124	LA-2FE	1.6	1.0	1.4	8.1	24.3	27.6	26.2	7.5	4.0	vfs	37.7	2.0
CALA-01-0125	LA-2FE	1.1	0.5	2.8	12.5	20.1	22.2	28.6	6.5	6.7	vfs	41.8	3.3
CALA-01-0126	LA-2FE	4.6	4.0	8.5	13.6	13.6	15.1	27.4	12.8	4.9	vfs	45.1	3.4
CALA-01-0127	LA-2FE	0.5	0.3	1.0	13.6	22.2	19.2	26.3	9.1	8.1	vfs	43.5	5.0
CALA-01-0128	LA-2FE	0.9	1.2	3.6	23.3	24.2	16.9	21.0	6.6	3.1	fs	30.8	2.1
CALA-01-0129	LA-2FE	2.2	2.3	5.6	12.0	18.2	18.4	29.5	8.6	5.3	vfs	43.4	2.7
CALA-01-0130	LA-2FE	1.1	1.7	5.1	14.8	18.6	18.8	24.3	6.9	9.7	vfs	40.9	2.8
CALA-01-0131	LA-3W	4.2	6.8	18.2	23.9	17.3	12.3	9.9	4.4	7.1	fs	21.4	1.9
CALA-01-0132	LA-3W	8.7	12.7	23.3	27.3	13.2	7.6	6.8	2.9	6.0	ms	15.7	1.2
CALA-01-0133	LA-3W	15.1	18.6	25.6	16.2	7.7	5.8	13.9	5.7	6.4	ms	26.1	1.7
CALA-01-0134	LA-3W	1.5	0.6	2.2	6.1	11.3	17.8	34.8	14.5	12.6	csi	62.0	5.3
CALA-01-0135	LA-3W	3.7	3.0	7.8	11.3	11.4	18.1	29.4	8.0	10.7	vfs	48.1	6.2
CALA-01-0137	LA-3W	10.1	8.8	14.3	14.8	14.9	14.3	19.2	5.9	8.0	fs	33.2	2.9
CALA-01-0138	LA-3W	2.5	3.3	7.7	15.2	16.2	15.2	25.2	8.2	8.9	vfs	42.3	3.1
CALA-01-0139	LA-3W	7.0	0.6	2.0	7.4	17.4	28.8	30.0	7.0	6.7	vfs	43.8	3.2
CALA-01-0140	LA-3W	0.9	7.5	11.2	21.6	20.1	14.1	12.8	4.4	8.1	fs	25.4	2.1

*cs = coarse sand; csi = coarse silt; fs = fine sand; fsi = fine silt; ms = medium sand; vfs = very fine sand.

Table B-1.0-7
Summary of Particle-Size and Organic-Matter Data from Reaches LA-2 Far East and LA-3 West

Reach	Geomorphic Unit	Sediment Facies	Number of Analyses	Gravel (>2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Median Particle Size Class*	Total Silt + Clay (wt%)	Organic Matter (wt %)
LA-2FE	c1	Coarse	1	44.8	40.0	33.9	15.5	4.6	1.0	2.3	1.3	1.3	cs	4.9	0.6
	c2	Coarse	1	2.1	10.8	46.7	32.9	4.1	1.3	1.7	3.3	0.0	cs	5.0	0.5
	c3	Coarse	4	20.5	32.3	33.0	17.8	6.4	2.9	3.3	2.2	2.1	cs	7.6	0.8
	c3a	Coarse	3	8.1	19.5	32.0	26.4	8.9	3.6	3.0	2.8	3.7	cs	9.4	2.3
	c1	Fine	1	1.6	1.0	1.4	8.1	24.3	27.6	26.2	7.5	4.0	vfs	37.7	2.0
	c2	Fine	4	1.4	2.0	5.1	15.6	20.5	19.1	24.1	7.0	6.5	vfs	37.6	2.8
	c3	Fine	7	1.4	2.1	3.3	10.4	20.7	20.8	28.2	6.8	7.5	vfs	42.5	2.7
	c3a	Fine	12	2.3	1.5	2.3	6.6	12.5	18.8	35.8	11.7	10.6	csi	58.1	3.7
	f1	Fine	8	3.3	3.1	4.6	10.5	17.8	19.9	28.3	7.7	8.1	vfs	44.0	3.1
	f1a	Fine	2	3.3	3.8	6.1	13.0	19.8	18.4	22.0	8.7	8.1	vfs	38.8	2.4
	f2	Fine	2	4.2	4.2	7.6	12.1	15.1	16.1	28.6	10.3	6.0	vfs	44.9	3.6
LA-3W	c3	Coarse	1	8.7	12.7	23.3	27.3	13.2	7.6	6.8	2.9	6.0	ms	15.7	1.2
	c2	Fine	4	2.8	2.8	6.7	14.6	17.5	17.0	23.4	8.3	9.7	vfs	41.3	3.1
	c3	Fine	5	2.1	2.0	6.3	11.8	14.6	17.7	28.4	8.5	10.5	vfs	47.5	3.7
	f1	Fine	2	2.3	5.2	9.5	16.5	15.7	16.1	21.1	6.2	9.4	vfs	36.8	4.1

Note: Average values, excluding samples that are inferred to be of largely pre-1943 sediment.

*cs = coarse sand; csi = coarse silt; ms = medium sand; vfs = very fine sand.

Table B-1.0-8
Dendrochronological Analyses from Reaches LA-2 Far East and LA-3 West

Reach	Core ID	Channel Distance (m)	Geomorphic Unit	Depth of Burial (cm)	Fixed-Point Measurement Site	Location ID	Species	Date of Pith Ring
LA-2FE	LA-2FE-001A	186	c3	43	LA2FE-r96	—[a]	Ponderosa pine	1964
	LA-2FE-001B							1964
	LA-2FE-002B	188	c3	50	LA2FE-r97	LA-10144	Ponderosa pine	1960[b]
	LA-2FE-002C							1960
	LA-2FE-003B	210	c3	85	LA2FE-r22	—	Ponderosa pine	1893–1895
	LA-2FE-004B	240	c3	56	LA2FE-r24	—	Ponderosa pine	1900[b]
	LA-2FE-005A	255	c3a	56	LA2FE-r26	LA-10077	Ponderosa pine	1960[b]
	LA-2FE-005B							1960[b]
	LA-2FE-005C						Ponderosa pine	1958[b]
	LA-2FE-006A	330	f1	7	LA2FE-r35	—	Ponderosa pine	1936
	LA-2FE-006B							1938
	LA-2FE-007C	330	f1	11	LA2FE-r34	—	Ponderosa pine	1960
	LA-2FE-007D							1960
	LA-2FE-008A	410	f1	13	LA2FE-r47	—	Ponderosa pine	1943[b]
	LA-2FE-009A	150	c3	25	LA2FE-r15	LA-10143	Ponderosa pine	1951
	LA-2FE-009B							1950
	LA-2FE-010A	150	Qt	5	LA2FE-r16	—	Ponderosa pine	1964
	LA-2FE-010B							1964
	LA-2FE-011B	8	Qt	9	LA2FE-r3	LA-10139	Ponderosa pine	1918
	LA-2FE-012	24	c2	40	LA2FE-r24	LA-10140	Ponderosa pine	1981[c]
	LA-2FE-013A	100	Qt	13	LA2FE-r95	LA-10141	Ponderosa pine	1909[b]
	LA-2FE-013B							1909[b]
	LA-2FE-014B	100	Qt	5			Douglas fir	1913[b]
	LA-2FE-015A	120	c2	34	LA2FE-r13	LA-10142	Ponderosa pine	1980
	LA-2FE-015B							1980
	LA-2FE-016A	660	f2? (Qt?)	0	LA2FE-r68	LA-10089	Ponderosa pine	1986
	LA-2FE-016B							1986
	LA-2FE-017E	740	f1	19	LA2FE-r75	LA-10093	Douglas fir	1946?[b]
	LA-2FE-017F							1946?[b]
	LA-2FE-018C	705	Qt	3	LA2FE-r71	—	Ponderosa pine	1948[b]
	LA-2FE-018D							1948[b]
	LA-2FE-019B	750	f1	8	LA2FE-r77	—	Piñon pine	1928
	LA-2FE-019C							1928
	LA-2FE-020A	800	f1	19	LA2FE-r80	—	Ponderosa pine	1928
	LA-2FE-020B							1928

Table B-1.0-8 (continued)

Reach	Core ID	Channel Distance (m)	Geomorphic Unit	Depth of Burial (cm)	Fixed-Point Measurement Site	Location ID	Species	Date of Pith Ring
LA-2FE	LA-2FE-021A	882	f1	10	—	—	Rocky Mountain juniper	1932[b]
	LA-2FE-021B							1933[b]
	LA-2FE-022A	938	f1	14	—	—	Ponderosa pine	1936
	LA-2FE-022B							1937
	LA-2FE-023A	938	f1	12	—	—	Rocky Mountain juniper	1968
	LA-2FE-023B							1968
	LA-2FE-023D							1968
	LA-2FE-024A	258	c3	6 or 42	LA2FE-r106	—	Ponderosa pine	1936
	LA-2FE-024B							1939
LA-3W	LA3W-001A	365	c2	28	LA3W-r42	LA-10105	Ponderosa pine	1980
	LA3W-001B							1980
	LA3W-002A	336	c3	39	LA3W-r28	—	Ponderosa pine	1943[b]
	LA3W-002B							1943[b]
	LA3W-003B	299	f1	10	LA3W-r24	—	Piñon pine	1919
	LA3W-004B	248	c3	50	LA3W-r18	—	Ponderosa pine	1943
	LA3W-004C							1943

[a] — = No fixed-point measurement site or location ID.

[b] Pith not encountered, age estimated.

[c] Age estimate based on whorl count.

Table B-1.0-9
Physical Characteristics of Post-1942 Geomorphic Units in Reaches LA-0 and LA-1 Far West

Reach	Geomorphic Unit	Average Unit Width (m)*	Sediment Facies	Estimated Average Sediment Thickness (m)	Typical Median Particle Size Class (<2 mm fraction)	Notes
LA-0	c1	1.7	Coarse	0.5	Coarse sand	Active channel
	c2	0.9	Fine	0.32	Unknown	Abandoned channel
			Coarse	0.5	Coarse sand	
	f1	9.6	Fine	0.23	Unknown	Post-1942 floodplain
	Total	**12.3**				
LA-1 Far West	c1	1.8	Coarse	0.5	Coarse sand	Active channel
	c2	2.9	Fine	0.41	Fine sand	Low abandoned channel
			Coarse	0.5	Coarse sand	
	c3	1.5	Fine	Unknown	Coarse silt	High abandoned channel
			Coarse	0.5	Coarse sand	
	f1	4.3	Fine	Unknown	Unknown	Post-1942 floodplain
	f2	2.5	Fine	Unknown	Unknown	Possible post-1942 floodplain
	Total	**13.1**				

*Average unit width is total area of unit in reach divided by reach length.

Table B-1.0-10
Sediment Thickness Measurements from Reaches LA-0 and LA-1 Far West

Reach	Distance Along Reach (m)	Side of Channel	Geomorphic Unit	Fine Facies Thickness (cm)	Coarse Facies Thickness (cm)	Location ID
LA-0	9	S	c2	14	>5	—*
	24	S	c2	42	0	LA-00222
	53	S	f1	16	0	LA-00223
	71	S	f1	≥30	unknown	LA-00224
	114	N	c2	40	>5	LA-00225
LA-1 Far West	13	N	c2	≥48	unknown	LA-00226
	17	S	c2	36	>5	LA-00227
	47	N	c2	43	>5	LA-00228
	80	N	c2	54	>5	—
	91	S	c2	24	16	LA-00230

*— = No fixed-point measurement site or location ID.

Table B-1.0-11
Physical Characteristics of
Post-1942 Geomorphic Units in Reaches P-1 Far West, P-1 West, and Walnut Canyon

Reach	Geomorphic Unit	Average Unit Width (m)[a]	Sediment Facies	Estimated Average Sediment Thickness (m)	Typical Median Particle Size Class (<2 mm fraction)	Notes
P-1FW	c1	3.9	Coarse	0.5	Very coarse sand	Active channel
	c2	2.8	Fine	0.24	Very fine sand	Abandoned channel
			Coarse	0.5	Very coarse sand?	
	f1	0.1	Fine	0.15	Very fine sand?	Post-1942 floodplain
	Total	**7.1**				
P-1W	c1	2.0	Coarse	0.5	Coarse sand	Active channel
	c2	3.1	Fine	0.24	Fine sand	Abandoned channel
			Coarse	0.5	Coarse sand	
	f1	0.4	Fine	0.2?	Fine sand	Post-1942 floodplain
	f2	0.9	Fine	<0.05	na[b]	Possible post-1942 floodplain
	Total	**5.5**				
WC	c1	3.3	Coarse	0.5	Coarse sand	Active channel
	c2	1.5	Fine	0.15	Fine sand	Abandoned channel
			Coarse	0.5	Coarse sand	
	f1	2.9	Fine	0.08	Fine sand	Post-1942 floodplain
			Coarse	0.03	Coarse sand	
	f2	5.5	Fine	<0.05	na	Possible post-1942 floodplain
	Total	**13.2**				

[a] Average unit width is total area of unit in reach divided by reach length.
[b] na = Not available.

Table B-1.0-12
Sediment Thickness Measurements from Reaches P-1 Far West, P-1 West, and Walnut Canyon

Reach	Distance Along Reach (m)	Side of Channel	Geomorphic Unit	Fine Facies Thickness (cm)	Coarse Facies Thickness (cm)	Location ID
P-1 Far West	1	N	c2	≥23	>20	PU-10056
	7	N	f1	15	0	—*
	36	Mid	c2	11	0	—
	37	S	c2	67	>5	PU-10058
	44	Mid	c2	30	>12	—
	45	S	c2	41	>16	—
	47	N	c2	30	10	PU-10059
	50	S	c2	16	8	—
	53	N	c2	32	>15	—
	56	N	c2	0	>40	—
	58	N	c2	22	>42	—
	64	N	c2	≥19	>7	PU-10061
	72	S	c2	0	>37	—
P-1 West	10	S	c2	48	>6	—
	25	S	c2	29	>28	—
	26	N	c2	10	>21	PU-10062
	37	N	c2	17	>10	PU-10063
	39	N	c2	29	0	—
	65	N	c2	26	>5	PU-10064
	74	S	c2	0	>49	—
	79	N	c2	23	>5	PU-10065
	89	S	c2	7	>22	—
	94	N	c2	>62	≥33	—
	122	N	c2	12	>53	—
Walnut Canyon	17	W	c2	15	>12	—
	18	E	c2	7	>7	PU-10050
	18	E	f1	8	0	PU-10051
	20	E	f1	7	6	—
	33	E	c2	28	>5	PU-10052
	36	W	c2	31	>12	—
	40	W	c2	19	>14	PU-10054
	54	E	c2	8	>15	PU-10055
	56	W	c2	0	>19	—

*— = No location ID.

Table B-1.0-13
Particle-Size and Organic-Matter Data from Reaches P-1 Far West, P-1 West, and Walnut Canyon

Sample ID	Reach	Gravel (>2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Median Particle Size Class[a]	Total Silt + Clay (wt%)	Organic Matter (wt %)
04PU-96-0123	P-1W	6.3	6.8	24.5	22.9	14.0	5.3	19.8	3.8	3.0	ms	26.6	0.8
04PU-97-0081	P-1W	7.0	15.6	26.7	21.7	10.8	6.4	9.6	4.7	4.5	ms	18.8	1.7
04PU-97-0082	P-1W	9.7	3.3	8.9	19.3	17.8	15.5	21.5	6.6	7.2	vfs	35.3	2.4
CAPU-99-0003	WC	5.9	23.6	29.8	16.6	8.9	5.8	6.2	4.5	4.5	cs	15.2	NA[b]
CAPU-99-0004	WC	0.7	3.9	9.2	11.6	12.4	15.2	26.3	13.3	8.0	vfs	47.5	NA
CAPU-99-0005	WC	20.3	43.1	31.4	9.8	3.2	2.1	3.0	3.5	4.1	cs	10.6	NA
CAPU-99-0006	WC	2.0	1.9	3.7	7.0	12.0	19.5	33.7	11.7	10.4	csi	55.9	NA
CAPU-99-0007	WC	2.4	7.3	15.0	15.9	11.5	11.4	22.8	8.6	7.6	vfs	38.9	NA
CAPU-99-0008	WC	1.6	3.8	6.2	9.9	16.0	21.6	28.1	7.0	7.3	vfs	42.3	NA
CAPU-99-0009	P-1FW	1.0	3.0	4.4	5.2	5.0	13.9	43.1	11.0	13.7	csi	67.8	NA
CAPU-99-0010	P-1FW	0.0	0.1	0.4	0.3	1.1	15.1	58.8	10.6	13.3	csi	82.7	NA
CAPU-99-0011	P-1FW	50.3	51.9	28.3	7.7	2.1	1.2	1.9	3.7	3.0	vcs	8.7	NA
CAPU-99-0012	P-1FW	0.3	1.9	5.0	11.0	9.1	12.4	32.8	16.0	11.6	csi	60.4	NA
CAPU-99-0013	P-1FW	7.6	14.6	18.0	13.5	7.3	7.2	16.9	12.7	9.1	fs	38.6	NA
CAPU-99-0014	P-1FW	10.6	9.5	22.4	25.0	10.6	6.4	11.7	7.6	6.6	ms	25.9	NA
CAPU-99-0015	P-1W	21.1	21.7	27.7	20.4	8.4	5.1	7.3	4.2	4.9	ms	16.5	NA
CAPU-99-0016	P-1W	7.3	9.1	16.3	18.6	12.1	9.4	16.4	10.2	7.5	fs	34.1	NA
CAPU-99-0017	P-1W	3.9	4.9	17.0	19.3	12.2	9.6	16.5	10.2	9.3	fs	36.1	NA
CAPU-99-0018	P-1W	12.0	14.9	15.7	11.8	9.2	10.0	19.8	9.3	8.7	fs	37.9	NA
CAPU-99-0019	P-1W	16.2	33.3	46.4	15.4	1.3	0.4	-0.1	1.3	1.9	cs	3.1	NA

[a] cs = coarse sand; csi = coarse silt; fs = fine sand; ms = medium sand; vcs = very coarse sand; vfs = very fine sand.

[b] NA = Not analyzed.

Table B-1.0-14
Summary of Particle Size and
Organic-Matter Data from Reaches P-1 Far West, P-1 West, and Walnut Canyon

Reach	Geomorphic Unit	Sediment Facies	Number of Analyses	Gravel (> 2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Median Particle Size Class[a]	Total Silt + Clay (wt%)	Organic Matter (wt %)
P-1FW	c1	Coarse	1	50.3	51.9	28.3	7.7	2.1	1.2	1.9	3.7	3.0	vcs	8.7	NA[b]
	c2	Fine	4	4.9	7.3	12.4	13.7	8.0	10.0	26.1	11.8	10.3	vfs	48.2	NA
	f1	Fine	1	0.0	0.1	0.4	0.3	1.1	15.1	58.8	10.6	13.3	csi	82.7	NA
P-1W	c1	Coarse	1	16.2	33.3	46.4	15.4	1.3	0.4	-0.1	1.3	1.9	cs	3.1	NA
	c2	Fine	7	9.6	10.9	19.5	19.1	12.1	8.8	15.8	7.0	6.4	fs	29.3	1.6
WC	c1	Coarse	1	20.3	43.1	31.4	9.8	3.2	2.1	3.0	3.5	4.1	cs	10.6	NA
	c2	Coarse	1	5.9	23.6	29.8	16.6	8.9	5.8	6.2	4.5	4.5	cs	15.2	NA
	c2	Fine	3	1.4	3.2	6.4	9.5	13.5	18.8	29.4	10.7	8.6	vfs	48.6	NA
	f1	Fine	1	2.4	7.3	15.0	15.9	11.5	11.4	22.8	8.6	7.6	vfs	38.9	NA

Note: Average values, excluding samples that are inferred to be of largely pre-1943 sediment.

[a] cs = coarse sand; csi = coarse silt; ms = medium sand; vfs = very fine sand.

[b] NA = Not analyzed.

Table B-1.0-15
Physical Characteristics of Post-1942 Geomorphic Units in Acid Canyon Reaches

Reach	Geomorphic Unit	Average Unit Width (m)[a]	Sediment Facies	Estimated Average Sediment Thickness (m)	Typical Median Particle Size Class (<2 mm fraction)	Notes
AC-1	c1	1.5	Coarse	0.3	Coarse sand	Active channel
	c2	0.6	Fine	0.65	Fine sand	Inset abandoned channel
			Coarse	0.3	Coarse sand	
	f1+c3	6.4	Fine	0.63	Coarse silt	High abandoned channel and post-1942 floodplain
			Coarse	0.15	Coarse sand	
	Total	**8.4**				
AC-2	c1	1.9	Coarse	0.25	Coarse sand	Active channel
	c1b	0.1	Fine	0.1	Very fine sand	Area of fine-grained sediment deposition along active channel
			Coarse	0.3	Coarse sand	
	c2	0.6	Fine	0.49	Very fine sand	Inset abandoned channel
			Coarse	0.25	Coarse sand	
	c3+f1	3.5	Fine	0.47	Very fine sand	High abandoned channel and post-1942 floodplain
			Coarse	0.2	Coarse sand	
	Total	**6.0**				
AC-3	c1	3.2	Coarse	0.5	Coarse sand	Active channel
	c2	1.6	Fine	0.32	Fine sand	Abandoned channel
			Coarse	0.5	Coarse sand	
	f1	0.9	Fine	0.18	Coarse silt	Post-1942 floodplain
			Coarse	0.02	Medium sand?	
	f2	0.8	Fine	0.05	Fine sand	Possible post-1942 floodplain
	Total	**6.5**				
ACS, pre-IA	c1	1.4	Coarse	0.5	Coarse sand	Active channel
	c1b	0.1	Fine	0.09	Fine sand	Area of fine-grained sediment deposition along active channel
			Coarse	0.5	Very fine sand	
	c2	1.0	Fine	0.33	Very fine sand	Young abandoned channel with relatively low plutonium-239,240
			Coarse	0.5	Coarse sand	
	c2a	0.3	Fine	0.42	Very fine sand	Old abandoned channel with intermediate plutonium-239,240
			Coarse	0.5	Coarse sand	
	c3	0.1	Fine	0.36	Very fine sand	Old abandoned channel with relatively high plutonium-239,240
			Coarse	0.5	Coarse sand	
	f1	0.5	Fine	0.35	Very fine sand	Post-1942 floodplain with relatively low plutonium-239,240
			Coarse	0.02	Coarse sand	
	f1a	0.3	Fine	0.39	Coarse silt	Post-1942 floodplain with relatively high plutonium-239,240
			Coarse	0.08	Coarse sand	
	f1b	0.2	Fine	0.34	Very fine sand	Post-1942 floodplain with intermediate plutonium-239,240
			Coarse	0.11	Coarse sand	
	Total	**3.8**				

Table B-1.0-15 (continued)

Reach	Geomorphic Unit	Average Unit Width (m)[a]	Sediment Facies	Estimated Average Sediment Thickness (m)	Typical Median Particle Size Class (<2 mm fraction)	Notes
ACS, post-IA	c1	0.8	Coarse	0.5	Coarse sand	Active channel
	c1b	0.1	Fine	0.09	Fine sand	Area of fine-grained sediment deposition along active channel
			Coarse	0.5	Very fine sand	
	c2	0.4	Fine	0.33	Very fine sand	Young abandoned channel with relatively low plutonium-239,240
			Coarse	0.5	Coarse sand	
	f1	0.4	Fine	0.35	Very fine sand	Post-1942 floodplain with relatively low plutonium-239,240
			Coarse	0.02	Coarse sand	
	c.a.	2.1	n/a[b]	0.25	n/a	IA cleanup area
	Total	**3.8**				
0-030(g) Drainage	c1	0.9	Fine	0.13	Coarse silt	Active channel
			Coarse	0.29	Coarse sand	
	c1b	0.3	Fine	0.07	Coarse silt	Recent sand and gravel lobe
			Coarse	0.43	Coarse sand	
	c1w	0.3	Fine	0.23	Coarse silt	Ponded area above dirt road with high water table
			Coarse	0.22	Coarse sand	
	c2a	2.2	Fine	0.22	Coarse silt	Lower abandoned channel in upper basin
			Coarse	0.32	Coarse sand	
	c2b	1.0	Fine	0.19	Coarse silt	Abandoned channel in middle basin
			Coarse	0.19	Coarse sand	
	c2c	3.6	Fine	0.16	Coarse silt	Abandoned channel in lower basin
			Coarse	0.06	Coarse sand	
	c3 + c2	0.1	Fine	0.15	Coarse silt	Higher abandoned channel in upper basin
			Coarse	0.15	Coarse sand	

[a] Average unit width is total area of unit in reach divided by reach length.
[b] n/a = Not applicable.

Table B-1.0-16
Field Radiological Data Obtained from Reach AC-1

Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm*)
PU-10240	c2	5	0–47	6
				7
			47–70	9
				4
PU-10241	f1+c3	12	0–14	11
				11
			14–36	18
				6
PU-10242	c1	25	0–5	6
				6
PU-10013	c2	29	0–43	5
				9

*cpm = Counts per minute.

Table B-1.0-17
Field Radiological Data Obtained from Reach AC-2

Location ID	Geomorphic Unit	Distance from Downstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
—[c]	c1	44	Surface	10	190	6828
				—	410	—
	f1	43	0–10	3	196	6493
				—	397	—
			10–20	6	172	6454
				—	457	—
			20–30	1	208	6601
				—	466	—
PU-10014	c2	40	0–10	3	194	6711
				—	457	—
			10–20	6	186	1708
				—	475	—
			20–30	4	218	7188
				—	419	—
PU-10015	c2	29	0–10	5	190	6324
				—	457	—
			10–20	7	194	6702
				—	419	—
			20–30	4	184	7035
				—	457	—
—	c1	32	Surface	0	210	7012
				—	526	—
—	c1	12	Surface	3	200	7503
				—	462	—
PU-10016	f1	9	0–10	8	204	6776
				—	337	—
			10–20	4	231	6955
				—	466	—
			20–30	6	216	6923
				—	479	—

[a] cpm = Counts per minute.
[b] dpm = Disintegrations per minute.
[c] — = No location ID or no measurements.

Table B-1.0-18
Field Radiological Data Obtained from Reach AC-3

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
AC3-1	—[c]	f1	38	0–10	6	354	—
				10–20	11	453	—
				20–30	12	470	—
				30–40	7	414	—
				40–50	9	401	—
				50–60	10	539	—
				60–70	6	367	—
				70–80	12	363	—
AC3-2	PU-10017	f1	41	0–10	19	811	—
				10–20	6	1900	—
				20–30	9	397	—
				30–40	9	488	—
				40–50	5	457	—
AC3-3	—	f2? (f1?)	61	0–10	13	363	—
				10–20	9	401	—
				20–30	8	432	—
				30–40	4	453	—
AC3-4	—	f1	71	0–10	25	470	—
				10–20	11	453	—
				20–30	6	406	—
				30–40	9	539	—
				40–50	7	526	—
AC3-5	—	c2	80	0–7	13	401	—
				7–17	5	440	—
				17–25	16	479	—
AC3-6	PU-10018	c2	92	0–10	7	384	—
				10–20	5	380	—
				20–30	9	539	—
				30–40	6	488	—
				40–50	14	388	—
AC3-7	—	f2	91	0–10	0	453	—
				10–20	1	462	—
				20–30	3	375	—
				30–40	4	345	—
AC3-8	PU-10102	c2	116	0–10	11	501	—
				10–20	14	388	—
				20–30	12	393	—
				30–40	9	496	—
				40–50	9	490	—

Table B-1.0-18 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
AC3-9	—	c2	129	0–10	0	462	7093
				10–20	11	466	7069
				20–30	28	536	7270
				30–40	16	462	7653
AC3-10	—	c2	129	0–10	6	405	7008
				10–20	8	528	6776
				20–30	13	368	6548
				30–40	20	446	6499
				40–50	19	434	6739
				50–60	15	—	—
AC3-11	—	c2	143	0–10	10	430	7266
				10–20	11	503	7089
				20–30	12	397	7250
				30–40	6	376	7447
				40–50	15	372	7526
AC3-12	PU-10103	c2	143	0–10	7	413	6826
				10–20	5	405	6586
				20–30	7	479	6732
				30–40	4	323	6728
				40–50	11	421	6952
				50–60	10	450	7520
AC3-13	PU-10019	c2	155	0–10	13	409	8365
				10–20	20	458	9124
				20–30	33	749	10073
				30–40	16	565	9884
				40–50	18	454	9782
				50–60	30	536	9789
AC3-14	—	c2	155	0–10	6	462	7037
				10–20	11	479	7271
				20–30	10	458	7127
				30–40	14	454	7323
				40–50	10	466	7644
AC3-15	—	f1?	177	0–10	9	376	7787
				10–20	13	434	7713
				20–30	7	503	7639
				30–40	20	622	7926
				40–50	11	507	8418
				50–60	12	—	—
				60–70	11	—	—

Table B-1.0-18 (continued)

AC3-16	—	c2	178	0–10	5	397	7005
				10–20	6	364	7386
				20–30	7	340	7210
				30–40	11	466	7835
				40–50	7	475	8560
				50–60	3	462	10035
AC3-17	—	c2	186	0–10	10	454	6819
				10–20	15	466	6988
				20–30	8	405	7267
				30–40	11	470	7529
				40–50	13	438	7698
AC3-18	PU-10104	c2	198	0–10	—	352	6094
				10–20	8	364	6011
				20–30	6	315	6242
				30–40	9	385	6385
				40–50	6	393	6344
				50–60	5	331	6501
				60–70	12	393	7090
				70–80	11	352	7240
AC3-19	—	f1	200	0–10	7	372	7187
				10–20	7	462	6912
				20–30	11	515	7292
				30–40	6	397	7529
AC3-20	—	c2	210	0–10	0	393	6903
				10–20	5	450	6781
				20–30	4	454	7091
				30–40	13	475	7394
				40–50	23	438	7616
AC3-21	—	c2? (f1?)	214	0–10	8	421	6836
				10–20	11	434	6963
				20–30	9	454	7644
				30–40	14	495	7485
AC3-22	—	f2? (f1?)	247	0–10	7	470	6806
				10–20	5	413	7062
				20–30	5	420	7250
				30–40	3	447	7268
AC3-23	PU-10106	f2? (f1?)	250	0–10	2	424	6333
				10–20	5	470	6625
				20–30	7	401	7169
				30–40	5	489	7813
AC3-24	—	f1? (f2?)	273	0–10	4	420	5750
				10–20	13	390	6288
				20–30	12	401	6628

Table B-1.0-18 (continued)

				30–40	14	462	6682
AC3-25	—	c2	269	0–10	9	401	6336
				10–20	13	390	6288
				20–30	12	401	6628
				30–40	14	462	6682
AC3-26	—	f1? (f2?)	285	0–10	44	390	6999
					50	—	—
				10–20	34	485	7127
AC3-27	PU-10107	c2	298	0–10	4	386	6338
				10–20	5	374	6379
				20–30	9	382	6542
				30–40	6	439	6635
				40–50	8	397	6554
AC3-28	—	f1	386	0–10	8	443	6728
AC3-29	—	c2	378	0–10	10	420	8803
				10–20	42	535	9902
				20–30	122	733	9148
					62	—	—
				30–40	21	477	8424
				40–50	7	523	7675
				50–60	5	485	7432
				60–70	7	485	7432
				70–80	3	497	7561
AC3-30	—	c1	385	Surface	—	—	6837
AC3-31	PU-10110	c2	375	0–10	5	416	5928
				10–20	7	397	5840
				20–30	10	416	5823
				30–40	7	367	6222
				40–50	4	336	6571
AC3-32	—	c2	372	0–10	4	439	6289
				10–20	7	393	6035
				20–30	4	371	6010
				30–40	8	470	6112
				40–50	13	443	6672
AC3-33	—	c2	369	0–10	6	474	6557
				10–20	10	401	6348
				20–30	8	397	6585
				30–40	6	397	6867
				40–50	10	455	7060
AC3-34	—	f1? (c2?)	353	0–10	9	428	6447
				10–20	9	489	6434
				20–30	14	420	6668
				30–40	15	428	6987

Table B-1.0-18 (continued)

				40–50	12	584	4202
				50–60	18	485	7419
AC3-35	—	c2	351	0–10	2	355	6230
				10–20	5	317	5766
				20–30	6	359	5646
				30–40	13	405	5467
				40–50	5	371	5612
				50–60	10	393	5870
				60–70	—	—	5989
AC3-36	PU-10109	c2	330	0–10	5	336	5955
				10–20	11	413	5920
				20–30	7	439	4869
				30–40	7	401	5776
				40–50	8	451	6058
				50–60	4	382	6301
				60–70	8	363	6360
				70–80	6	477	6948
AC3-37	—	c2	323	0–10	6	351	6895
				10–20	11	363	6483
				20–30	15	435	7111
				30–40	6	413	7628
				40–50	53	477	9154
AC3-38	PU-10108	f1	314	0–10	53	443	6772
				10–20	111	447	6348
					85	—	—
				20–30	11	466	6213
				30–40	6	371	6206
				40–50	8	409	6488
AC3-39	PU-10105	c1	244	Surface	10	—	—

[a] cpm = Counts per minute.

[b] dpm = Disintegrations per minute.

[c] — = No location ID or no measurements.

Table B-1.0-19
Field Radiological Data Obtained from Reach ACS Prior to Interim Action

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
ACS-1	—[c]	f1	289	0–10	36	206	7294
					19	—	—
					32	—	—
				10–20	8	186	7177
					11	—	—
				20–30	9	220	7239
				30–40	12	200	7128
				40–50	19	210	6783
				50–60	23	233	6725
				60–70	5	200	6574
				70–80	4	184	6151
				80–90	1	178	6183
ACS-2	—	c2	281	0–10	31	299	9800
				10–20	35	314	9214
				20–30	54	322	9382
				30–40	46	281	9082
				40–50	17	255	8847
ACS-3	—	f1 (c.a.)	272	0–10	29	475	7407
					48	—	—
				10–20	27	445	7706
					19	—	—
				20–30	20	535	7922
					28	—	—
					10	—	—
				30–40	3	531	8721
					6	—	—
				40–50	6	574	9395
					3	—	—
				50–60	5	479	10124
					6	—	—
				60–70	38	630	11182
					43	—	—
					37	—	—
				70–80	189	790	12707
					107	—	—
				80–90	155	846	13634
					174	—	—
					132	—	—
				90–100	56	1090	13844
					67	—	—
				100–110	58	660	12568
					44	—	—
				110–120	20	—	—
					43	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
ACS-4	—	f1b (c.a.)	264.3	0–10	58	488	7748
					129	—	—
				10–20	472	544	7614
					38	—	—
					33	—	—
					24	—	—
				20–30	7	453	7798
					10	—	—
				30–40	10	561	7836
					20	—	—
				40–50	9	544	8025
					8	—	—
				50–60	11	570	7835
					10	—	—
				60–70	5	—	—
				70–80	9	—	—
				80–90	16	—	—
				90–100	8	—	—
ACS-5	—	c2a (c.a.)	262	0–10	25	613	—
					26	—	—
				10–20	42	682	—
					62	—	—
				20–30	75	794	—
					87	—	—
				30–40	178	820	—
					93	—	—
					132	—	—
					164	—	—
				40–50	261	—	—
					286	—	—
ACS-6	—	f1b (c.a.)	254	0–10	68	526	6325
					67	—	—
				10–20	150	445	6499
					150	—	—
					42	—	—
				20–30	16	470	7075
					15	—	—
				30–40	8	531	7527
					11	—	—
				40–50	10	535	7317
					11	—	—
				50–60	9	432	7608
					5	—	—
				60–70	6	531	7372

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
					13	—	—
				70–80	13	526	7740
					9	—	—
				80–90	3	596	8360
					4	—	—
				90–100	22	539	8370
ACS-7	PU-10246	c2a (c.a.)	250	0–10	44	669	12385
					45	—	—
				10–20	86	837	13570
					93	—	—
				20–30	104	1210	13803
					85	—	—
				30–40	91	1020	13068
					59	—	—
				40–50	61	837	13040
					53	—	—
				50–60	140	863	13037
					110	—	—
					148	—	—
ACS-8	—	c2a (c.a.)	245	0–10	100	466	7114
				10–20	89	449	7297
				20–30	27	505	7394
				30–40	—	419	7499
				40–50	32	479	7367
ACS-9	—	f1a (c.a.)	236	-10–0	74	—	—
				0–10	69	492	7122
					85	—	—
				10–20	377	539	7518
					392	—	—
					490	—	—
					442	—	—
				20–30	461	863	7937
					431	—	—
					389	—	—
					367	—	—
				30–40	833	734	7985
					778	—	—
					504	—	—
					510	—	—
				40–50	149	721	8051
					89	—	—
				50–60	60	514	8078
					89	—	—
				60–70	31	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
				70–80	38	—	—
ACS-10	PU-10101	c3 (c.a.)	233	0–10	172	1130	12650
					76	—	—
				10–20	85	1640	14995
					166	—	—
				20–30	41	1240	17034
					31	—	—
				30–40	105	1180	21952
					58	—	—
				40–50	327	1530	21003
					184	—	—
				50–60	151	—	—
				60–70	34	—	—
ACS-11	PU-10001	f1a (c.a.)	231	0–10	112	647	8484
					53	—	—
				10–20	256	993	9025
					276	—	—
					327	—	—
				20–30	326	1230	9366
					462	—	—
					691	—	—
				30–40	246	1020	3219
					184	—	—
				40–50	67	889	8742
					59	—	—
				50–60	90	932	8761
					56	—	—
				60–70	54	630	8500
					32	—	—
				70–80	41	755	8157
					22	—	—
ACS-12	PU-10242	c2 (c.a.)	231	0–10	57	772	9271
					58	—	—
				10–20	38	669	10199
					54	—	—
				20–30	23	583	11521
					27	—	—
				30–40	23	712	12898
					29	—	—
				40–50	25	850	14369
					26	—	—
				50–60	39	928	17207
					141	—	—
				60–70	25	1400	20158

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
					50	—	—
				70–80	65	997	19467
					37	—	—
				80–90	9	824	18636
				90–100	16	—	—
ACS-13	PU-10241	c2a (c.a.)	230	0–10	31	617	11897
					46	—	—
					29	—	—
				10–20	100	919	13548
					26	—	—
					70	—	—
				20–30	58	941	14629
					69	—	—
					65	—	—
				30–40	47	583	13749
					189	—	—
					310	—	—
				40–50	61	483	11795
					51	—	—
					50	—	—
				50–60	40	—	—
					53	—	—
ACS-14	—	c2 (c.a.)	219	0–10	11	427	9669
				10–20	56	747	10740
				20–30	58	755	11244
				30–40	49	647	10081
				40–50	11	548	8702
				50–60	10	470	8423
				60–70	9	397	7768
				70–80	11	475	7867
ACS-15	PU-10002	f1 (c.a.)	200	0–10	20	466	6482
				10–20	9	630	7039
				20–30	8	462	7010
				30–40	5	440	7515
				40–50	11	557	7626
				50–60	9	492	7960
ACS-16	PU-10003	c3 (c.a.)	188	–10–0	23	—	—
				0–10	12	470	6251
					30	—	—
				10–20	58	505	6415
					135	—	—
				20–30	658	578	7004
					640	—	—
					433	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
				30–40	139	548	7114
					71	—	—
				40–50	34	475	7413
					31	—	—
				50–60	22	578	7581
					30	—	—
ACS-17	—	c3 (c.a.)	185	0–10	31	501	6499
					28	—	—
				10–20	15	462	6617
					4	—	—
				20–30	31	483	7296
					37	—	—
				30–40	373	492	7749
					348	—	—
				40–50	220	665	7626
					344	—	—
				50–60	65	544	7934
					118	—	—
				60–70	56	608	8614
					24	—	—
ACS-18	—	c2 (c.a.)	177	0–10	33	475	5917
					17	—	—
				10–20	26	457	6808
					11	—	—
					11	—	—
				20–30	15	445	7188
					26	—	—
				30–40	25	483	7664
					6	—	—
				40–50	35	514	7750
					31	—	—
				50–60	4	—	—
ACS-19	—	c2 (c.a.)	170	0–10	12	462	6206
				10–20	9	445	6347
				20–30	11	483	6645
				30–40	15	531	7329
				40–50	22	505	6660
ACS-20	—	c2 (c.a.)	159	0–10	18	406	7103
				10–20	20	496	8035
				20–30	25	552	8241
				30–40	28	501	8737
				40–50	41	518	8809
ACS-21	PU-10238	c2a (c.a.)	152	0–10	16	423	6163
					19	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
				10–20	19	440	6509
					22	—	—
				20–30	21	518	6761
					24	—	—
				30–40	17	466	6976
					34	—	—
				40–50	40	470	7482
					74	—	—
				50–60	204	522	7521
					178	—	—
				60–70	80	483	7816
				70–80	—	492	7968
ACS-22	PU-10219	c2 (c.a.)	148	0–10	16	427	6225
					8	—	—
				10–20	25	470	6679
					23	—	—
				20–30	13	440	6962
					9	—	—
				30–40	17	514	7329
					17	—	—
				40–50	15	457	7961
					24	—	—
ACS-23	PU-10005	c2a (c.a.)	143	0–10	44	738	13041
					52	—	—
					48	—	—
				10–20	114	659	17032
					103	—	—
					85	—	—
				20–30	16	816	23235
					41	—	—
				30–40	10	1300	29738
					44	—	—
				40–50	51	1700	32489
					76	—	—
				50–60	283	945	27249
					35	—	—
				60–70	291	936	22196
					77	—	—
				70–80	59	703	17587
					36	—	—
					27	—	—
				80–90	61	639	14731
					24	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
ACS-24	PU-10220	c2 (c.a.)	134	0–10	14	457	6775
					32	—	—
				10–20	8	388	7548
					11	—	—
				20–30	26	509	8371
					25	—	—
				30–40	28	518	9115
					61	—	—
				40–50	88	514	9984
					61	—	—
				50–60	47	509	10276
					0	—	—
					7	—	—
				60–70	24	552	10267
					30	—	—
				70–80	53	—	—
				80–90	88	—	—
ACS-25	—	c2	96	0–10	10	406	6047
				10–20	14	509	6213
				20–30	22	505	6224
				30–40	11	440	6426
				40–50	12	544	6339
				50–60	9	505	6368
ACS-26	—	c2	66	0–10	12	457	6481
				10–20	14	375	6301
				20–30	8	427	6345
				30–40	21	401	6223
ACS-27	—	c2	103	0–10	15	492	5071
				10–20	4	393	5335
				20–30	14	427	5404
				30–40	13	479	5821
				40–50	12	406	6051
				50–60	16	427	6321
				60–70	11	—	—
ACS-27A	—	c1b	103	Surface	12	583	6076
ACS-28	—	c2 (c.a.)	117	0–10	14	440	7037
				10–20	35	445	7287
				20–30	19	462	7485
				30–40	25	488	7417
				40–50	17	518	7367
ACS-29	—	c1 (c.a.)	125	Surface	5	535	7204
ACS-30	—	c2	5	0–10	16	526	5891
				10–20	13	427	6210
				20–30	3	393	6304

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
				30–40	7	479	6307
				40–50	128	544	6702
					9	—	—
				50–60	14	432	6972
ACS-31	PU-10223	c2	27	0–10	7	427	6181
				10–20	12	453	6081
				20–30	15	445	6334
				30–40	35	475	6557
				40–50	27	496	6680
				50–60	23	514	6853
				60–70	16	414	6894
ACS-32	—	c2	33	0–10	21	683	6614
				10–20	17	539	6803
				20–30	17	570	6663
				30–40	10	544	6945
ACS-33	PU-10009	c2	33	0–10	14	518	6429
				10–20	25	539	6307
				20–30	38	436	6776
				30–40	87	549	6940
ACS-34	—	c2	40	0–10	51	436	6333
				10–20	23	388	6642
				20–30	9	522	6748
				30–40	8	—	—
ACS-35	PU-10222	c1	49	Surface	2	496	5813
ACS-36	PU-10006	c1b (c.a.)	118	Surface	9	557	6890
ACS-37	PU-10004	f1	150	0–10	5	380	6381
				10–20	7	496	6696
				20–30	16	518	6876
				30–40	5	479	6925
				40–50	8	440	6815
				50–60	8	453	7285
				60–70	15	492	7300
ACS-38	—	c2 (c.a.)	155	0–10	24	496	6576
					13	—	—
				10–20	12	445	6893
					11	—	—
				20–30	17	613	7148
					17	—	—
				30–40	27	526	7603
					21	—	—
				40–50	109	552	7923
					72	—	—
				50–60	40	449	7858
					23	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
ACS-39	PU-10218	c2 (c.a.)	200	0–10	15	479	6520
				10–20	13	470	6773
				20–30	16	436	7105
				30–40	17	380	7571
				40–50	—	501	8545
ACS-40	—	c1	214	Surface	10	384	6916
ACS-41	—	c1 (c.a.)	240	Surface	11	453	6205
ACS-42	PU-10243	f1a (c.a.)	238	0–10	14	565	6844
					17	—	—
				10–20	34	587	6991
					48	—	—
				20–30	100	496	7471
					191	—	—
				30–40	100	535	7836
					79	—	—
				40–50	10	505	8105
					13	—	—
				50–60	5	531	8479
					15	—	—
				60–70	7	591	9186
					5	—	—
				70–80	23	634	9120
					18	—	—
				80–90	13	613	9582
					31	—	—
ACS-43	PU-10245	c2a (c.a.)	242	0–10	12	544	6227
				10–20	26	462	6540
				20–30	8	596	6986
				30–40	7	509	7365
				40–50	45	479	7389
				50–60	0	535	7662
					17	—	—
					59	—	—
				60–70	54	470	6657
					53	—	—
				70–80	452	462	7132
					384	—	—
					96	—	—
				80–90	76	583	7793
					61	—	—
				90–100	57	496	7732
					37	—	—
				100–110	28	414	8023
				110–120	23	526	8069

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
				120–130	24	462	—
				130–140	9	488	—
ACS-44	—	c2 (c.a.)	192	0–10	9	427	5886
				10–20	15	514	6601
				20–30	15	462	6927
				30–40	22	526	7590
ACS-45	—	c2 (c.a.)	185	0–10	9	436	6182
					10	—	—
				10–20	17	501	6507
					13	—	—
				20–30	18	419	6627
					9	—	—
				30–40	19	462	7352
					14	—	—
ACS-46	PU-10008	c2	50	0–10	6	328	5700
				10–20	4	384	5976
				20–30	3	457	6621
ACS-47	PU-10000	f1a (c.a.)	245	0–10	62	432	6817
					62	—	—
				10–20	255	522	7512
					102	—	—
				20–30	1538	721	8039
					1691	—	—
					317	—	—
					475	—	—
				30–40	424	626	8112
					354	—	—
					381	—	—
				40–50	80	712	8042
					912	—	—
					307	—	—
				50–60	163	535	7918
					108	—	—
				60–70	189	526	7550
					86	—	—
				70–80	112	673	7464
					75	—	—
				80–90	63	552	7594
					21	—	—
				90–100	39	522	7641
ACS-48	—	f1a (c.a.)	232	0–10	33	481	6504
				10–20	103	432	6657
					136	—	—
				20–30	348	493	7242

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
					311	—	—
ACS-49	—	f1a (c.a.)	247	0–10	526	672	7960
					457	—	—
				10–20	1402	657	7799
					1662	—	—
				20–30	246	600	7536
					256	—	—
				30–40	43	497	7669
				40–50	88	519	7747
				50–60	77	562	8020
ACS-50	—	c3 (c.a.)	226	0–10	66	458	7046
				10–20	29	458	7146
				20–30	36	455	7638
				30–40	48	535	8468
				40–50	633	703	9288
					620	—	—
				50–60	187	814	10096
					214	—	—
				60–70	128	695	10825
					112	—	—
				70–80	58	619	10825
				80–90	25	558	11080
ACS-51	PU-10237	c2a (c.a.)	146	0–10	12	420	7224
				10–20	132	432	7218
					109	—	—
				20–30	122	474	7409
					135	—	—
ACS-52	PU-10236	c2a (c.a.)	143	0–10	35	481	8676
				10–20	73	695	9514
				20–30	27	649	11513
				30–40	52	657	12834
				40–50	99	1142	13188
					128	—	—
				50–60	87	1108	13306
					75	—	—
				60–70	97	642	12598
					100	—	—
				70–80	39	443	11775
				80–90	—	615	10800
				90–100	—	573	10837
ACS-53	—	c2 (c.a.)	139	0–10	13	367	6227
				10–20	87	474	6791
				20–30	16	527	6911
				30–40	7	462	7006

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
				40–50	25	485	7306
				50–60	24	416	7348
				60–70	—	405	7401
				70–80	—	416	7444
ACS-54	PU-10221	c2 (c.a.)	130	0–10	14	500	6154
				10–20	22	401	6460
				20–30	16	416	7010
				30–40	27	409	7749
				40–50	5	512	9033
				50–60	62	539	10920
				60–70	188	1000	13105
					128	—	—
				70–80	56	672	12334
				80–90	37	455	11522
				90–100	—	535	10084
				100–110	—	424	9169
ACS-55	—	c2a (c.a.)	145	0–15	24	—	—
					35	—	—
					30	—	—
				15–30	26	—	—
					26	—	—
					17	—	—
				30–45	79	—	—
					100	—	—
					84	—	—
				45–60	338	—	—
					266	—	—
					488	—	—
				60–75	48	—	—
					43	—	—
					38	—	—
ACS-56	PU-10235	c2a (c.a.)	141	0–15	50	—	—
					62	—	—
					41	—	—
				15–30	65	—	—
					58	—	—
					50	—	—
				30–45	49	—	—
					63	—	—
					59	—	—
				45–60	104	—	—
					89	—	—
					110	—	—
				60–75	47	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
					40	—	—
					30	—	—
				75–90	61	—	—
					65	—	—
					66	—	—
ACS-57	—	c2 (c.a.)	137	0–15	22	—	—
				15–30	22	—	—
				30–45	36	—	—
				45–60	35	—	—
				60–75	54	—	—
				75–90	24	—	—
ACS-58	PU-10234	c2a (c.a.)	141	0–15	33	—	—
					31	—	—
					47	—	—
				15–30	25	—	—
					25	—	—
					37	—	—
				30–45	146	—	—
					140	—	—
					215	—	—
				45–60	61	—	—
					51	—	—
					53	—	—
ACS-59	—	c2a (c.a.)	139	0–15	9	—	—
					8	—	—
					18	—	—
				15–30	24	—	—
					29	—	—
					40	—	—
				30–45	155	—	—
					127	—	—
					151	—	—
				45–60	92	—	—
					297	—	—
					100	—	—
				60–75	99	—	—
					96	—	—
					122	—	—
				75–90	220	—	—
					239	—	—
					238	—	—
ACS-60	PU-10233	c2a (c.a.)	137	0–15	25	—	—
				15–30	44	—	—
				30–45	145	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
				45–60	50	—	—
				60–75	11	—	—
				75–90	96	—	—
ACS-61	—	c2a (c.a.)	145	0–15	58	—	—
					82	—	—
					69	—	—
				15–30	46	—	—
					58	—	—
					52	—	—
				30–45	143	—	—
					154	—	—
					119	—	—
				45–60	84	—	—
					104	—	—
					79	—	—
				60–75	48	—	—
					46	—	—
					49	—	—
				75–90	257	—	—
					230	—	—
					256	—	—
				90–105	72	—	—
				–	57	—	—
				–	60	—	—
ACS-62	—	c2a (c.a.)	146	0–15	57	—	—
					46	—	—
					44	—	—
				15–30	97	—	—
					95	—	—
					109	—	—
				30–45	31	—	—
					46	—	—
					43	—	—
				45–60	41	—	—
					40	—	—
					46	—	—
				60–75	69	—	—
					59	—	—
					87	—	—
				75–90	250	—	—
					216	—	—
					207	—	—
ACS-63	—	c2 (c.a.)	152	0–15	23	—	—
				15–30	13	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
				30–45	19	—	—
				45–60	22	—	—
				60–75	46	—	—
				75–90	38	—	—
ACS-64	—	c2 (c.a.)	181	0–15	10	—	—
				15–30	12	—	—
				30–45	11	—	—
				45–60	11	—	—
ACS-65	—	f1b (c.a.)	185	0–15	33	—	—
					38	—	—
					27	—	—
				15–30	18	—	—
					14	—	—
					19	—	—
				30–45	43	—	—
					40	—	—
					35	—	—
				45–60	318	—	—
					274	—	—
					290	—	—
ACS-66	PU-10239	f1b (c.a.)	181	0–15	28	—	—
					20	—	—
					29	—	—
				15–30	13	—	—
					11	—	—
					12	—	—
				30–45	40	—	—
					28	—	—
					25	—	—
				45–60	112	—	—
					140	—	—
					178	—	—
				60–75	65	—	—
					66	—	—
					66	—	—
ACS-67	PU-10240	f1b (c.a.)	193	0–15	39	—	—
					35	—	—
					38	—	—
				15–30	117	—	—
					127	—	—
					131	—	—
				30–45	22	—	—
					64	—	—
					25	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
				45–60	13	—	—
					7	—	—
					11	—	—
ACS-68	—	c2 (c.a.)	218	0–15	9	—	—
				15–30	14	—	—
				30–45	19	—	—
				45–60	11	—	—
ACS-69	—	f1b (c.a.)	230	0–15	53	—	—
					62	—	—
					60	—	—
				15–30	144	—	—
					196	—	—
					190	—	—
				30–45	99	—	—
					83	—	—
					92	—	—
				45–60	16	—	—
					24	—	—
					18	—	—
ACS-70	—	c2a (c.a.)	238	0–15	35	—	—
				15–30	32	—	—
				30–45	71	—	—
ACS-71	PU-10244	f1a (c.a.)	239	0–15	81	—	—
				15–30	76	—	—
				30–45	23	—	—
				45–60	13	—	—
				60–75	28	—	—
ACS-72	—	f1a (c.a.)	250	0–15	493	—	—
					341	—	—
					384	—	—
				15–30	1160	—	—
					1216	—	—
					1091	—	—
				30–45	159	—	—
					102	—	—
					130	—	—
				45–60	14	—	—
					15	—	—
					24	—	—
ACS-73	—	c2 (c.a.)	254	0–15	9	—	—
				15–30	18	—	—
				30–45	21	—	—
				45–60	14	—	—
ACS-74	—	f1a (c.a.)	256	0–15	339	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
					292	—	—
					293	—	—
				15–30	84	—	—
					60	—	—
					113	—	—
				30–45	9	—	—
					7	—	—
					9	—	—
				45–60	8	—	—
				60–75	7	—	—
				75–90	7	—	—
ACS-75	—	f1a (c.a.)	259	0–15	270	—	—
					377	—	—
					228	—	—
				15–30	91	—	—
					156	—	—
					77	—	—
				30–45	31	—	—
					33	—	—
					40	—	—
				45–60	8	—	—
					11	—	—
					8	—	—
ACS-76	—	f1 (c.a.)	263	0–15	27	—	—
				15–30	9	—	—
				30–45	12	—	—
				45–60	17	—	—
ACS-77	—	c3 (c.a.)	243	0–15	32	—	—
					36	—	—
					34	—	—
				15–30	50	—	—
					48	—	—
					45	—	—
				30–45	45	—	—
					38	—	—
					38	—	—
				45–60	690	—	—
					692	—	—
					681	—	—
ACS-78	—	f1a (c.a.)	236	0–15	73	—	—
					84	—	—
					81	—	—
				15–30	188	—	—
					227	—	—

Table B-1.0-19 (continued)

Fixed-Point Site	Location ID	Geomorphic Unit	Distance from Upstream End of Reach (m)	Depth (cm)	Alpha Radiation (cpm[a])	Shielded Beta/ Gamma Radiation (dpm[b])	Shielded Gamma Radiation (cpm)
					202	—	—
				30–45	545	—	—
					423	—	—
					479	—	—
				45–60	105	—	—
					93	—	—
					135	—	—
ACS-79	—	f1a (c.a.)	232	0–15	71	—	—
					80	—	—
					70	—	—
				15–30	226	—	—
					236	—	—
					238	—	—
				30–45	311	—	—
					352	—	—
					405	—	—
				45–60	162	—	—
					125	—	—
					110	—	—
ACS-80	—	f1	121	0–15	26	—	—
				15–30	27	—	—
ACS-81	—	f1	135	0–15	12	—	—
				15–30	13	—	—
				30–45	20	—	—
				45–60	34	—	—
ACS-82	—	c2 (c.a.)	159	0–15	16	—	—
				15–30	10	—	—
				30–45	14	—	—

[a] cpm = Counts per minute.
[b] dpm = Disintegrations per minute.
[c] — = No location ID or no measurements.

Table B-1.0-20
Thickness Measurements from Reaches AC-1 and AC-2 and 0-030(g) Drainage

Reach	Distance from Upstream End of Reach (m)	Side of Channel	Geomorphic Unit	Fine Facies Thickness (cm)	Coarse Facies Thickness (cm)	Location ID
AC-1, Upstream from 0-030(g) Drainage	5	N	c2	80	35	00-10240
	5	S	f1+c3	62	0	—[a]
	12	S	f1+c3	70	18	00-10241
	12	N	f1	46	0	—
	13	N	f1	78	0	—
	16	S	c2	88	Unknown	—
	22	S	c3	74	7	—
	27	S	f1+c3	78	17	—
	29	N	c2	43	0	PU-10013
	34	N	c2	64	>16	—
AC-2, Downstream from 0-030(g) Drainage	47	S	c2?	66	Unknown	—
	52	N	c3	73+	Unknown	00-10243
	57	N	c3	83	Unknown	—
	65	N	c3	59	Unknown	—
	65	S	c3	63	Unknown	—
	73	N	c2	45	Unknown	—
	74	S	c3? (f1?)	39	Unknown	—
	78	N	c2	49	Unknown	00-10246
AC-2, Upstream from South Fork of Acid Canyon	40	N	c2	26	0	PU-10014
	29	N	c2	40	15	PU-10015
	42	S	f1	24	0	—
	9	N	f1	28	5	PU-10016
0-030(g) Drainage	19	na[b]	c2a	15	15	—
	27	na	c1b	7	43	—
	37	na	c2a	10	34	00-10232
	40	na	c2a	9	31	—
	49	na	c2a	16	12	—
	52	na	c2a	41	38	00-10233
	60	na	c2a	23	54	—
	70	na	c2a	51	31	—
	95	na	c2b? (c2c?)	23	0	—
	120	na	c2c	10	28	—
	150	na	c2c	14	8	—
	170	na	c1	19	14	—
	192	na	c2c	12	0	00-10237
	196	na	c2c	12	0	—
	197	na	c2c	6	0	—
	197	na	c2c	31	0	—
	225	na	c1w	45	0	00-10238

[a] — = No location ID
[b] na = Not available.

Table B-1.0-21
Thickness Measurements from Reach AC-3

Distance from Upstream End of Reach (m)	Side of Channel	Geomorphic Unit	Fine Facies Thickness (cm)	Coarse Facies Thickness (cm)	Fixed-Point Site	Location ID
38	N	f1	33	0	AC3-1	—*
41	S	f1	18	0	AC3-2	PU-10017
61	S	f1? (f2?)	26	0	AC3-3	—
71	S	f1	9	0	AC3-4	—
80	N	c2	10	≥15	AC3-5	—
91	S	f2	14	0	AC3-7	—
92	N	c2	26	>38	AC3-6	PU-10018
116	N	c2	19	>41	AC3-8	PU-10102
129	S	c2	33	>27	AC3-10	—
129	N	c2	19	>31	AC3-9	—
143	N	c2	35	>21	AC3-11	—
143	S	c2	17	>58	AC3-12	PU-10103
155	S	c2	44	>24	AC3-13	PU-10019
155	N	c2	26	>30	AC3-14	—
177	N	f1	48	15	AC3-15	—
178	S	c2	41	>32	AC3-16	—
186	S	c2	30	24	AC3-17	—
198	S	c2	81	>4	AC3-18	PU-10104
200	N	c2	29	13	AC3-19	—
210	N	c2? (f1?)	50	≥15	AC3-20	—
214	S	c2? (f1?)	38	6	AC3-21	—
247	W	f2? (f1?)	≥10	0	AC3-22	—
250	E	f2? (f1?)	≥6	0	AC3-23	PU-10106
269	W	c2	17	>23	AC3-25	—
273	W	f1	5	0	AC3-24	—
285	W	f1	8	0	AC3-26	—
298	W	c2	28	>22	AC3-27	PU-10107
314	W	f1	16	0	AC3-38	PU-10108
323	W	c2	42	8	AC3-37	—
330	E	c2	63	>23	AC3-36	PU-10109
351	W	c2	27	>60	AC3-35	—
353	W	f1? (c2?)	9	9	AC3-34	—
369	W	c2	15	>38	AC3-33	—
372	E	c2	27	23	AC3-32	—
375	mid	c2	25	>30	AC3-31	—
378	W	c2	21	23	AC3-29	PU-10110
386	W	f1	11	0	AC3-28	—

*— = No location ID

Table B-1.0-22
Thickness Measurements from Reach ACS

Distance from Upstream End of Reach (m)	Side of Channel	Geomorphic Unit	Fine Facies Thickness (cm)	Coarse Facies Thickness (cm)	Thickness of Pre-1942 Sediment (m)	Fixed Point Site	Location ID
5	E	c2	20	60	0	ACS-30	—*
27	W	c2	22	56	0	ACS-31	PU-10223
33	E	c2	7	21	0	ACS-32	—
33	W	c2	22	40	0	ACS-33	PU-10009
40	W	c2	29	5	0	ACS-34	—
50	E	c2	33	0	0	ACS-46	PU-10008
66	W	c2	27	>17	Unknown	ACS-26	—
96	W	c2	27	>46	Unknown	ACS-25	—
103	W	c1b	6	>0.2	Unknown	ACS-27A	—
103	E	c2	58	>8	Unknown	ACS-27	—
117	E	c2 (c.a.)	44	>5	Unknown	ACS-28	—
118	E	c1b (c.a.)	12	>0.2	Unknown	ACS-36	PU-10006
121	W	f1	24	0	>6	ACS-80	—
130	W	c2 (c.a.)	39	>68	Unknown	ACS-54	PU-10221
134	W	c2 (c.a.)	44	41	0	ACS-24	PU-10220
135	E	f1	25	0	>35	ACS-81	—
137	E	c2 (c.a.)	31	59	0	ACS-57	—
137	W	c2a (c.a.)	61	29	0	ACS-60	PU-10233
139	E	c2 (c.a.)	11	>80	Unknown	ACS-53	—
139	W	c2a (c.a.)	67	23	0	ACS-59	—
141	E	c2a (c.a.)	45	48	0	ACS-56	PU-10235
141	W	c2a (c.a.)	57	≥33	Unknown	ACS-58	PU-10234
143	E	c2a (c.a.)	28	>66	Unknown	ACS-23	PU-10005
143	E	c2a (c.a.)	60	≥43	Unknown	ACS-52	PU-10236
145	E	c2a (c.a.)	31	43	0	ACS-55	—
145	W	c2a (c.a.)	78	32	0	ACS-61	—
146	E	c2a (c.a.)	6	23	0	ACS-51	PU-10237
146	W	c2a (c.a.)	68	24	0	ACS-62	—
148	W	c2 (c.a.)	18	>48	Unknown	ACS-22	PU-10219
150	E	f1	42	0	33	ACS-37	PU-10004
152	E	c2a (c.a.)	63	>18	Unknown	ACS-21	PU-10238
152	W	c2 (c.a.)	40	51	0	ACS-63	—
155	E	c2 (c.a.)	50	18	0	ACS-38	—
159	W	c2 (c.a.)	51	5	0	ACS-20	—
159	E	c2 (c.a.)	30	20	0	ACS-82	—
170	W	c2 (c.a.)	37	15	0	ACS-19	—
177	E	c2 (c.a.)	56	>4	Unknown	ACS-18	—
181	E	c2 (c.a.)	57	5	0	ACS-64	—
181	W	f1b (c.a.)	>64	11	0	ACS-66	PU-10239
185	E	c3 (c.a.)	23	≥44	Unknown	ACS-17	—
185	W	c2 (c.a.)	43	7	0	ACS-45	—

Table B-1.0-22 (continued)

Distance from Upstream End of Reach (m)	Side of Channel	Geomorphic Unit	Fine Facies Thickness (cm)	Coarse Facies Thickness (cm)	Thickness of Pre-1942 Sediment (m)	Fixed Point Site	Location ID
185	W	f1b (c.a.)	59	4	0	ACS-65	—
188	W	c3 (c.a.)	56	13	0	ACS-16	PU-10003
192	W	c2 (c.a.)	31	≥15	Unknown	ACS-44	—
193	W	f1b (c.a.)	32	0	28	ACS-67	PU-10240
200	W	f1 (c.a.)	10	0	52	ACS-15	PU-10002
200	E	c2 (c.a.)	37	>17	Unknown	ACS-39	PU-10218
218	W	c2 (c.a.)	31	31	0	ACS-68	—
219	W	c2 (c.a.)	16	≥76	Unknown	ACS-14	—
226	E	c3 (c.a.)	27	51	0	ACS-50	—
230	E	c2a (c.a.)	20	37	0	ACS-13	PU-10241
230	W	f1b (c.a.)	25	19	>16	ACS-69	—
231	E	c2 (c.a.)	34	>86	Unknown	ACS-12	PU-10242
231	W	f1a (c.a.)	56	0	45	ACS-11	PU-10001
232	E	f1a (c.a.)	40	0	Unknown	ACS-48	—
232	W	f1a (c.a.)	51	14	Unknown	ACS-79	—
233	E	c3 (c.a.)	47	≥32	Unknown	ACS-10	—
236	W	f1a (c.a.)	73	5	≥20	ACS-9	—
236	W	f1a (c.a.)	65	0	0	ACS-78	—
238	E	f1a (c.a.)	46	8	31	ACS-42	PU-10243
238	E	c2 (c.a.)	37	≥15	Unknown	ACS-70	—
239	W	f1a (c.a.)	18	25	≥43	ACS-71	PU-10244
242	W	c2a (c.a.)	27	>116	Unknown	ACS-43	PU-10245
243	W	c3 (c.a.)	29	31	0	ACS-77	—
245	W	f1a (c.a.)	35	14	≥41	ACS-47	PU-10000
245	W	c2a (c.a.)	34	>36	Unknown	ACS-8	—
247	E	f1a (c.a.)	10	15	30	ACS-49	—
250	E	c2a (c.a.)	4	≥83	Unknown	ACS-7	PU-10246
250	W	f1a (c.a.)	39	0	24	ACS-72	—
254	W	f1b (c.a.)	12	20	>78	ACS-6	—
254	E	c2 (c.a.)	22	>40	Unknown	ACS-73	—
256	W	f1a (c.a.)	20	0	70	ACS-74	—
259	W	f1a (c.a.)	15	12	33	ACS-75	—
262	E	c2a (c.a.)	28	>24	Unknown	ACS-5	—
263	E	f1 (c.a.)	≥27	0	>35	ACS-76	—
264	W	f1b (c.a.)	14	11	>78	ACS-4	—
272	E	f1 (c.a.)	80	9	>70	ACS-3	—
281	W	c2	22	36	0	ACS-2	—
289	W	c2	24	62	0	ACS-1	—

*— = No location ID

Table B-1.0-23
Particle-Size and Organic-Matter Data from Acid Canyon Reaches

Sample ID	Reach	Gravel (>2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Median Particle Size Class[a]	Total Silt + Clay (wt%)	Organic Matter (wt %)
04PU-96-0124	AC-3	12.1	17.2	36.0	24.7	11.3	5.7	3.3	1.1	0.7	cs	5.1	0.5
04PU-97-0079	AC-3	6.9	11.3	19.7	17.2	10.8	8.1	17.2	10.1	5.5	fs	32.8	4.4
04PU-97-0080	AC-3	27.6	5.9	11.4	10.3	7.5	15.8	38.3	5.5	5.3	ms	49.1	1.9
CAPU-00-0100	AC-3	7.6	2.6	6.9	8.3	6.9	14.6	33.5	13.3	13.9	csi	60.6	4.6
CAPU-00-0101	AC-3	2.7	9.4	15.9	14.0	10.0	11.2	17.8	11.6	9.8	vfs	39.2	3.3
CAPU-00-0102	AC-3	2.9	5.5	11.4	17.0	14.1	15.7	19.7	7.9	8.4	vfs	36.0	2.3
CAPU-00-0117	AC-3	4.3	7.9	16.2	20.0	14.2	10.9	14.6	8.4	7.7	fs	30.7	2.5
CAPU-00-0118	AC-3	62.0	53.6	20.7	8.3	2.7	1.6	3.4	4.9	4.7	vcs	13.0	NA[b]
CAPU-00-0119	AC-3	0.2	2.9	6.2	8.4	9.4	16.1	30.8	14.5	11.5	csi	56.8	4.8
CAPU-00-0120	AC-3	17.9	52.1	27.2	5.7	1.3	1.2	4.0	4.2	4.1	vcs	12.3	NA
CAPU-00-0121	AC-3	1.1	5.4	14.4	18.5	15.7	13.3	17.3	7.6	7.7	fs	32.5	3.5
CAPU-00-0122	AC-3	14.0	10.1	12.1	11.6	9.4	11.9	23.5	12.0	9.5	vfs	45.0	3.6
CAPU-00-0123	AC-3	15.3	52.7	32.6	9.8	1.6	0.4	0.3	1.0	1.6	vcs	2.9	NA
CAPU-00-0124	AC-3	1.0	6.0	19.1	17.8	8.5	8.3	21.4	10.3	8.4	fs	40.1	4.3
CAPU-00-0125	AC-3	14.2	14.2	29.9	26.5	13.4	5.1	4.9	2.6	3.3	ms	10.8	1.2
CAPU-00-0126	AC-3	5.5	12.7	19.9	19.2	12.6	10.4	12.6	6.1	6.7	ms	25.5	2.5
CAPU-01-0059	ACS	28.8	24.5	24.7	21.1	9.2	4.6	5.2	4.9	5.8	ms	15.8	1.70
CAPU-01-0060	ACS	16.5	26.0	27.1	19.6	7.3	3.6	3.5	6.2	6.7	cs	16.4	1.69
CAPU-01-0061	ACS	44.1	22.9	23.6	20.6	10.4	5.7	6.8	5.5	4.5	ms	16.7	1.60
CAPU-01-0062	ACS	58.3	37.4	25.0	9.5	4.2	2.7	4.7	7.6	7.9	cs	20.2	1.67
CAPU-01-0063	ACS	69.2	50.0	25.4	9.2	3.3	1.8	1.9	3.1	5.4	cs	10.3	0.78
CAPU-01-0065	ACS	40.3	48.7	30.3	10.9	2.5	1.4	2.4	1.3	2.4	cs	6.1	0.64

Table B-1.0-23 (continued)

Sample ID	Reach	Gravel (>2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Median Particle Size Class[a]	Total Silt + Clay (wt%)	Organic Matter (wt %)
CAPU-01-0068	ACS	19.0	21.1	15.2	13.1	9.1	7.9	15.1	7.1	11.2	fs	33.3	3.41
CAPU-01-0069	ACS	0.4	1.2	3.3	8.4	17.5	17.9	28.9	13.3	9.4	csi	51.6	4.19
CAPU-01-0147	ACS	0.7	1.8	5.9	11.2	14.8	16.3	26.6	11.9	11.5	csi	50.1	4.44
CAPU-01-0148	ACS	7.9	11.5	9.8	7.0	9.1	12.4	24.0	12.5	13.1	vfs	49.7	3.08
CAPU-01-0149	ACS	22.3	15.8	24.9	25.1	10.4	5.2	10.5	5.0	3.1	ms	18.6	1.41
CAPU-01-0150	ACS	0.0	2.7	4.6	7.6	12.8	18.6	32.1	11.8	9.6	csi	53.5	3.15
CAPU-01-0151	ACS	9.3	9.4	13.7	9.9	7.8	11.5	27.4	9.5	11.0	vfs	47.9	3.15
CAPU-01-0152	ACS	3.5	7.6	9.4	8.4	9.9	13.9	29.8	11.0	9.9	csi	50.7	3.24
CAPU-01-0153	ACS	19.6	10.4	12.7	8.6	10.4	14.3	25.4	9.9	8.1	vfs	43.4	2.96
CAPU-01-0154	ACS	17.3	1.1	2.3	5.5	10.8	18.6	37.5	11.7	12.4	csi	61.6	0.91
CAPU-01-0155	ACS	1.0	1.6	3.6	6.4	11.7	18.0	38.6	11.8	8.2	csi	58.6	3.04
CAPU-01-0156	ACS	44.8	19.7	15.7	10.7	7.4	9.2	23.5	6.3	7.4	fs	37.2	1.77
CAPU-01-0157	ACS	18.3	42.1	22.4	8.8	3.7	2.9	9.0	5.9	5.1	cs	20.1	0.91
CAPU-01-0158	ACS	32.0	5.9	9.4	12.6	14.5	17.2	26.5	7.0	6.9	vfs	40.4	2.42
CAPU-01-0159	ACS	36.4	15.5	16.3	14.8	11.7	9.7	17.4	6.2	8.4	fs	32.0	3.00
CAPU-01-0160	ACS	2.3	5.2	9.5	22.2	21.1	12.9	14.6	8.6	5.8	fs	29.0	2.77
CAPU-01-0161	ACS	17.7	22.3	17.8	11.2	9.0	8.5	17.6	8.9	4.6	ms	31.2	2.59
CAPU-01-0162	ACS	0.6	2.3	7.7	9.8	9.5	12.9	30.6	15.1	12.1	csi	57.8	3.60
CAPU-01-0163	ACS	7.3	6.8	15.7	20.2	15.5	11.5	15.9	7.8	6.5	fs	30.1	3.05
CAPU-01-0164	ACS	23.7	23.8	28.9	15.6	7.1	4.9	9.9	5.8	3.9	cs	19.7	1.76
CAPU-01-0165	ACS	1.1	0.6	4.2	12.0	16.3	21.6	28.4	5.8	11.0	vfs	45.2	2.26
CAPU-01-0166	ACS	6.7	8.0	10.7	9.5	11.2	13.4	28.8	10.5	7.9	vfs	47.2	3.06
CAPU-01-0167	ACS	12.4	44.1	33.5	8.0	2.3	1.5	3.1	3.4	4.0	cs	10.5	0.83

Table B-1.0-23 (continued)

Sample ID	Reach	Gravel (>2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Median Particle Size Class[a]	Total Silt + Clay (wt%)	Organic Matter (wt %)
CAPU-01-0168	ACS	0.6	1.5	4.7	10.1	13.0	15.3	30.8	13.7	10.7	csi	55.3	4.84
CAPU-01-0169	ACS	4.6	3.6	8.7	12.0	11.7	14.3	28.3	10.5	11.0	vfs	49.8	3.04
CAPU-01-0170	ACS	25.2	4.8	13.5	15.7	12.6	11.0	21.0	12.9	8.6	vfs	42.6	3.72
CAPU-01-0171	ACS	20.6	26.6	28.7	14.2	5.7	4.1	8.6	6.2	5.9	cs	20.7	1.60
CAPU-01-0172	ACS	5.5	15.3	15.7	8.3	6.5	9.9	25.4	10.7	8.0	vfs	44.1	2.17
CAPU-01-0173	ACS	6.0	9.7	23.5	23.8	12.6	7.9	11.1	5.6	5.9	ms	22.6	1.87
CAPU-01-0174	ACS	2.8	1.4	4.4	8.5	13.7	19.7	33.9	9.3	9.0	csi	52.3	2.60
CAPU-01-0175	ACS	16.6	31.7	31.5	11.6	5.0	3.6	7.1	4.4	5.9	cs	17.3	1.27
CAPU-01-0177	ACS	27.2	7.9	12.7	12.9	11.5	10.8	22.6	13.7	7.9	vfs	44.2	2.33
CAPU-01-0178	ACS	15.2	12.5	20.6	16.7	10.6	10.2	15.6	9.1	4.5	fs	29.3	1.90
CAPU-01-0180	ACS	30.3	28.1	24.6	12.3	6.7	4.6	10.6	9.3	3.8	cs	23.7	1.72
CAPU-01-0181	ACS	51.9	34.3	16.3	8.5	6.4	7.0	13.8	6.7	6.8	cs	27.4	1.65
CAPU-01-0182	ACS	68.0	31.4	24.3	10.8	4.6	3.9	11.7	7.5	5.8	cs	24.9	1.47
CAPU-01-0183	ACS	66.1	41.4	24.0	9.4	3.4	2.3	7.2	7.4	4.8	cs	19.4	1.39
CAPU-01-0184	ACS	23.8	18.2	29.2	18.1	8.1	5.3	9.7	6.5	4.9	ms	21.1	1.66
CAPU-01-0185	ACS	31.1	24.8	31.1	16.7	5.6	3.2	7.1	5.2	6.2	cs	18.5	1.82
CAPU-01-0186	ACS	68.2	39.6	27.8	8.3	2.9	2.0	5.9	8.7	4.9	cs	19.5	0.97
CAPU-99-1000	AC-3	0.4	1.6	3.0	3.4	4.9	10.5	46.3	16.6	13.6	csi	76.5	NA
CAPU-99-1001	AC-3	2.1	6.4	8.7	9.6	8.7	10.0	32.0	12.5	12.0	csi	56.5	NA
CAPU-99-1002	AC-3	3.1	11.1	19.7	25.1	14.6	8.1	12.4	5.0	3.9	ms	21.3	NA
CAPU-99-1003	AC-3	9.6	16.2	20.4	18.1	9.9	6.5	15.9	6.8	6.0	ms	28.6	NA
CAPU-99-1004	AC-3	7.1	20.4	27.6	16.2	6.9	5.3	12.4	5.6	5.7	ms	23.7	NA
CAPU-99-1005	ACS	0.4	1.3	1.2	1.6	5.3	20.1	47.3	10.9	12.1	csi	70.4	NA

Table B-1.0-23 (continued)

Sample ID	Reach	Gravel (>2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Median Particle Size Class[a]	Total Silt + Clay (wt%)	Organic Matter (wt %)
CAPU-99-1006	ACS	1.2	3.7	14.9	23.1	19.0	12.2	16.5	5.1	5.3	fs	27.0	NA
CAPU-99-1007	ACS	2.4	3.6	7.3	11.0	13.2	15.7	30.7	8.2	10.3	vfs	49.1	NA
CAPU-99-1008	ACS	1.5	4.1	6.8	6.6	12.1	20.7	34.7	9.6	5.1	vfs	49.3	NA
CAPU-99-1009	ACS	0.9	2.0	6.9	21.9	28.0	18.4	16.0	3.9	2.9	fs	22.7	NA
CAPU-99-1010	ACS	40.7	46.1	30.1	13.3	4.1	1.3	3.2	1.1	0.7	cs	5.1	NA
CAPU-99-1011	AC-1	2.0	6.9	13.1	16.2	12.2	10.5	23.7	9.2	8.0	vfs	41.0	NA
CAPU-99-1012	AC-1	0.1	1.0	3.8	8.9	11.5	20.2	33.9	8.8	11.5	csi	54.2	NA
CAPU-99-1013	AC-1	0.9	3.1	9.1	15.0	15.3	14.5	24.6	10.0	8.1	vfs	42.7	NA
CAPU-99-1014	AC-2	1.5	7.5	15.0	12.3	10.7	12.5	22.4	10.0	9.5	vfs	41.9	NA
CAPU-99-1015	AC-2	0.6	5.1	11.0	11.0	9.4	9.9	26.0	14.5	12.9	csi	53.3	NA
CAPU-99-1016	AC-2	6.2	9.6	17.5	15.9	8.9	9.7	18.7	8.0	11.3	fs	38.1	NA
CAPU-99-1023	ACS	5.8	9.8	11.2	12.5	12.0	12.1	24.2	10.5	7.7	vfs	42.4	NA
CAPU-99-1024	ACS	2.6	2.7	5.7	8.3	9.8	14.9	34.6	12.7	11.2	csi	58.6	NA
CAPU-99-1025	ACS	9.0	16.8	24.5	18.1	7.9	6.5	12.4	6.7	7.0	ms	26.0	NA
CAPU-99-1026	ACS	18.8	45.6	29.7	10.2	3.0	1.3	2.4	4.2	3.6	cs	10.3	NA
CAPU-99-1027	ACS	3.1	3.7	8.9	10.9	10.7	13.9	28.7	13.6	9.6	csi	51.9	NA
CAPU-99-1028	ACS	1.1	1.1	1.9	2.2	5.4	13.5	49.1	16.6	9.9	csi	75.6	NA
CAPU-99-1029	ACS	25.4	20.0	20.3	13.1	7.9	7.0	16.2	9.7	5.5	ms	31.4	NA
CAPU-99-1030	ACS	2.7	4.6	11.4	13.4	14.1	13.6	23.1	10.7	8.8	vfs	42.7	NA
CAPU-99-1031	ACS	16.0	17.6	19.1	13.7	10.1	9.0	15.2	8.1	7.1	ms	30.4	NA
CAPU-99-1032	ACS	4.2	3.4	10.0	17.0	19.2	15.9	19.2	7.0	8.1	vfs	34.3	NA
CAPU-99-1033	ACS	13.9	41.0	29.4	7.9	2.7	2.2	6.5	5.3	4.6	cs	16.4	NA
CAPU-99-1034	ACS	6.4	9.2	9.4	10.2	11.3	12.3	24.7	12.4	10.2	vfs	47.3	NA

Table B-1.0-23 (continued)

Sample ID	Reach	Gravel (>2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Median Particle Size Class[a]	Total Silt + Clay (wt%)	Organic Matter (wt %)
CAPU-99-1035	ACS	0.4	3.1	7.6	11.2	13.6	15.1	26.2	12.7	10.1	vfs	49.1	NA
CAPU-99-1036	ACS	6.5	19.5	17.9	7.9	5.5	6.6	22.1	12.5	8.1	fs	42.8	NA
CAPU-99-1037	ACS	2.0	7.8	12.1	9.5	9.1	12.5	28.2	12.9	7.9	vfs	48.9	NA
CAPU-99-1038	ACS	12.3	35.5	33.5	14.4	4.5	2.5	3.8	3.3	2.5	cs	9.5	NA
CAPU-99-1039	ACS	32.2	53.8	22.5	6.2	2.7	2.3	5.2	4.8	2.5	vcs	12.4	NA
CAPU-99-1040	ACS	8.1	18.8	15.3	13.3	13.2	11.3	15.1	5.6	7.4	fs	28.1	NA
CAPU-99-1041	ACS	36.6	36.8	29.7	16.6	4.6	1.8	4.1	3.2	3.1	cs	10.4	NA
CAPU-99-1042	ACS	5.0	10.5	22.1	21.6	13.0	8.4	12.3	6.9	5.1	ms	24.3	NA
CAPU-99-1043	ACS	1.5	3.6	7.3	10.5	14.1	16.0	26.3	13.6	8.6	vfs	48.5	NA
CAPU-99-1044	ACS	2.1	5.1	8.0	9.3	10.6	12.9	29.5	14.0	10.5	csi	54.0	NA
CAPU-99-1045	ACS	20.1	42.0	28.0	7.1	2.1	1.9	6.2	6.3	6.2	cs	18.7	NA
CAPU-99-1046	ACS	9.8	21.1	16.0	8.4	5.5	6.6	20.8	16.0	5.6	fs	42.4	NA
CAPU-99-1047	ACS	33.6	18.3	19.2	11.7	7.8	8.1	19.6	10.2	5.0	fs	34.9	NA
RE00-99-0173	AC-1	5.4	6.2	16.3	23.6	15.4	10.2	15.6	5.6	7.2	fs	28.5	2.51
RE00-99-0174	AC-1	8.4	0.3	1.9	3.2	7.0	14.1	45.3	14.0	13.8	csi	73.1	7.02
RE00-99-0175	AC-1	38.1	39.9	28.5	16.6	4.0	1.3	3.4	3.5	2.9	cs	9.7	0.72
RE00-99-0176	AC-2	3.0	4.6	12.2	17.9	12.6	13.3	22.7	7.7	9.0	vfs	39.4	2.73
RE00-99-0177	AC-2	5.0	5.3	12.8	17.4	13.5	13.6	21.9	6.8	8.7	vfs	37.4	2.83
RE00-99-0178	AC-2	22.1	47.5	30.3	13.2	2.6	0.8	2.0	1.8	1.8	cs	5.6	0.51
RE00-99-0179	AC-2	7.3	3.7	10.3	17.4	13.7	12.4	23.2	8.9	10.3	vfs	42.4	3.55

[a] cs = coarse sand; csi = coarse silt; fs = fine sand; fsi = fine silt; ms = medium sand; vcs = very coarse sand; vfs = very fine sand.

[b] NA = Not analyzed.

Table B-1.0-24
Summary of Particle-Size and Organic-Matter Data from Acid Canyon Reaches

Reach	Geomorphic Unit	Sediment Facies	Number of Analyses	Gravel (>2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Median Particle Size Class[b]	Total Silt + Clay (wt%)	Organic Matter (wt %)
AC-1	c1	Coarse	1	38.1	39.9	28.5	16.6	4.0	1.3	3.4	3.5	2.9	cs	9.7	0.7
	c2	Fine	3	2.7	5.4	12.8	18.3	14.3	11.7	21.3	8.3	7.8	fs	37.4	2.5
	f1+c3	Fine	2	4.3	0.7	2.8	6.0	9.3	17.2	39.6	11.4	12.6	csi	63.7	7.0
AC-2	c1	Coarse	1	22.1	47.5	30.3	13.2	2.6	0.8	2.0	1.8	1.8	cs	5.6	0.5
	c2	Fine	3	3.1	5.4	12.1	13.6	11.3	11.6	23.9	11.1	10.9	vfs	45.9	3.5
	c3+f1	Fine	2	4.6	7.1	14.9	16.9	10.7	11.5	20.7	7.9	10.2	vfs	38.7	2.7
AC-3	c1	Coarse	2	13.7	35.0	34.3	17.2	6.4	3.1	1.8	1.0	1.1	cs	4.0	0.5
	c2	Coarse	3	31.3	40.0	25.9	13.5	5.8	2.6	4.1	3.9	4.0	cs	12.0	1.2
	c2	Fine	10	5.0	10.2	16.4	16.8	11.7	10.9	17.7	8.6	7.7	fs	33.9	3.2
	f1	Fine	5	4.9	7.8	12.1	10.3	7.6	9.9	29.5	12.3	10.3	csi	52.1	3.2
	f2	Fine	1	1.0	6.0	19.1	17.8	8.5	8.3	21.4	10.3	8.4	fs	40.1	4.3
ACS	c1	Coarse	3	39.2	43.9	30.0	13.6	3.7	1.5	3.3	1.9	2.1	cs	7.2	0.6
	c2	Coarse	8	32.4	30.5	26.1	15.3	6.8	4.0	5.8	5.4	6.0	cs	17.3	1.5
	c2a	Coarse	12	36.0	32.1	25.2	12.7	5.6	4.1	9.2	6.3	4.8	cs	20.3	1.5
	c3	Coarse	1	13.9	41.0	29.4	7.9	2.7	2.2	6.5	5.3	4.6	cs	16.4	NA[b]
	f1a	Coarse	3	17.7	27.4	24.8	13.8	6.3	5.0	10.3	6.8	5.4	cs	22.6	NA
	f1b	Coarse	2	18.0	34.0	31.2	11.8	4.7	3.2	6.5	4.6	4.0	cs	15.1	1.3
	c1b	Fine	1	0.9	2.0	6.9	21.9	28.0	18.4	16.0	3.9	2.9	fs	22.7	NA
	c2	Fine	6	5.1	7.1	10.1	11.9	13.0	13.8	24.3	10.7	9.0	vfs	44.0	3.4
	c2a	Fine	18	12.1	8.1	10.2	10.4	11.4	13.9	26.6	10.3	9.0	vfs	45.8	2.9
	c3	Fine	3	4.3	5.4	8.9	12.7	14.6	14.6	24.8	9.2	9.5	vfs	43.6	NA
	f1	Fine	2	0.8	3.4	11.2	17.2	16.3	13.7	21.3	8.9	7.7	vfs	38.0	NA
	f1a	Fine	7	7.9	5.6	8.9	9.3	9.3	13.6	31.7	12.4	9.0	csi	53.2	2.1
	f1b	Fine	5	4.0	4.1	8.8	12.8	13.5	15.2	26.4	9.7	9.4	vfs	45.5	3.2

Note: Average values, excluding samples that are inferred to be of largely pre-1943 sediment.
[a] cs = coarse sand; csi = coarse silt; ms = medium sand; vfs = very fine sand.
[b] NA = Not analyzed.

Table B-1.0-25
Crosswalk Between Sample ID for Particle-Size and Organic-Matter Data and Sample ID for Other Analyses from Reach ACS

Sample ID for Particle Size and Organic Matter Analyses	Sample ID for Other Analyses
CAPU-01-0147	CAPU-01-0105
CAPU-01-0148	CAPU-01-0106
CAPU-01-0149	CAPU-01-0107
CAPU-01-0150	CAPU-01-0108
CAPU-01-0151	CAPU-01-0109
CAPU-01-0152	CAPU-01-0110
CAPU-01-0153	CAPU-01-0111
CAPU-01-0154	CAPU-01-0112
CAPU-01-0155	CAPU-01-0113
CAPU-01-0156	CAPU-01-0114
CAPU-01-0157	CAPU-01-0115
CAPU-01-0158	CAPU-01-0116
CAPU-01-0159	CAPU-01-0117
CAPU-01-0160	CAPU-01-0118
CAPU-01-0161	CAPU-01-0119
CAPU-01-0162	CAPU-01-0120
CAPU-01-0163	CAPU-01-0122
CAPU-01-0164	CAPU-01-0123
CAPU-01-0165	CAPU-01-0124
CAPU-01-0166	CAPU-01-0125
CAPU-01-0167	CAPU-01-0126
CAPU-01-0168	CAPU-01-0127
CAPU-01-0169	CAPU-01-0128
CAPU-01-0170	CAPU-01-0129
CAPU-01-0171	CAPU-01-0130
CAPU-01-0172	CAPU-01-0131
CAPU-01-0173	CAPU-01-0132
CAPU-01-0174	CAPU-01-0133
CAPU-01-0175	CAPU-01-0134
CAPU-01-0177	CAPU-01-0137
CAPU-01-0178	CAPU-01-0138
CAPU-01-0180	CAPU-01-0140
CAPU-01-0181	CAPU-01-0141
CAPU-01-0182	CAPU-01-0142
CAPU-01-0183	CAPU-01-0143
CAPU-01-0184	CAPU-01-0144
CAPU-01-0185	CAPU-01-0145
CAPU-01-0186	CAPU-01-0146

Table B-2.1-1
Surface Water Field Parameters for Los Alamos Canyon

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])
Upper Los Alamos Canyon								
CALA-01-0520	LA-10126	LA Creek upstream of LA Reservoir	11/2/2001	Filtered	8.13	149	8.3	0.93
CALA-01-0522	LA-10126	LA Creek upstream of LA Reservoir	11/2/2001	Filtered	8.13	149	8.3	0.93
CALA-01-0521	LA-10126	LA Creek upstream of LA Reservoir	11/2/2001	Unfiltered	8.13	149	8.3	0.93
CABG-00-0113	LA-10033	LA Reservoir	9/6/2000	Filtered	7.21	320	19.6	19.30
CABG-00-0112	LA-10033	LA Reservoir	9/6/2000	Unfiltered	7.21	320	19.6	19.30
GF01041WRAL	LA-10033	LA Reservoir	5/1/2001	Filtered	8.07	117	10.1	6.30
GU01041WRAL	LA-10033	LA Reservoir	5/1/2001	Unfiltered	8.07	117	10.1	6.30
CALA-01-0254	LA-10033	LA Reservoir	6/18/2001	Filtered	7.03	293	19.4	14.30
CALA-01-0256	LA-10033	LA Reservoir	6/18/2001	Filtered	7.03	293	19.4	14.30
CALA-01-0255	LA-10033	LA Reservoir	6/18/2001	Unfiltered	7.03	293	19.4	14.30
CABG-00-0111	LA-10034	Los Alamos Creek below LA Reservoir	9/6/2000	Filtered	7.4	290	16.4	4.90
CABG-00-0110	LA-10034	Los Alamos Creek below LA Reservoir	9/6/2000	Unfiltered	7.4	290	16.4	4.90
CALA-02-45014	LA-10034	Los Alamos Creek below LA Reservoir	5/30/2002	Filtered	7.93	128	11.4	2.93
CALA-02-45015	LA-10034	Los Alamos Creek below LA Reservoir	5/30/2002	Unfiltered	7.93	128	11.4	2.93
CALA-00-0101	LA-10006	Reach LA-Bkgd SW	7/24/2000	Filtered	6.54	210	19.8	4.58
CALA-00-0100	LA-10006	Reach LA-Bkgd SW	7/24/2000	Unfiltered	6.54	210	19.8	4.58
CALA-00-0166	LA-10006	Reach LA-Bkgd SW	10/5/2000	Filtered	6.13	210	11.6	2.50
CALA-00-0165	LA-10006	Reach LA-Bkgd SW	10/5/2000	Unfiltered	6.13	210	11.6	2.50
CALA-01-0020	LA-10040	SW at E026	8/30/2001	Filtered	8.54	237	14.3	NA
CALA-01-0019	LA-10040	SW at E026	8/30/2001	Unfiltered	8.54	237	14.3	NA
CALA-01-0061	LA-10064	Reach LA-1W SW	3/30/2001	Filtered	7.9	243	8.2	117.00
CALA-01-0062	LA-10064	Reach LA-1W SW	3/30/2001	Unfiltered	7.9	243	8.2	117.00
CALA-01-0244	LA-10064	Reach LA-1W SW	6/18/2001	Filtered	8.03	218	11.5	63.90
CALA-01-0245	LA-10064	Reach LA-1W SW	6/18/2001	Unfiltered	8.03	218	11.5	63.90
CALA-01-0510	LA-10064	Reach LA-1W SW	11/5/2001	Filtered	8.13	268	10.2	352.00
CALA-01-0511	LA-10064	Reach LA-1W SW	11/5/2001	Unfiltered	8.13	268	10.2	352.00
CALA-00-0024	LA-10005	SW at LAO-0.6	6/22/2000	Filtered	6.06	330	12.9	2.50
CALA-00-0023	LA-10005	SW at LAO-0.6	6/22/2000	Unfiltered	6.06	330	12.9	2.50
CALA-00-0099	LA-10005	SW at LAO-0.6	7/24/2000	Filtered	6.99	160	25.4	8.97
CALA-00-0098	LA-10005	SW at LAO-0.6	7/24/2000	Unfiltered	6.99	160	25.4	8.97
CALA-00-0168	LA-10005	SW at LAO-0.6	10/5/2000	Filtered	6.75	380	9.3	3.20
CALA-00-0167	LA-10005	SW at LAO-0.6	10/5/2000	Unfiltered	6.75	380	9.3	3.20
CALA-01-0063	LA-10065	Reach LA-1C SW	3/30/2001	Filtered	7.89	240	7.5	115.00
CALA-01-0064	LA-10065	Reach LA-1C SW	3/30/2001	Unfiltered	7.89	240	7.5	115.00
CALA-01-0246	LA-10065	Reach LA-1C SW	6/18/2001	Filtered	7.94	286	17.6	5.78
CALA-01-0247	LA-10065	Reach LA-1C SW	6/18/2001	Unfiltered	7.94	286	17.6	5.78
CALA-01-0512	LA-10065	Reach LA-1C SW	11/5/2001	Filtered	7.78	253	6.6	>1000
CALA-01-0513	LA-10065	Reach LA-1C SW	11/5/2001	Unfiltered	7.78	253	6.6	>1000
GF01031WGUL	LA-10036	SW at E030	3/26/2001	Filtered	7.45	235	7.8	44.70
CALA-01-0036	LA-10036	SW at E030	3/26/2001	Unfiltered	7.45	235	7.8	44.70

Table B-2.1-1 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])
GU01031WGUL	LA-10036	SW at E030	3/26/2001	Unfiltered	7.45	235	7.8	44.70
GF01031W4SL	LA-10038	SW at E042	3/26/2001	Filtered	7.95	236	9.0	68.30
CALA-01-0035	LA-10038	SW at E042	3/26/2001	Unfiltered	7.95	236	9.0	68.30
GU01031W4SL	LA-10038	SW at E042	3/26/2001	Unfiltered	7.95	236	9.0	68.30
DP Canyon								
CA21-01-0005	21-10929	Reach DP-1W SW	4/2/2001	Filtered	8.97	481	7.2	21.70
CA21-01-0006	21-10929	Reach DP-1W SW	4/2/2001	Unfiltered	8.97	481	7.2	21.70
CA21-01-0011	21-10929	Reach DP-1W SW	6/20/2001	Filtered	7.23	437	16.5	17.20
CA21-01-0012	21-10929	Reach DP-1W SW	6/20/2001	Unfiltered	7.23	437	16.5	17.20
CA21-01-0021	21-10929	Reach DP-1W SW	6/28/2001	Filtered	7.37	372	17.5	12.20
CA21-01-0023	21-10929	Reach DP-1W SW	7/23/2001	Unfiltered	7.65	349	18.4	7.72
CA21-01-0029	21-10929	Reach DP-1W SW	11/12/2001	Filtered	8.51	564	9.2	13.40
CA21-01-0030	21-10929	Reach DP-1W SW	11/12/2001	Unfiltered	8.51	564	9.2	13.40
CA21-02-45264	21-10929	Reach DP-1W SW	5/21/2002	Filtered	9.19	531	16.3	12.80
CA21-02-45265	21-10929	Reach DP-1W SW	5/21/2002	Unfiltered	9.19	531	16.3	12.80
CA21-01-0003	21-11226	Reach DP-1C SW	4/2/2001	Filtered	6.92	629	4.4	6.24
CA21-01-0004	21-11226	Reach DP-1C SW	4/2/2001	Unfiltered	6.92	629	4.4	6.24
CA21-01-0009	21-11226	Reach DP-1C SW	6/20/2001	Filtered	6.87	218	15.0	13.20
CA21-01-0010	21-11226	Reach DP-1C SW	6/20/2001	Unfiltered	6.87	218	15.0	13.20
CA21-01-0019	21-11226	Reach DP-1C SW	6/28/2001	Filtered	6.6	263	16.9	8.60
CA21-01-0020	21-11226	Reach DP-1C SW	6/28/2001	Unfiltered	6.6	263	16.9	8.60
CA21-01-0022	21-11226	Reach DP-1C SW	7/23/2001	Unfiltered	6.72	253	17.3	7.47
CA21-01-0027	21-11226	Reach DP-1C SW	11/12/2001	Filtered	6.52	370	5.7	5.12
CA21-01-0028	21-11226	Reach DP-1C SW	11/12/2001	Unfiltered	6.52	370	5.7	5.12
CA21-02-45266	21-11226	Reach DP-1C SW	5/21/2002	Filtered	6.96	582	12.8	49.40
CA21-02-45267	21-11226	Reach DP-1C SW	5/21/2002	Unfiltered	6.96	582	12.8	49.40
GF01031W1PD	21-11269	Reach DP-2 SW	3/28/2001	Filtered	6.51	116	8.1	8.20
GU01031W1PD	21-11269	Reach DP-2 SW	3/28/2001	Unfiltered	6.51	116	8.1	8.20
0121-97-1401	21-01854	DP Spring	8/21/1997	Filtered	7.85	219	11.6	NA[c]
0121-97-1400	21-01854	DP Spring	8/21/1997	Unfiltered	7.85	219	11.6	NA
0121-97-1422	21-01854	DP Spring	10/15/1997	Unfiltered	NA	NA	NA	NA
CA21-98-0006	21-01854	DP Spring	5/6/1998	Filtered	6.18	486	12.0	NA
CA21-98-0005	21-01854	DP Spring	5/6/1998	Unfiltered	6.18	486	12.0	NA
CA21-98-0012	21-01854	DP Spring	9/16/1998	Filtered	8.16	308	16.7	NA
CA21-98-0011	21-01854	DP Spring	9/16/1998	Unfiltered	8.16	308	16.7	NA
CA21-98-0043	21-01854	DP Spring	10/6/1998	Unfiltered	7.84	219	12.4	NA
GF01031GSDP	21-01854	DP Spring	4/3/2001	Filtered	7.81	367	9.6	2.85
GU01031GSDP	21-01854	DP Spring	4/3/2001	Unfiltered	7.81	367	9.6	2.85
CA21-01-0017	21-01854	DP Spring	6/22/2001	Filtered	8.44	407	20.8	3.21
CA21-01-0018	21-01854	DP Spring	6/22/2001	Unfiltered	8.44	407	20.8	3.21
CADP-03-50373	21-01854	DP Spring	1/15/2003	Filtered	6.36	236	6.3	NA
Lower Los Alamos Canyon								
CALA-00-0028	LA-00219	Basalt Spring	6/27/2000	Filtered	6.35	290	9.3	NA
CALA-00-0027	LA-00219	Basalt Spring	6/27/2000	Unfiltered	6.35	290	9.3	NA
CALA-00-0105	LA-00219	Basalt Spring	7/26/2000	Filtered	6.09	290	7.4	1.80
CALA-00-0104	LA-00219	Basalt Spring	7/26/2000	Unfiltered	6.09	290	7.4	1.80
CALA-00-0158	LA-00219	Basalt Spring	9/1/2000	Filtered	6.64	340	9.7	0.77
CALA-00-0157	LA-00219	Basalt Spring	9/1/2000	Unfiltered	6.64	340	9.7	0.77

Table B-2.1-1 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])
CALA-00-0172	LA-00219	Basalt Spring	10/6/2000	Filtered	6.16	290	9.4	1.10
CALA-00-0171	LA-00219	Basalt Spring	10/6/2000	Unfiltered	6.16	290	9.4	1.10
CALA-01-0026	LA-00219	Basalt Spring	3/15/2001	Filtered	6	527	5.9	0.45
CALA-01-0025	LA-00219	Basalt Spring	3/15/2001	Unfiltered	6	527	5.9	0.45
CALA-01-0248	LA-00219	Basalt Spring	7/27/2001	Filtered	6.77	418	9.3	11.10
CALA-01-0249	LA-00219	Basalt Spring	7/27/2001	Unfiltered	6.77	418	9.3	11.10
CALA-01-0506	LA-00219	Basalt Spring	11/1/2001	Filtered	6.67	533	11.7	1.39
CALA-01-0507	LA-00219	Basalt Spring	11/1/2001	Unfiltered	6.67	533	11.7	1.39
CALA-02-45012	LA-00219	Basalt Spring	5/29/2002	Filtered	7.01	310	10.5	1.12
CALA-02-45013	LA-00219	Basalt Spring	5/29/2002	Unfiltered	7.01	310	10.5	1.12
CALA-00-0022	LA-00218	Reach LA-4 SW	6/27/2000	Filtered	7.64	270	22.3	6.40
CALA-00-0021	LA-00218	Reach LA-4 SW	6/27/2000	Unfiltered	7.64	270	22.3	6.40
CALA-00-0103	LA-00218	Reach LA-4 SW	7/26/2000	Filtered	7.31	350	16.6	2.20
CALA-00-0102	LA-00218	Reach LA-4 SW	7/26/2000	Unfiltered	7.31	350	16.6	2.20
CALA-00-0156	LA-00218	Reach LA-4 SW	9/1/2000	Filtered	8.35	330	13.1	0.89
CALA-00-0155	LA-00218	Reach LA-4 SW	9/1/2000	Unfiltered	8.35	330	13.1	0.89
CALA-00-0170	LA-00218	Reach LA-4 SW	10/6/2000	Filtered	6.84	310	10.7	11.70
CALA-00-0169	LA-00218	Reach LA-4 SW	10/6/2000	Unfiltered	6.84	310	10.7	11.70
CALA-01-0024	LA-00218	Reach LA-4 SW	3/15/2001	Filtered	6	460	6.7	18.32
CALA-01-0023	LA-00218	Reach LA-4 SW	3/15/2001	Unfiltered	6	460	6.7	18.32
CALA-01-0059	LA-00218	Reach LA-4 SW	3/30/2001	Filtered	8.17	314	5.8	52.50
CALA-01-0066	LA-00218	Reach LA-4 SW	3/30/2001	Filtered	8.17	314	5.8	52.50
CALA-01-0060	LA-00218	Reach LA-4 SW	3/30/2001	Unfiltered	8.17	314	5.8	52.50
CALA-01-0508	LA-00218	Reach LA-4 SW	11/1/2001	Filtered	8.26	503	10.6	7.00
CALA-01-0509	LA-00218	Reach LA-4 SW	11/1/2001	Unfiltered	8.26	503	10.6	7.00
CALA-02-45010	LA-00218	Reach LA-4 SW	5/29/2002	Filtered	7.6	358	12.7	2.06
CALA-02-45011	LA-00218	Reach LA-4 SW	5/29/2002	Unfiltered	7.6	358	12.7	2.06
CAGU-01-0002	GU-10004	Guaje at LA Confluence	3/15/2001	Filtered	7	451	12.6	1.05
CAGU-01-0001	GU-10004	Guaje at LA Confluence	3/15/2001	Unfiltered	7	451	12.6	1.05
CAGU-01-0023	GU-10004	Guaje at LA Confluence	9/13/2001	Filtered	7.05	245	16.1	2.60
CAGU-01-0022	GU-10004	Guaje at LA Confluence	9/13/2001	Unfiltered	7.05	245	16.1	2.60
CALA-01-0028	LA-10057	Upper Reach LA-5 SW	3/15/2001	Filtered	6	447	8.3	32.80
CALA-01-0027	LA-10057	Upper Reach LA-5 SW	3/15/2001	Unfiltered	6	447	8.3	32.80
CALA-01-0470	LA-10057	Upper Reach LA-5 SW	9/13/2001	Filtered	7.48	131	17.7	5.15
CALA-01-0469	LA-10057	Upper Reach LA-5 SW	9/13/2001	Unfiltered	7.48	131	17.7	5.15
CALA-01-0030	LA-10058	Lower Reach LA-5 SW	3/15/2001	Filtered	6.5	443	13.0	75.50
CALA-01-0029	LA-10058	Lower Reach LA-5 SW	3/15/2001	Unfiltered	6.5	443	13.0	75.50
GF01031WGRL	LA-10058	Lower Reach LA-5 SW	3/26/2001	Filtered	7.52	333	13.9	74.50
CALA-01-0037	LA-10058	Lower Reach LA-5 SW	3/26/2001	Unfiltered	7.52	333	13.9	74.50
GU01031WGRL	LA-10058	Lower Reach LA-5 SW	3/26/2001	Unfiltered	7.52	333	13.9	74.50
CALA-01-0518	LA-10179	Otowi Spring	11/2/2001	Filtered	7.1	277	14.6	1.36
CALA-01-0519	LA-10179	Otowi Spring	11/2/2001	Unfiltered	7.1	277	14.6	1.36
CALA-01-0516	BG-00081	LA Spring	11/20/2001	Filtered	7.36	339	12.6	0.13
CALA-01-0517	BG-00081	LA Spring	11/20/2001	Unfiltered	7.38	340	9.6	0.13

[a] µS/cm = microSiemens per centimeter.

[b] NTU = Nephelometric turbidity unit.

[c] NA = Parameter not collected.

Table B-2.1-2
Surface Water Field Parameters for Pueblo Canyon

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])
Acid Canyon								
CAPU-00-0136	00-10241	Reach AC-2 SW	10/10/2000	Filtered	6.42	100	6.6	28.30
CAPU-00-0135	00-10241	Reach AC-2 SW	10/10/2000	Unfiltered	6.42	100	6.6	28.30
CAPU-01-0013	00-10241	Reach AC-2 SW	4/3/2001	Filtered	5.9	788	5.8	8.53
CAPU-01-0014	00-10241	Reach AC-2 SW	4/3/2001	Unfiltered	5.9	788	5.8	8.53
CAPU-01-0009	PU-10175	Upper S. Fork Acid Canyon SW	4/3/2001	Filtered	6.72	347	6.0	11.40
CAPU-01-0015	PU-10175	Upper S. Fork Acid Canyon SW	4/3/2001	Filtered	6.72	347	6.0	11.40
CAPU-01-0010	PU-10175	Upper S. Fork Acid Canyon SW	4/3/2001	Unfiltered	6.72	347	6.0	11.40
CAPU-01-0090	PU-10175	Upper S. Fork Acid Canyon SW	6/20/2001	Filtered	7.49	130	13.5	8.32
CAPU-01-0091	PU-10175	Upper S. Fork Acid Canyon SW	6/20/2001	Unfiltered	7.49	130	13.5	8.32
CAPU-01-0104	PU-10175	Upper S. Fork Acid Canyon SW	6/28/2001	Filtered	7.27	317	16.3	3.20
CAPU-01-0103	PU-10175	Upper S. Fork Acid Canyon SW	6/28/2001	Unfiltered	7.27	317	16.3	3.20
CAPU-00-0138	PU-10176	Lower S. Fork Acid Canyon SW	10/10/2000	Filtered	6	300	6.8	9.90
CAPU-00-0137	PU-10176	Lower S. Fork Acid Canyon SW	10/10/2000	Unfiltered	6	300	6.8	9.90
CAPU-01-0011	PU-10176	Lower S. Fork Acid Canyon SW	4/3/2001	Filtered	6.35	344	4.4	10.20
CAPU-01-0012	PU-10176	Lower S. Fork Acid Canyon SW	4/3/2001	Unfiltered	6.35	344	4.4	10.20
CAPU-00-0134	PU-10155	Lower Reach AC-3 SW (near Acid Weir)	9/6/2000	Filtered	6.29	180	14.0	1.95
CAPU-00-0133	PU-10155	Lower Reach AC-3 SW (near Acid Weir)	9/6/2000	Unfiltered	6.29	180	14.0	1.95
CAPU-00-0140	PU-10155	Lower Reach AC-3 SW (near Acid Weir)	10/10/2000	Filtered	6.32	3000	9.5	4.20
CAPU-00-0139	PU-10155	Lower Reach AC-3 SW (near Acid Weir)	10/10/2000	Unfiltered	6.32	3000	9.5	4.20
GF01041WPWA	PU-10155	Lower Reach AC-3 SW (near Acid Weir)	4/11/2001	Filtered	6.96	625	6.5	8.80
GU01041WPWA	PU-10155	Lower Reach AC-3 SW (near Acid Weir)	4/11/2001	Unfiltered	6.96	625	6.5	8.80
CAPU-01-0100	PU-10155	Lower Reach AC-3 SW (near Acid Weir)	7/3/2001	Filtered	7.29	379	22.4	78.80
CAPU-01-0101	PU-10155	Lower Reach AC-3 SW (near Acid Weir)	7/3/2001	Unfiltered	7.29	379	22.4	78.80
Pueblo Canyon								
CAPU-00-0005	PU-10068	Reach P-1 Far West SW	6/17/2000	Filtered	7.01	190	12.3	3.01
CAPU-00-0001	PU-10068	Reach P-1 Far West SW	6/17/2000	Unfiltered	7.01	190	12.3	3.01
CAPU-00-0037	PU-10068	Reach P-1 Far West SW	7/27/2000	Filtered	6.47	320	13.0	15.90
CAPU-00-0032	PU-10068	Reach P-1 Far West SW	7/27/2000	Unfiltered	6.47	320	13.0	15.90
CAPU-00-0076	PU-10068	Reach P-1 Far West SW	8/30/2000	Filtered	6.32	270	14.5	1.17
CAPU-00-0075	PU-10068	Reach P-1 Far West SW	8/30/2000	Unfiltered	6.32	270	14.5	1.17
CAPU-00-0166	PU-10068	Reach P-1 Far West SW	10/3/2000	Filtered	6.35	290	NA[c]	77.10
CAPU-00-0165	PU-10068	Reach P-1 Far West SW	10/3/2000	Unfiltered	6.35	290	NA	77.10
CAPU-00-0006	PU-10069	Upper Reach P-1W SW	6/17/2000	Filtered	7.05	210	14.3	3.60
CAPU-00-0002	PU-10069	Upper Reach P-1W SW	6/17/2000	Unfiltered	7.05	210	14.3	3.60
CAPU-00-0035	PU-10069	Upper Reach P-1W SW	7/27/2000	Filtered	6.64	320	14.3	26.80
CAPU-00-0034	PU-10069	Upper Reach P-1W SW	7/27/2000	Unfiltered	6.64	320	14.3	26.80
CAPU-00-0078	PU-10069	Upper Reach P-1W SW	8/30/2000	Filtered	6.73	300	16.8	2.45
CAPU-00-0077	PU-10069	Upper Reach P-1W SW	8/30/2000	Unfiltered	6.73	300	16.8	2.45

Table B-2.1-2 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])
CAPU-00-0168	PU-10069	Upper Reach P-1W SW	10/3/2000	Filtered	6.43	290	NA	23.80
CAPU-00-0167	PU-10069	Upper Reach P-1W SW	10/3/2000	Unfiltered	6.43	290	NA	23.80
CAPU-00-0007	PU-10070	Lower Reach P-1W SW	6/17/2000	Filtered	6.96	240	17.6	1.75
CAPU-00-0003	PU-10070	Lower Reach P-1W SW	6/17/2000	Unfiltered	6.96	240	17.6	1.75
CAPU-00-0033	PU-10070	Lower Reach P-1W SW	7/27/2000	Filtered	7.01	170	17.8	17.10
CAPU-00-0036	PU-10070	Lower Reach P-1W SW	7/27/2000	Unfiltered	7.01	170	17.8	17.10
CAPU-00-0080	PU-10070	Lower Reach P-1W SW	8/30/2000	Filtered	6.87	320	20.5	2.07
CAPU-00-0079	PU-10070	Lower Reach P-1W SW	8/30/2000	Unfiltered	6.87	320	20.5	2.07
CAPU-00-0170	PU-10070	Lower Reach P-1W SW	10/3/2000	Filtered	6.19	310	NA	4.50
CAPU-00-0169	PU-10070	Lower Reach P-1W SW	10/3/2000	Unfiltered	6.19	310	NA	4.50
GF01041WR1P	PU-10070	Lower Reach P-1W SW	4/11/2001	Filtered	7.36	282	6.6	11.60
GU01041WR1P	PU-10070	Lower Reach P-1W SW	4/11/2001	Unfiltered	7.36	282	6.6	11.60
CAPU-01-0098	PU-10070	Lower Reach P-1W SW	7/5/2001	Filtered	6.83	449	14.6	6.43
CAPU-01-0099	PU-10070	Lower Reach P-1W SW	7/5/2001	Unfiltered	6.83	449	14.6	6.43
CAPU-00-0008	PU-10071	Upper Reach P-1E SW	6/17/2000	Filtered	6.96	200	16.8	3.27
CAPU-00-0004	PU-10071	Upper Reach P-1E SW	6/17/2000	Unfiltered	6.96	200	16.8	3.27
CAPU-00-0039	PU-10071	Upper Reach P-1E SW	7/27/2000	Filtered	7.1	230	16.2	13.50
CAPU-00-0038	PU-10071	Upper Reach P-1E SW	7/27/2000	Unfiltered	7.1	230	16.2	13.50
CAPU-00-0082	PU-10071	Upper Reach P-1E SW	8/30/2000	Filtered	7.01	230	16.3	2.65
CAPU-00-0081	PU-10071	Upper Reach P-1E SW	8/30/2000	Unfiltered	7.01	230	16.3	2.65
CAPU-00-0172	PU-10071	Upper Reach P-1E SW	10/3/2000	Filtered	6.73	290	NA	109.00
CAPU-00-0171	PU-10071	Upper Reach P-1E SW	10/3/2000	Unfiltered	6.73	290	NA	109.00
GF01041W2LP	PU-10231	Pueblo 2	4/3/2001	Filtered	8.08	357	16.8	18.10
GU01041W2LP	PU-10231	Pueblo 2	4/3/2001	Unfiltered	8.08	357	16.8	18.10
GF01041W3LP	PU-10230	Pueblo 3	4/3/2001	Filtered	7.55	615	17.2	14.80
GU01041W3LP	PU-10230	Pueblo 3	4/3/2001	Unfiltered	7.55	615	17.2	14.80
CAPU-01-0094	PU-10230	Pueblo 3	6/21/2001	Filtered	7.16	642	23.0	7.55
CAPU-01-0095	PU-10230	Pueblo 3	6/21/2001	Unfiltered	7.16	642	23.0	7.55
CAPU-01-0220	PU-10230	Pueblo 3	10/31/2001	Filtered	7.46	565	18.1	25.10
CAPU-01-0221	PU-10230	Pueblo 3	10/31/2001	Unfiltered	7.46	565	18.1	25.10
CAPU-02-45081	PU-10230	Pueblo 3	5/23/2002	Filtered	7.44	576	19.2	10.70
CAPU-02-45082	PU-10230	Pueblo 3	5/23/2002	Unfiltered	7.44	576	19.2	10.70
GF01041W5SP	PU-10229	Pueblo at SR-502	4/3/2001	Filtered	7.42	523	10.8	12.70
GF01042W5SP	PU-10229	Pueblo at SR-502	4/3/2001	Filtered	7.42	523	10.8	12.70
GU01041W5SP	PU-10229	Pueblo at SR-502	4/3/2001	Unfiltered	7.42	523	10.8	12.70
GU01042W5SP	PU-10229	Pueblo at SR-502	4/3/2001	Unfiltered	7.42	523	10.8	12.70
CAPU-01-0092	PU-10229	Pueblo at SR-502	7/3/2001	Filtered	7.48	534	26.3	914.00
CAPU-01-0093	PU-10229	Pueblo at SR-502	7/3/2001	Unfiltered	7.48	534	26.3	914.00
CAPU-01-0218	PU-10229	Pueblo at SR-502	10/31/2001	Filtered	6.89	529	15.4	9.13
CAPU-01-0219	PU-10229	Pueblo at SR-502	10/31/2001	Unfiltered	6.89	529	15.4	9.13
CAPU-02-45083	PU-10229	Pueblo at SR-502	5/23/2002	Filtered	6.7	596	17.4	3.46
CAPU-02-45084	PU-10229	Pueblo at SR-502	5/23/2002	Unfiltered	6.7	596	17.4	3.46

[a] µS/cm = microSiemens per centimeter.

[b] NTU = Nephelometric turbidity unit.

[c] NA = Parameter not collected.

Table B-2.1-3
Alluvial Groundwater Field Parameters and Water Levels for Los Alamos Canyon

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])	Water Level (ft TOC[c])	Water Level (ft bgs[d])	Water Level (ft asl[e])
Upper Los Alamos Canyon											
CABG-00-0021	41-01045	LAO-B	1/10/2000	Filtered	7.57	110	5.7	4.80	9.00	6.54	7316.03
CABG-00-0046	41-01045	LAO-B	3/24/2000	Filtered	6.93	78	3.5	3.00	8.52	6.06	7316.51
CABG-00-0028	41-01045	LAO-B	3/24/2000	Unfiltered	6.93	78	3.5	3.00	8.52	6.06	7316.51
CALA-00-0030	41-01045	LAO-B	6/21/2000	Filtered	6.52	70	8.3	4.00	10.11	7.65	7314.92
CALA-00-0029	41-01045	LAO-B	6/21/2000	Unfiltered	6.52	70	8.3	4.00	10.11	7.65	7314.92
CALA-00-0049	41-01045	LAO-B	6/22/2000	Unfiltered	6.52	70	8.3	4.00	10.11	7.65	7314.92
CALA-00-0080	41-01045	LAO-B	7/24/2000	Filtered	6.21	140	9.2	2.20	9.13	6.67	7315.90
CALA-00-0079	41-01045	LAO-B	7/24/2000	Unfiltered	6.21	140	9.2	2.20	9.13	6.67	7315.90
CALA-00-0132	41-01045	LAO-B	9/5/2000	Filtered	6.15	140	11.1	0.40	10.49	8.03	7314.54
CALA-00-0131	41-01045	LAO-B	9/5/2000	Unfiltered	6.15	140	11.1	0.40	10.49	8.03	7314.54
CALA-00-0176	41-01045	LAO-B	10/5/2000	Filtered	6.14	160	11.1	0.90	9.92	7.46	7315.11
CALA-00-0175	41-01045	LAO-B	10/5/2000	Unfiltered	6.14	160	11.1	0.90	9.92	7.46	7315.11
CALA-01-0049	41-01045	LAO-B	3/29/2001	Filtered	6.83	149	3.8	1.30	8.06	5.60	7316.97
CALA-01-0050	41-01045	LAO-B	3/29/2001	Unfiltered	6.83	149	3.8	1.30	8.06	5.60	7316.97
CALA-01-0215	41-01045	LAO-B	6/18/2001	Filtered	6.49	160	8.1	0.70	8.65	6.19	7316.38
CALA-01-0216	41-01045	LAO-B	6/18/2001	Unfiltered	6.49	160	8.1	0.70	8.65	6.19	7316.38
CALA-01-0257	41-01045	LAO-B	6/28/2001	Unfiltered	6.45	162	8.9	0.60	8.74	6.28	7316.29
CALA-01-0471	41-01045	LAO-B	11/7/2001	Filtered	6.78	214	11.1	0.30	10.35	7.89	7314.68
CALA-01-0497	41-01045	LAO-B	11/7/2001	Filtered	6.78	214	11.1	0.30	na[f]	na	na
CALA-01-0472	41-01045	LAO-B	11/7/2001	Unfiltered	6.78	214	11.1	0.30	10.35	7.89	7314.68
CALA-02-45277	41-01045	LAO-B	3/26/2002	Filtered	6.86	182	4.8	0.40	8.98	6.52	7316.05
CALA-02-45281	41-01045	LAO-B	3/26/2002	Filtered	6.86	182	4.8	0.40	na	na	na
CALA-02-45278	41-01045	LAO-B	3/26/2002	Unfiltered	6.86	182	4.8	0.40	8.98	6.52	7316.05
CALA-02-45029	41-01045	LAO-B	5/30/2002	Filtered	6.86	199	6.2	0.30	9.48	7.02	7315.55
CALA-02-45041	41-01045	LAO-B	5/30/2002	Filtered	6.86	199	6.2	0.30	na	na	na
CALA-02-45030	41-01045	LAO-B	5/30/2002	Unfiltered	6.86	199	6.2	0.30	9.48	7.02	7315.55
GF01031GCOL	41-01004	LAO-C	4/3/2001	Filtered	6.89	356	3.5	15.40	na	na	na
GU01031GCOL	41-01004	LAO-C	4/3/2001	Unfiltered	6.89	356	3.5	15.40	na	na	na

Table B-2.1-3 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])	Water Level (ft TOC[c])	Water Level (ft bgs[d])	Water Level (ft asl[e])
CALA-01-0038	41-01004	LAO-C	4/4/2001	Unfiltered	6.89	356	3.5	15.40	3.85	2.35	7047.65
CALA-01-0239	41-01004	LAO-C	6/25/2001	Filtered	6.96	271	14.8	5.90	4.30	2.80	7047.20
CALA-01-0240	41-01004	LAO-C	6/25/2001	Unfiltered	6.96	271	14.8	5.90	4.30	2.80	7047.20
CALA-01-0481	41-01004	LAO-C	11/5/2001	Filtered	7.1	389	9.2	4.00	5.01	3.51	7046.49
CALA-01-0482	41-01004	LAO-C	11/5/2001	Unfiltered	7.1	389	9.2	4.00	5.01	3.51	7046.49
CALA-02-45037	41-01004	LAO-C	6/4/2002	Filtered	7.12	509	11.5	2.30	4.64	3.14	7046.86
CALA-02-45038	41-01004	LAO-C	6/4/2002	Unfiltered	7.12	509	11.5	2.30	4.64	3.14	7046.86
CALA-00-0032	41-01003	LAO-0.3	6/22/2000	Filtered	6.1	320	10.7	22.10	10.38	7.95	6959.87
CALA-00-0031	41-01003	LAO-0.3	6/22/2000	Unfiltered	6.1	320	10.7	22.10	10.38	7.95	6959.87
CALA-00-0082	41-01003	LAO-0.3	7/24/2000	Filtered	6.33	330	12.2	9.10	10.53	8.10	6959.72
CALA-00-0081	41-01003	LAO-0.3	7/24/2000	Unfiltered	6.33	330	12.2	9.10	10.53	8.10	6959.72
CALA-00-0134	41-01003	LAO-0.3	8/31/2000	Filtered	6.49	270	12.8	2.40	11.36	8.93	6958.89
CALA-00-0133	41-01003	LAO-0.3	8/31/2000	Unfiltered	6.49	270	12.8	2.40	11.36	8.93	6958.89
CALA-00-0178	41-01003	LAO-0.3	10/5/2000	Filtered	6.32	300	12.4	1.70	11.18	8.75	6959.07
CALA-00-0177	41-01003	LAO-0.3	10/5/2000	Unfiltered	6.32	300	12.4	1.70	11.18	8.75	6959.07
CALA-01-0051	41-01003	LAO-0.3	3/29/2001	Filtered	6.83	412	3.2	3.90	7.89	5.46	6962.36
CALA-01-0052	41-01003	LAO-0.3	3/29/2001	Unfiltered	6.83	412	3.2	3.90	7.89	5.46	6962.36
CALA-01-0217	41-01003	LAO-0.3	6/18/2001	Filtered	6.52	324	11.7	6.70	8.94	6.51	6961.31
CALA-01-0218	41-01003	LAO-0.3	6/18/2001	Unfiltered	6.52	324	11.7	6.70	8.94	6.51	6961.31
CALA-01-0258	41-01003	LAO-0.3	6/28/2001	Unfiltered	6.42	313	12.1	3.60	9.01	6.58	6961.24
CALA-01-0473	41-01003	LAO-0.3	11/8/2001	Filtered	6.81	312	12.8	9.10	10.72	8.29	6959.53
CALA-01-0474	41-01003	LAO-0.3	11/8/2001	Unfiltered	6.81	312	12.8	9.10	10.72	8.29	6959.53
CALA-02-45027	41-01003	LAO-0.3	5/28/2002	Filtered	6.84	476	8.6	4.20	10.68	8.25	6959.57
CALA-02-45028	41-01003	LAO-0.3	5/28/2002	Unfiltered	6.84	476	8.6	4.20	10.68	8.25	6959.57
CALA-00-0034	41-01002	LAO-0.6	6/21/2000	Filtered	6.45	250	13.8	32.20	15.77	13.23	6897.11
CALA-00-0033	41-01002	LAO-0.6	6/21/2000	Unfiltered	6.45	250	13.8	32.20	15.77	13.23	6897.11
CALA-00-0084	41-01002	LAO-0.6	7/24/2000	Filtered	6.43	340	14.1	43.20	9.13	6.59	6903.75
CALA-00-0083	41-01002	LAO-0.6	7/24/2000	Unfiltered	6.43	340	14.1	43.20	9.13	6.59	6903.75
CALA-00-0136	41-01002	LAO-0.6	8/31/2000	Filtered	6.78	420	15.6	8.60	8.48	5.94	6904.40

Table B-2.1-3 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])	Water Level (ft TOC[c])	Water Level (ft bgs[d])	Water Level (ft asl[e])
CALA-00-0135	41-01002	LAO-0.6	8/31/2000	Unfiltered	6.78	420	15.6	8.60	8.48	5.94	6904.40
CALA-00-0180	41-01002	LAO-0.6	10/5/2000	Filtered	6.58	420	15.4	2.10	8.37	5.83	6904.51
CALA-00-0179	41-01002	LAO-0.6	10/5/2000	Unfiltered	6.58	420	15.4	2.10	8.37	5.83	6904.51
GF01031G7OL	LA-10066	LAO-0.7	3/29/2001	Filtered	7.05	357	5.2	22.40	12.38	9.88	6897.52
CALA-01-0039	LA-10066	LAO-0.7	3/29/2001	Unfiltered	7.05	357	5.2	22.40	12.38	9.88	6897.52
GU01031G7OL	LA-10066	LAO-0.7	3/29/2001	Unfiltered	7.05	357	5.2	22.40	12.38	9.88	6897.52
CALA-01-0225	LA-10066	LAO-0.7	6/25/2001	Filtered	6.86	345	16.3	4.70	13.32	10.82	6896.58
CALA-01-0226	LA-10066	LAO-0.7	6/25/2001	Unfiltered	6.86	345	16.3	4.70	13.32	10.82	6896.58
CALA-01-0483	LA-10066	LAO-0.7	11/5/2001	Filtered	6.82	368	13.2	5.60	14.15	11.65	6895.75
CALA-01-0484	LA-10066	LAO-0.7	11/5/2001	Unfiltered	6.82	368	13.2	5.60	14.15	11.65	6895.75
CALA-02-45045	LA-10066	LAO-0.7	6/4/2002	Filtered	6.84	413	9.0	4.00	14.38	11.88	6895.52
CALA-02-45046	LA-10066	LAO-0.7	6/4/2002	Unfiltered	6.84	413	9.0	4.00	14.38	11.88	6895.52
CALA-00-0036	02-01022	LAO-0.91	6/22/2000	Filtered	6.26	200	14.1	1.90	14.50	10.87	6850.29
CALA-00-0035	02-01022	LAO-0.91	6/22/2000	Unfiltered	6.26	200	14.1	1.90	14.50	10.87	6850.29
GF01031G1OL	02-01076	LAO-1	4/5/2001	Filtered	6.86	433	7.0	3.10	6.58	4.58	6831.72
CALA-01-0040	02-01076	LAO-1	4/5/2001	Unfiltered	6.86	433	7.0	3.10	6.58	4.58	6831.72
GU01031G1OL	02-01076	LAO-1	4/5/2001	Unfiltered	6.86	433	7.0	3.10	6.58	4.58	6831.72
CALA-01-0227	02-01076	LAO-1	6/25/2001	Filtered	6.65	331	14.2	3.00	8.68	6.68	6829.62
CALA-01-0228	02-01076	LAO-1	6/25/2001	Unfiltered	6.65	331	14.2	3.00	8.68	6.68	6829.62
CALA-01-0485	02-01076	LAO-1	11/5/2001	Filtered	7.19	331	11.4	5.90	11.50	9.50	6826.80
CALA-01-0486	02-01076	LAO-1	11/5/2001	Unfiltered	7.19	331	11.4	5.90	11.50	9.50	6826.80
CALA-00-0088	LA-10008	LAO-1.2	7/25/2000	Filtered	6.58	150	15.4	9.40	7.97	7.77	6712.23
CALA-00-0087	LA-10008	LAO-1.2	7/25/2000	Unfiltered	6.58	150	15.4	9.40	7.97	7.77	6712.23
04LA-97-0002	LA-00001	LAO-1.6g	4/10/1997	Filtered	6.3	259	10.0	0.00	9.12	6.24	6651.44
04LA-97-0001	LA-00001	LAO-1.6g	4/10/1997	Unfiltered	6.3	259	10.0	0.00	9.12	6.24	6651.44
CALA-00-0040	LA-00001	LAO-1.6g	6/23/2000	Filtered	6.18	180	9.8	4.50	15.65	12.77	6644.91
CALA-00-0048	LA-00001	LAO-1.6g	6/23/2000	Filtered	6.18	180	9.8	4.50	na	na	na
CALA-00-0039	LA-00001	LAO-1.6g	6/23/2000	Unfiltered	6.18	180	9.8	4.50	15.65	12.77	6644.91
CALA-00-0047	LA-00001	LAO-1.6g	6/23/2000	Unfiltered	6.18	180	9.8	4.50	na	na	na
CALA-00-0090	LA-00001	LAO-1.6g	7/25/2000	Filtered	6.36	190	10.6	5.90	17.21	14.33	6643.35

Table B-2.1-3 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])	Water Level (ft TOC[c])	Water Level (ft bgs[d])	Water Level (ft asl[e])
CALA-00-0089	LA-00001	LAO-1.6g	7/25/2000	Unfiltered	6.36	190	10.6	5.90	17.21	14.33	6643.35
CALA-00-0142	LA-00001	LAO-1.6g	9/5/2000	Filtered	6.6	200	11.6	4.10	18.47	15.59	6642.09
CALA-00-0141	LA-00001	LAO-1.6g	9/5/2000	Unfiltered	6.6	200	11.6	4.10	18.47	15.59	6642.09
CALA-00-0186	LA-00001	LAO-1.6g	10/5/2000	Filtered	6.13	200	12.0	3.00	16.93	14.05	6643.63
CALA-00-0193	LA-00001	LAO-1.6g	10/5/2000	Filtered	6.13	200	12.0	3.00	na	na	na
CALA-00-0185	LA-00001	LAO-1.6g	10/5/2000	Unfiltered	6.13	200	12.0	3.00	16.93	14.05	6643.63
CALA-01-0053	LA-00001	LAO-1.6g	3/29/2001	Filtered	6.23	330	9.0	1.20	8.51	5.63	6652.05
CALA-01-0054	LA-00001	LAO-1.6g	3/29/2001	Unfiltered	6.23	330	9.0	1.20	8.51	5.63	6652.05
CALA-01-0219	LA-00001	LAO-1.6g	6/19/2001	Filtered	6.44	290	8.8	1.40	13.45	10.57	6647.11
CALA-01-0241	LA-00001	LAO-1.6g	6/19/2001	Filtered	6.44	290	8.8	1.40	na	na	na
CALA-01-0220	LA-00001	LAO-1.6g	6/19/2001	Unfiltered	6.44	290	8.8	1.40	13.45	10.57	6647.11
CALA-01-0475	LA-00001	LAO-1.6g	11/8/2001	Filtered	6.47	321	12.4	13.80	19.01	16.13	6641.55
CALA-01-0476	LA-00001	LAO-1.6g	11/8/2001	Unfiltered	6.47	321	12.4	13.80	19.01	16.13	6641.55
GF01031G2OL	LA-10067	LAO-2	3/29/2001	Filtered	6.66	429	9.8	1.30	13.00	11.50	6581.50
CALA-01-0041	LA-10067	LAO-2	3/29/2001	Unfiltered	6.66	429	9.8	1.30	13.00	11.50	6581.50
GU01031G2OL	LA-10067	LAO-2	3/29/2001	Unfiltered	6.66	429	9.8	1.30	13.00	11.50	6581.50
CALA-01-0229	LA-10067	LAO-2	6/26/2001	Filtered	6.74	354	12.7	1.50	16.40	14.90	6578.10
CALA-01-0230	LA-10067	LAO-2	6/26/2001	Unfiltered	6.74	354	12.7	1.50	16.40	14.90	6578.10
CALA-01-0263	LA-10067	LAO-2	7/11/2001	Filtered	6.56	347	11.9	4.30	17.00	15.50	6577.50
CALA-01-0264	LA-10067	LAO-2	7/11/2001	Unfiltered	6.56	347	11.9	4.30	17.00	15.50	6577.50
CALA-00-0199	LA-10035	LAO-3a	10/11/2000	Filtered	6.62	250	12.0	4.30	na	na	na
CALA-00-0198	LA-10035	LAO-3a	10/11/2000	Unfiltered	6.62	250	12.0	4.30	na	na	na
GF01031GA3L	LA-10035	LAO-3a	3/28/2001	Filtered	6.83	420	8.2	2.60	10.79	9.96	6569.04
GF01032GA3L	LA-10035	LAO-3a	3/28/2001	Filtered	6.83	420	8.2	2.60	na	na	na
GU01031GA3L	LA-10035	LAO-3a	3/28/2001	Unfiltered	6.83	420	8.2	2.60	10.79	9.96	6569.04
GU01032GA3L	LA-10035	LAO-3a	3/28/2001	Unfiltered	6.83	420	8.2	2.60	na	na	na
CALA-01-0042	LA-10035	LAO-3a	3/29/2001	Unfiltered	6.83	420	8.2	2.60	10.79	9.96	6569.04
CALA-01-0231	LA-10035	LAO-3a	6/26/2001	Filtered	6.77	343	12.2	1.60	8.95	8.12	6570.88
CALA-01-0232	LA-10035	LAO-3a	6/26/2001	Unfiltered	6.77	343	12.2	1.60	8.95	8.12	6570.88
CALA-01-0265	LA-10035	LAO-3a	7/11/2001	Filtered	6.61	352	11.3	2.60	na	na	na

Table B-2.1-3 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])	Water Level (ft TOC[c])	Water Level (ft bgs[d])	Water Level (ft asl[e])
CALA-01-0266	LA-10035	LAO-3a	7/11/2001	Unfiltered	6.61	352	11.3	2.60	na	na	na
CALA-02-45043	LA-10035	LAO-3a	6/5/2002	Filtered	7.09	274	12.3	2.20	10.06	9.23	6569.77
CALA-02-45044	LA-10035	LAO-3a	6/5/2002	Unfiltered	7.09	274	12.3	2.20	10.06	9.23	6569.77
GF01031G4OL	LA-10068	LAO-4	4/5/2001	Filtered	7.2	329	8.5	1.50	9.65	8.23	6510.57
CALA-01-0043	LA-10068	LAO-4	4/5/2001	Unfiltered	7.2	329	8.5	1.50	9.65	8.23	6510.57
GU01031G4OL	LA-10068	LAO-4	4/5/2001	Unfiltered	7.2	329	8.5	1.50	9.65	8.23	6510.57
CALA-01-0233	LA-10068	LAO-4	6/27/2001	Filtered	6.78	310	9.8	0.80	13.52	12.10	6506.70
CALA-01-0234	LA-10068	LAO-4	6/27/2001	Unfiltered	6.78	310	9.8	0.80	13.52	12.10	6506.70
CALA-01-0491	LA-10068	LAO-4	11/6/2001	Filtered	7.04	340	11.8	0.90	13.80	12.38	6506.42
CALA-01-0492	LA-10068	LAO-4	11/6/2001	Unfiltered	7.04	340	11.8	0.90	13.80	12.38	6506.42
GF01031GC54	LA-10069	LAO-4.5c	3/28/2001	Filtered	7	318	8.6	1.40	8.79	6.71	6451.29
CALA-01-0044	LA-10069	LAO-4.5c	3/28/2001	Unfiltered	7	318	8.6	1.40	8.79	6.71	6451.29
GU01031GC54	LA-10069	LAO-4.5c	3/28/2001	Unfiltered	7	318	8.6	1.40	8.79	6.71	6451.29
CALA-01-0235	LA-10069	LAO-4.5c	6/26/2001	Filtered	6.67	298	10.2	0.90	12.95	10.87	6447.13
CALA-01-0236	LA-10069	LAO-4.5c	6/26/2001	Unfiltered	6.67	298	10.2	0.90	12.95	10.87	6447.13
CALA-01-0267	LA-10069	LAO-4.5c	7/11/2001	Filtered	6.43	316	10.0	0.60	12.58	10.50	6447.50
CALA-01-0268	LA-10069	LAO-4.5c	7/11/2001	Unfiltered	6.43	316	10.0	0.60	12.58	10.50	6447.50
CALA-01-0493	LA-10069	LAO-4.5c	11/6/2001	Filtered	6.7	315	11.7	4.40	13.39	11.31	6446.69
CALA-01-0494	LA-10069	LAO-4.5c	11/6/2001	Unfiltered	6.7	315	11.7	4.40	13.39	11.31	6446.69
GF01031GA6L	LA-10070	LAO-6a	3/28/2001	Filtered	7.52	312	7.2	1.40	10.77	9.44	6386.56
CALA-01-0045	LA-10070	LAO-6a	3/28/2001	Unfiltered	7.52	312	7.2	1.40	10.77	9.44	6386.56
GU01031GA6L	LA-10070	LAO-6a	3/28/2001	Unfiltered	7.52	312	7.2	1.40	10.77	9.44	6386.56
DP Canyon											
0121-97-1397	21-01811	LAUZ-1	8/20/1997	Filtered	7.17	245	18.2	5.00	5.05	2.50	7029.90
0121-97-1396	21-01811	LAUZ-1	8/20/1997	Unfiltered	7.17	245	18.2	5.00	5.05	2.50	7029.90
0121-97-1428	21-01811	LAUZ-1	12/4/1997	Filtered	7.11	802	5.5	1.00	4.87	2.32	7030.08
0121-97-1430	21-01811	LAUZ-1	12/4/1997	Filtered	7.11	802	5.5	1.00	na	na	na
0121-97-1424	21-01811	LAUZ-1	12/4/1997	Unfiltered	7.11	802	5.5	1.00	4.87	2.32	7030.08
0121-97-1426	21-01811	LAUZ-1	12/4/1997	Unfiltered	7.11	802	5.5	1.00	na	na	na
CA21-98-0002	21-01811	LAUZ-1	5/5/1998	Filtered	7.16	726	7.6	0.00	6.35	3.80	7028.60

Table B-2.1-3 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])	Water Level (ft TOC[c])	Water Level (ft bgs[d])	Water Level (ft asl[e])
CA21-98-0001	21-01811	LAUZ-1	5/5/1998	Unfiltered	7.16	726	7.6	0.00	6.35	3.80	7028.60
CA21-98-0008	21-01811	LAUZ-1	9/17/1998	Filtered	7.27	337	17.6	3.00	5.96	3.41	7028.99
CA21-98-0007	21-01811	LAUZ-1	9/17/1998	Unfiltered	7.27	337	17.6	3.00	5.96	3.41	7028.99
CA21-98-0041	21-01811	LAUZ-1	10/20/1998	Unfiltered	6.7	246	13.8	4.00	6.40	3.85	7028.55
CA21-01-0001	21-01811	LAUZ-1	4/2/2001	Filtered	7	1146	4.0	4.20	5.13	2.58	7029.82
CA21-01-0002	21-01811	LAUZ-1	4/2/2001	Unfiltered	7	1146	4.0	4.20	5.13	2.58	7029.82
CA21-01-0007	21-01811	LAUZ-1	6/19/2001	Filtered	6.9	844	12.9	59.60	6.52	3.97	7028.43
CA21-01-0008	21-01811	LAUZ-1	6/19/2001	Unfiltered	6.9	844	12.9	59.60	6.52	3.97	7028.43
CA21-01-0024	21-01811	LAUZ-1	11/13/2001	Filtered	7.18	432	12.0	248.00	7.81	5.26	7027.14
CA21-01-0025	21-01811	LAUZ-1	11/13/2001	Unfiltered	7.18	432	12.0	248.00	7.81	5.26	7027.14
CA21-02-45300	21-01811	LAUZ-1	3/26/2002	Filtered	7.2	538	7.3	68.00	7.11	4.56	7027.84
CA21-02-45301	21-01811	LAUZ-1	3/26/2002	Unfiltered	7.2	538	7.3	68.00	7.11	4.56	7027.84
CA21-02-45090	21-01811	LAUZ-1	5/22/2002	Filtered	6.93	928	10.8	2.60	7.30	4.75	7027.65
CA21-02-45091	21-01811	LAUZ-1	5/22/2002	Unfiltered	6.93	928	10.8	2.60	7.30	4.75	7027.65
0121-97-1399	21-01812	LAUZ-2	8/20/1997	Filtered	7.41	420	19.1	1.00	6.16	3.72	7022.98
0121-97-1398	21-01812	LAUZ-2	8/20/1997	Unfiltered	7.41	420	19.1	1.00	6.16	3.72	7022.98
0121-97-1429	21-01812	LAUZ-2	12/4/1997	Filtered	7.43	545	7.3	3.00	6.67	4.23	7022.47
0121-97-1425	21-01812	LAUZ-2	12/4/1997	Unfiltered	7.43	545	7.3	3.00	6.67	4.23	7022.47
CA21-98-0004	21-01812	LAUZ-2	5/5/1998	Filtered	7.92	701	8.2	4.00	6.52	4.08	7022.62
CA21-98-0003	21-01812	LAUZ-2	5/5/1998	Unfiltered	7.92	701	8.2	4.00	6.52	4.08	7022.62
CA21-98-0010	21-01812	LAUZ-2	9/17/1998	Filtered	7.33	462	17.7	2.00	6.17	3.73	7022.97
CA21-98-0009	21-01812	LAUZ-2	9/17/1998	Unfiltered	7.33	462	17.7	2.00	6.17	3.73	7022.97
CA21-98-0042	21-01812	LAUZ-2	10/7/1998	Unfiltered	6.75	422	16.0	3.30	6.12	3.68	7023.02
Lower Los Alamos Canyon											
CALA-99-0002	LA-00215	LLAO-1	2/8/1999	Filtered	7.12	1392	10.2	2.00	11.82	9.19	5839.65
CALA-99-0001	LA-00215	LLAO-1	2/8/1999	Unfiltered	7.12	1392	10.2	2.00	11.82	9.19	5839.65
CALA-00-0042	LA-00215	LLAO-1	6/27/2000	Filtered	7.01	260	12.1	20.30	22.14	19.51	5829.33
CALA-00-0041	LA-00215	LLAO-1	6/27/2000	Unfiltered	7.01	260	12.1	20.30	22.14	19.51	5829.33
CALA-00-0092	LA-00215	LLAO-1	7/26/2000	Filtered	6.74	320	12.3	3.90	15.81	13.18	5835.66
CALA-00-0091	LA-00215	LLAO-1	7/26/2000	Unfiltered	6.74	320	12.3	3.90	15.81	13.18	5835.66

Table B-2.1-3 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])	Water Level (ft TOC[c])	Water Level (ft bgs[d])	Water Level (ft asl[e])
CALA-00-0144	LA-00215	LLAO-1	9/1/2000	Filtered	7.01	370	13.9	2.50	14.77	12.14	5836.70
CALA-00-0143	LA-00215	LLAO-1	9/1/2000	Unfiltered	7.01	370	13.9	2.50	14.77	12.14	5836.70
CALA-00-0188	LA-00215	LLAO-1	10/6/2000	Filtered	6.79	360	13.8	3.90	21.38	18.75	5830.09
CALA-00-0187	LA-00215	LLAO-1	10/6/2000	Unfiltered	6.79	360	13.8	3.90	21.38	18.75	5830.09
CALA-01-0055	LA-00215	LLAO-1	3/30/2001	Filtered	6.99	463	9.4	0.60	10.54	7.91	5840.93
CALA-01-0065	LA-00215	LLAO-1	3/30/2001	Filtered	6.99	463	9.4	0.60	na	na	na
CALA-01-0056	LA-00215	LLAO-1	3/30/2001	Unfiltered	6.99	463	9.4	0.60	10.54	7.91	5840.93
CALA-01-0221	LA-00215	LLAO-1	6/26/2001	Filtered	7.12	385	11.7	3.00	18.90	16.27	5832.57
CALA-01-0222	LA-00215	LLAO-1	6/26/2001	Unfiltered	7.12	385	11.7	3.00	18.90	16.27	5832.57
CALA-01-0259	LA-00215	LLAO-1	7/12/2001	Filtered	6.88	379	11.9	3.30	18.70	16.07	5832.77
CALA-01-0260	LA-00215	LLAO-1	7/12/2001	Unfiltered	6.88	379	11.9	3.30	18.70	16.07	5832.77
CALA-01-0477	LA-00215	LLAO-1	11/1/2001	Filtered	6.86	432	13.2	1.60	22.13	19.50	5829.34
CALA-01-0478	LA-00215	LLAO-1	11/1/2001	Unfiltered	6.86	432	13.2	1.60	22.13	19.50	5829.34
CALA-02-45035	LA-00215	LLAO-1	5/29/2002	Filtered	6.87	495	12.3	1.50	22.91	20.28	5828.56
CALA-02-45036	LA-00215	LLAO-1	5/29/2002	Unfiltered	6.87	495	12.3	1.50	22.91	20.28	5828.56
04LA-97-0006	LA-00045	LLAO-2	5/5/1997	Filtered	7.31	469	13.9	1.00	23.81	22.25	5749.93
04LA-97-0005	LA-00045	LLAO-2	5/5/1997	Unfiltered	7.31	469	13.9	1.00	23.81	22.25	5749.93
04LA-97-0008	LA-00046	LLAO-4	5/7/1997	Filtered	6.87	424	12.2	2.00	4.54	3.38	5511.83
04LA-97-0007	LA-00046	LLAO-4	5/7/1997	Unfiltered	6.87	424	12.2	2.00	4.54	3.38	5511.83
CALA-00-0044	LA-00046	LLAO-4	6/27/2000	Filtered	6.68	310	14.8	0.50	8.46	7.30	5507.91
CALA-00-0043	LA-00046	LLAO-4	6/27/2000	Unfiltered	6.68	310	14.8	0.50	8.46	7.30	5507.91
CALA-00-0094	LA-00046	LLAO-4	7/26/2000	Filtered	6.84	300	16.2	0.30	8.14	6.98	5508.23
CALA-00-0097	LA-00046	LLAO-4	7/26/2000	Filtered	6.84	300	16.2	0.30	na	na	na
CALA-00-0093	LA-00046	LLAO-4	7/26/2000	Unfiltered	6.84	300	16.2	0.30	8.14	6.98	5508.23
CALA-00-0146	LA-00046	LLAO-4	9/1/2000	Filtered	6.99	340	17.0	0.20	7.81	6.65	5508.56
CALA-00-0149	LA-00046	LLAO-4	9/1/2000	Filtered	6.99	340	17.0	0.20	na	na	na
CALA-00-0145	LA-00046	LLAO-4	9/1/2000	Unfiltered	6.99	340	17.0	0.20	7.81	6.65	5508.56
CALA-00-0190	LA-00046	LLAO-4	10/6/2000	Filtered	6.87	320	17.5	1.40	8.41	7.25	5507.96
CALA-00-0189	LA-00046	LLAO-4	10/6/2000	Unfiltered	6.87	320	17.5	1.40	8.41	7.25	5507.96
04LA-97-0010	LA-00002	LLAO-5	5/6/1997	Filtered	6.51	808	16.1	1.00	11.50	12.00	5492.71

Table B-2.1-3 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU[b])	Water Level (ft TOC[c])	Water Level (ft bgs[d])	Water Level (ft asl[e])
04LA-97-0009	LA-00002	LLAO-5	5/6/1997	Unfiltered	6.51	808	16.1	1.00	12.47	12.97	5491.74
CALA-00-0046	LA-00002	LLAO-5	6/27/2000	Filtered	6.78	460	16.6	2.20	14.21	14.71	5490.00
CALA-00-0045	LA-00002	LLAO-5	6/27/2000	Unfiltered	6.78	460	16.6	2.20	14.21	14.71	5490.00
CALA-00-0096	LA-00002	LLAO-5	7/26/2000	Filtered	6.84	460	16.0	2.70	14.29	14.79	5489.92
CALA-00-0095	LA-00002	LLAO-5	7/26/2000	Unfiltered	6.84	460	16.0	2.70	14.29	14.79	5489.92
CALA-00-0148	LA-00002	LLAO-5	9/1/2000	Filtered	7.11	480	16.6	0.60	14.28	14.78	5489.93
CALA-00-0147	LA-00002	LLAO-5	9/1/2000	Unfiltered	7.11	480	16.6	0.60	14.28	14.78	5489.93
CALA-00-0192	LA-00002	LLAO-5	10/6/2000	Filtered	6.85	440	17.3	4.40	14.82	15.32	5489.39
CALA-00-0191	LA-00002	LLAO-5	10/6/2000	Unfiltered	6.85	440	17.3	4.40	14.82	15.32	5489.39
CALA-01-0057	LA-00002	LLAO-5	3/30/2001	Filtered	6.89	1023	15.2	2.10	12.49	12.99	5491.72
CALA-01-0058	LA-00002	LLAO-5	3/30/2001	Unfiltered	6.89	1023	15.2	2.10	12.49	12.99	5491.72
CALA-01-0223	LA-00002	LLAO-5	6/26/2001	Filtered	7.05	860	16.4	2.60	13.73	14.23	5490.48
CALA-01-0224	LA-00002	LLAO-5	6/26/2001	Unfiltered	7.05	860	16.4	2.60	13.73	14.23	5490.48
CALA-01-0261	LA-00002	LLAO-5	7/12/2001	Filtered	6.77	789	16.4	4.60	14.15	14.65	5490.06
CALA-01-0262	LA-00002	LLAO-5	7/12/2001	Unfiltered	6.77	789	16.4	4.60	14.15	14.65	5490.06
CALA-01-0479	LA-00002	LLAO-5	11/1/2001	Filtered	6.77	802	17.0	0.40	14.47	14.97	5489.74
CALA-01-0480	LA-00002	LLAO-5	11/1/2001	Unfiltered	6.77	802	17.0	0.40	14.47	14.97	5489.74
CALA-02-45033	LA-00002	LLAO-5	5/29/2002	Filtered	6.84	716	16.0	2.10	13.96	14.46	5490.25
CALA-02-45034	LA-00002	LLAO-5	5/29/2002	Unfiltered	6.84	716	16.0	2.10	13.96	14.46	5490.25

[a] µS/cm = microSiemens per centimeter.

[b] NTU = Nephelometric turbidity unit.

[c] ft toc = Feet below top of casing.

[d] ft bgs = Feet below ground surface.

[e] ft asl = Feet above sea level.

[f] na = Water-level data not available.

Table B-2.1-4
Alluvial Groundwater Field Parameters and Water Levels for Pueblo Canyon

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU)[b]	Water Level (ft TOC[c])	Water Level (ft bgs[d])	Water Level (ft asl[e])
CAPU-00-0015	PU-00178	PAO-1	6/17/2000	Filtered	6.38	260	13.1	4.59	8.20	5.33	6949.14
CAPU-00-0009	PU-00178	PAO-1	6/17/2000	Unfiltered	6.38	260	13.1	4.59	8.20	5.33	6949.14
CAPU-00-0023	PU-00178	PAO-1	7/27/2000	Filtered	6.72	240	15.4	1.26	10.63	7.76	6946.71
CAPU-00-0022	PU-00178	PAO-1	7/27/2000	Unfiltered	6.72	240	15.4	1.26	10.63	7.76	6946.71
CAPU-00-0066	PU-00178	PAO-1	8/30/2000	Filtered	6.65	280	15.1	1.08	10.80	7.93	6946.54
CAPU-00-0065	PU-00178	PAO-1	8/30/2000	Unfiltered	6.65	280	15.1	1.08	10.80	7.93	6946.54
CAPU-00-0157	PU-00178	PAO-1	10/3/2000	Filtered	6.47	350	NA[f]	1.10	11.91	9.04	6945.43
CAPU-00-0156	PU-00178	PAO-1	10/3/2000	Unfiltered	6.47	350	NA	1.10	11.91	9.04	6945.43
CAPU-01-0001	PU-00178	PAO-1	4/4/2001	Filtered	6.74	408	3.5	1.68	10.45	7.58	6946.89
CAPU-01-0002	PU-00178	PAO-1	4/4/2001	Unfiltered	6.74	408	3.5	1.68	10.45	7.58	6946.89
CAPU-01-0075	PU-00178	PAO-1	6/21/2001	Filtered	6.47	462	11.9	0.69	11.74	8.87	6945.60
CAPU-01-0076	PU-00178	PAO-1	6/21/2001	Unfiltered	6.47	462	11.9	0.69	11.74	8.87	6945.60
CAPU-01-0199	PU-00178	PAO-1	10/30/2001	Filtered	6.91	614	14.9	0.55	11.68	8.81	6945.66
CAPU-01-0209	PU-00178	PAO-1	10/30/2001	Filtered	6.91	614	14.9	0.55	NA	NA	NA
CAPU-01-0200	PU-00178	PAO-1	10/30/2001	Unfiltered	6.91	614	14.9	0.55	11.68	8.81	6945.66
CAPU-02-45061	PU-00178	PAO-1	5/28/2002	Filtered	6.24	579	9.7	0.89	12.38	9.51	6944.96
CAPU-02-45062	PU-00178	PAO-1	5/28/2002	Unfiltered	6.24	579	9.7	0.89	12.38	9.51	6944.96
CAPU-01-0078	PU-10174	PAO-2	6/21/2001	Unfiltered	6.57	482	20.9	0.50	14.07	11.38	6919.05
CAPU-01-0202	PU-10174	PAO-2	10/30/2001	Unfiltered	6.53	510	14.6	0.77	14.06	11.37	6919.06
CAPU-01-0005	PU-00181	PAO-3	4/4/2001	Filtered	7.03	346	6.7	8.25	7.37	4.27	6574.31
CAPU-01-0006	PU-00181	PAO-3	4/4/2001	Unfiltered	7.03	346	6.7	8.25	7.37	4.27	6574.31
CAPU-01-0079	PU-00181	PAO-3	6/21/2001	Filtered	6.63	401	21.2	11.90	13.61	10.51	6568.07
CAPU-01-0080	PU-00181	PAO-3	6/21/2001	Unfiltered	6.63	401	21.2	11.90	13.61	10.51	6568.07
CAPU-01-0204	PU-00181	PAO-3	10/31/2001	Unfiltered	6.83	406	14.7	13.80	13.61	10.51	6568.07
CAPU-98-0041	PU-00182	PAO-4	9/22/1998	Filtered	7	502	18.0	2.85	5.63	3.12	6433.92

Table B-2.1-4 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU)[b]	Water Level (ft TOC[c])	Water Level (ft bgs[d])	Water Level (ft asl[e])
CAPU-98-0040	PU-00182	PAO-4	9/22/1998	Unfiltered	7	502	18.0	2.85	5.63	3.12	6433.92
CAPU-00-0018	PU-00182	PAO-4	6/19/2000	Filtered	6.78	440	16.0	1.10	5.11	2.60	6434.44
CAPU-00-0012	PU-00182	PAO-4	6/19/2000	Unfiltered	6.78	440	16.0	1.10	5.11	2.60	6434.44
CAPU-00-0027	PU-00182	PAO-4	7/28/2000	Filtered	6.7	440	17.1	1.30	5.34	2.83	6434.21
CAPU-00-0030	PU-00182	PAO-4	7/28/2000	Filtered	6.7	440	17.1	1.30	NA	NA	NA
CAPU-00-0026	PU-00182	PAO-4	7/28/2000	Unfiltered	6.7	440	17.1	1.30	5.34	2.83	6434.21
CAPU-00-0070	PU-00182	PAO-4	8/31/2000	Filtered	6.87	520	17.4	2.90	5.63	3.12	6433.92
CAPU-00-0073	PU-00182	PAO-4	8/31/2000	Filtered	6.87	520	17.4	2.90	NA	NA	NA
CAPU-00-0069	PU-00182	PAO-4	8/31/2000	Unfiltered	6.87	520	17.4	2.90	5.63	3.12	6433.92
CAPU-00-0161	PU-00182	PAO-4	10/4/2000	Filtered	6.66	400	15.5	2.20	5.58	3.07	6433.97
CAPU-00-0160	PU-00182	PAO-4	10/4/2000	Unfiltered	6.66	400	15.5	2.20	5.58	3.07	6433.97
CAPU-01-0007	PU-00182	PAO-4	4/4/2001	Filtered	7.13	689	9.1	1.20	5.52	3.01	6434.03
CAPU-01-0016	PU-00182	PAO-4	4/4/2001	Filtered	7.13	689	9.1	1.20	NA	NA	NA
CAPU-01-0008	PU-00182	PAO-4	4/4/2001	Unfiltered	7.13	689	9.1	1.20	5.52	3.01	6434.03
CAPU-01-0081	PU-00182	PAO-4	6/21/2001	Filtered	6.86	658	14.8	2.26	5.83	3.32	6433.72
CAPU-01-0085	PU-00182	PAO-4	6/21/2001	Filtered	6.86	658	14.8	2.26	NA	NA	NA
CAPU-01-0082	PU-00182	PAO-4	6/21/2001	Unfiltered	6.86	658	14.8	2.26	5.83	3.32	6433.72
CAPU-01-0205	PU-00182	PAO-4	10/31/2001	Filtered	6.9	618	14.9	1.59	5.98	3.47	6433.57
CAPU-01-0206	PU-00182	PAO-4	10/31/2001	Unfiltered	6.9	618	14.9	1.59	5.98	3.47	6433.57
CAPU-02-45060	PU-00182	PAO-4	5/23/2002	Filtered	6.94	734	11.9	1.10	NA	NA	NA
CAPU-02-45065	PU-00182	PAO-4	5/23/2002	Filtered	6.94	734	11.9	1.10	6.36	3.85	6433.19
CAPU-02-45066	PU-00182	PAO-4	5/23/2002	Unfiltered	6.94	734	11.9	1.10	6.36	3.85	6433.19
CAPU-99-0002	PU-00177	PAO-5N	2/11/1999	Filtered	7.38	364	4.2	3.31	9.95	7.03	6362.76
CAPU-99-0001	PU-00177	PAO-5N	2/11/1999	Unfiltered	7.38	364	4.2	3.31	9.95	7.03	6362.76
CAPU-00-0020	PU-00177	PAO-5N	6/19/2000	Filtered	6.66	370	13.4	3.50	10.28	7.36	6362.43
CAPU-00-0014	PU-00177	PAO-5N	6/19/2000	Unfiltered	6.66	370	13.4	3.50	10.28	7.36	6362.43

Table B-2.1-4 (continued)

Sample ID	Location ID	Sample Location	Date Collected	Filtered/ Unfiltered	pH	Specific Conductance (µS/cm[a])	Temp. (°C)	Turbidity (NTU)[b]	Water Level (ft TOC[c])	Water Level (ft bgs[d])	Water Level (ft asl[e])
CAPU-00-0029	PU-00177	PAO-5N	7/28/2000	Filtered	6.88	450	16.0	1.10	9.41	6.49	6363.30
CAPU-00-0028	PU-00177	PAO-5N	7/28/2000	Unfiltered	6.88	450	16.0	1.10	9.41	6.49	6363.30
CAPU-00-0072	PU-00177	PAO-5N	8/31/2000	Filtered	7.08	410	16.5	0.74	10.47	7.55	6362.24
CAPU-00-0071	PU-00177	PAO-5N	8/31/2000	Unfiltered	7.08	410	16.5	0.74	10.47	7.55	6362.24
CAPU-00-0163	PU-00177	PAO-5N	10/4/2000	Filtered	6.92	370	15.4	3.50	10.95	8.03	6361.76
CAPU-00-0164	PU-00177	PAO-5N	10/4/2000	Filtered	6.92	370	15.4	3.50	NA	NA	NA
CAPU-00-0162	PU-00177	PAO-5N	10/4/2000	Unfiltered	6.92	370	15.4	3.50	10.95	8.03	6361.76
CAPU-02-45069	PU-00177	PAO-5N	6/11/2002	Filtered	6.92	598	11.6	0.85	11.63	8.71	6361.08
CAPU-02-45070	PU-00177	PAO-5N	6/11/2002	Unfiltered	6.92	598	11.6	0.85	11.63	8.71	6361.08
GF01041G1PA	PU-10228	APCO-1	4/3/2001	Filtered	7.14	597	7.9	4.70	5.90	4.15	6363.38
GU01041G1PA	PU-10228	APCO-1	4/3/2001	Unfiltered	7.14	597	7.9	4.70	5.90	4.15	6363.38
CAPU-01-0083	PU-10228	APCO-1	6/27/2001	Filtered	6.2	538	13.4	1.70	6.60	4.85	6362.68
CAPU-01-0084	PU-10228	APCO-1	6/27/2001	Unfiltered	6.2	538	13.4	1.70	6.60	4.85	6362.68
CAPU-01-0207	PU-10228	APCO-1	11/7/2001	Filtered	6.73	604	11.7	3.80	7.01	5.26	6362.27
CAPU-01-0208	PU-10228	APCO-1	11/7/2001	Unfiltered	6.73	604	11.7	3.80	7.01	5.26	6362.27

[a] µS/cm = microSiemens per centimeter.
[b] NTU = Nephelometric turbidity unit.
[c] ft toc = Feet below top of casing.
[d] ft bgs = Feet below ground surface.
[e] ft asl = Feet above sea level.
[f] NA = Data or parameter not collected.

Table B-3.0-1
Characteristics of Sediment in
Composite Samples from Small Mammal Trapping Arrays in Reach AC-3

Sub-Sample Number	Trap Number	Geomorphic Unit	Thickness Fine Facies Sediment (cm)	Thickness Coarse Facies Sediment (cm)	Thickness Post-Fire Sediment (cm)	Thickness Post-1942 Pre-Fire Sediment (cm)	Thickness Pre-1943 Sediment or Colluvium (cm)	Thickness Other (fill or disturbed material) (cm)
Sample CAPU-02-47846, Location ID PU-02-20866, Lower Array, Lower 1/3								
1	C4	Qc	5	10	0	0	15	0
2	C6	Qc	0	15	0	0	15	0
3	C7	Qc	10	5	0	0	15	0
4	A1	c2	15	0	15	0	0	0
5	A5	c2	5	10	0	15	0	0
6	B4	c2	3	12	0	15	0	0
7	B5	c1	0	15	0	15	0	0
8	A7	c2	15	0	0	15	0	0
9	B7	c2	8	7	0	15	0	0
Average			**6.8**	**8.2**	**1.7**	**8.3**	**5.0**	**0.0**
Percent of total			**45.2%**	**54.8%**	**11.1%**	**55.6%**	**33.3%**	**0.0%**
Sample CAPU-02-47847, Location ID PU-02-20867, Lower Array, Middle 1/3								
1	A8	c1	9	6	0	15	0	0
2	A10	f1	15	0	0	15	0	0
3	B10	c2	5	10	0	15	0	0
4	A12	c2	9	6	0	15	0	0
5	B13	c1	0	15	0	15	0	0
6	B14	Qc	15	0	0	0	15	0
7	C12	Qc	10	5	0	0	15	0
8	C11	Qc	12	3	0	0	15	0
9	C10	Qc	15	0	0	0	15	0
Average			**10.0**	**5.0**	**0.0**	**8.3**	**6.7**	**0.0**
Percent of total			**66.7%**	**33.3%**	**0.0%**	**55.6%**	**44.4%**	**0.0%**
Sample CAPU-02-47848, Location ID PU-02-20868, Lower Array, Upper 1/3								
1	A15	f1	15	0	0	15	0	0
2	A16	f1	9	6	0	15	0	0
3	B17	Qc	15	0	0	0	15	0
4	A17	f1	13	2	0	13	2	0
5	B18	c2	13	2	0	15	0	0
6	A20	c2	15	0	0	15	0	0
7	C19	Qc	6	9	0	0	15	0
8	C20	Qc	5	10	0	0	15	0
9	C17	Qc	7	8	0	0	15	0
Average			**10.9**	**4.1**	**0.0**	**8.1**	**6.9**	**0.0**
Percent of total			**72.6%**	**27.4%**	**0.0%**	**54.1%**	**45.9%**	**0.0%**

Table B-3.0-1 (continued)

Sub-Sample Number	Trap Number	Geomorphic Unit	Thickness Fine Facies Sediment (cm)	Thickness Coarse Facies Sediment (cm)	Thickness Post-Fire Sediment (cm)	Thickness Post-1942 Pre-Fire Sediment (cm)	Thickness Pre-1943 Sediment or Colluvium (cm)	Thickness Other (fill or disturbed material) (cm)
Sample CAPU-03-49805 Location ID PU-03-21412, Upper Array, Lower 1/2								
1	21B	Qc	15	0	0	0	15	0
2	23A	c2	0	15	0	15	0	0
3	23B	Qc	10	5	0	0	15	0
4	24A	c1	11	4	0	15	0	0
5	26A	Qc/c2	15	0	0	2	13	0
6	26B	Qc	15	0	0	0	15	0
7	27A	Qc	13	2	0	0	15	0
8	27B	f1	15	0	0	15	0	0
Average			**11.8**	**3.3**	**0.0**	**5.9**	**9.1**	**0.0**
Percent of total			**78.3%**	**21.7%**	**0.0%**	**39.2%**	**60.8%**	**0.0%**
Sample CAPU-03-49806 Location ID PU-03-21413, Upper Array, Upper 1/2								
1	28A	c2	11	4	0	15	0	0
2	28B	Qc	12	3	0	0	15	0
3	29B	Qc	5	10	0	0	15	0
4	29A	c2	15	0	0	15	0	0
5	30B	Qc	15	0	0	0	15	0
6	33B	Qc	15	0	0	0	15	0
7	33A	Qc	10	5	0	0	15	0
8	34A	c2	15	0	0	15	0	0
Average			**12.3**	**2.8**	**0.0**	**5.6**	**9.4**	**0.0**
Percent of total			**81.7%**	**18.3%**	**0.0%**	**37.5%**	**62.5%**	**0.0%**

Table B-3.0-2
Characteristics of Sediment in
Composite Samples From Small Mammal Trapping Arrays in Reach LA-1C

Sub-Sample Number	Trap Number	Geomorphic Unit	Thickness Fine Facies Sediment (cm)	Thickness Coarse Facies Sediment (cm)	Thickness Post-Fire Sediment (cm)	Thickness Post-1942 Pre-Fire Sediment (cm)	Thickness Pre-1943 Sediment or Colluvium (cm)	Thickness Other (fill or disturbed material) (cm)
Sample CALA-02-47839, Location ID LA-02-20860, Upper Array, Upper 1/3								
1	1	c3	5	10	0	15	0	0
2	81	Fill	10	5	0	0	0	15
3	62	Fill	0	15	0	0	15	0
4	63	Qc	15	0	0	0	15	0
5	24	f1	15	0	0	15	0	0
6	83	Qt	15	0	0	0	15	0
7	85	Qt	15	0	0	0	15	0
8	44	Disturbed	7	8	0	0	15	0
9	45	Disturbed	7	8	0	0	15	0
10	65	Disturbed	10	5	0	0	15	0
11	26	c2	15	0	0	15	0	0
12	46	f1	4	11	0	4	11	0
13	6	Qc	7	8	0	0	15	0
14	27	Qt	15	0	0	0	15	0
15	7	Qc	15	0	0	0	15	0
Average			**10.3**	**4.7**	**0.0**	**3.3**	**10.7**	**1.0**
Percent of total			**68.9%**	**31.1%**	**0.0%**	**21.8%**	**71.6%**	**6.7%**
Sample CALA-02-47840, Location ID LA-02-20861, Upper Array, Middle 1/3								
1	88	Disturbed	6	9	0	0	0	15
2	68	Disturbed	0	15	0	0	0	15
3	48	f1	15	0	0	15	0	0
4	89	Qc	15	0	0	0	15	0
5	69	Qt	5	10	0	0	15	0
6	10	Qt	5	10	0	0	15	0
7	51	f1	13	2	0	7	8	0
8	70	Qt	12	3	0	0	15	0
9	11	Qt	8	7	0	0	15	0
10	52	c3	5	10	0	15	0	0
11	32	f1	4	11	4	0	11	0
12	33	Qt	15	0	0	0	15	0
13	91	Qc	15	0	0	0	15	0
14	13	Qt	15	0	0	0	15	0
15	34	f1	6	9	0	4	11	0
Average			**9.3**	**5.7**	**0.3**	**2.7**	**10.0**	**2.0**
Percent of total			**61.8%**	**38.2%**	**1.8%**	**18.2%**	**66.7%**	**13.3%**

Table B-3.0-2 (continued)

Sub-Sample Number	Trap Number	Geomorphic Unit	Thickness Fine Facies Sediment (cm)	Thickness Coarse Facies Sediment (cm)	Thickness Post-Fire Sediment (cm)	Thickness Post-1942 Pre-Fire Sediment (cm)	Thickness Pre-1943 Sediment or Colluvium (cm)	Thickness Other (fill or disturbed material) (cm)
Sample CALA-02-47841, Location ID LA-02-20862, Upper Array, Lower 1/3								
1	15	Qt	12	3	0	0	15	0
2	35	Disturbed	0	15	0	0	0	15
3	55	f1	15	0	0	15	0	0
4	16	Qt	15	0	0	0	15	0
5	56	c2	10	5	0	15	0	0
6	37	f1/disturbed	15	0	0	6	0	9
7	17	Qt	10	5	0	0	15	0
8	79	f1	3	12	0	3	12	0
9	96	Qc	3	12	0	0	15	0
10	98	Qc	15	0	0	0	15	0
11	99	Qc	15	0	0	0	15	0
12	39	f1	15	0	0	15	0	0
13	60	f1	15	0	0	15	0	0
14	80	f1	12	3	0	15	0	0
15	77	Qc	9	6	0	0	15	0
Average			**10.9**	**4.1**	**0.0**	**5.6**	**7.8**	**1.6**
Percent of total			**72.9%**	**27.1%**	**0.0%**	**37.3%**	**52.0%**	**10.7%**
Sample CALA-02-47842, Location ID LA-02-20863, Lower Array, Upper 1/3								
1	1	Qc	15	0	0	0	15	0
2	2	Qc	2	13	0	0	15	0
3	21	c3	15	0	0	15	0	0
4	41	Qt	7	8	0	0	15	0
5	23	c3	15	0	0	15	0	0
6	42	Qt	15	0	0	0	15	0
7	62	Qt	14	1	0	0	15	0
8	63	Qc	14	1	0	0	15	0
9	83	Qc	14	1	0	0	15	0
10	43	Disturbed	9	6	0	0	15	0
11	84	Qc	11	4	0	0	15	0
12	85	Qc	15	0	0	0	15	0
13	25	f1	15	0	0	15	0	0
14	7	Qc	14	1	0	0	15	0
15	67	Qc	10	5	0	0	15	0
Average			**12.3**	**2.7**	**0.0**	**3.0**	**12.0**	**0.0**
Percent of total			**82.2%**	**17.8%**	**0.0%**	**20.0%**	**80.0%**	**0.0%**

Table B-3.0-2 (continued)

Sub-Sample Number	Trap Number	Geomorphic Unit	Thickness Fine Facies Sediment (cm)	Thickness Coarse Facies Sediment (cm)	Thickness Post-Fire Sediment (cm)	Thickness Post-1942 Pre-Fire Sediment (cm)	Thickness Pre-1943 Sediment or Colluvium (cm)	Thickness Other (fill or disturbed material) (cm)
Sample CALA-02-47843, Location ID LA-02-20864, Lower Array, Middle 1/3								
1	8	Qc	13	2	0	0	15	0
2	29	c2	15	0	0	15	0	0
3	48	Disturbed	9	6	0	0	15	0
4	90	Qc	11	4	0	0	15	0
5	70	Qc	5	10	0	0	15	0
6	31	c2	2	13	0	15	0	0
7	71	Qc	10	5	0	0	15	0
8	91	Qc	15	0	0	0	15	0
9	72	Qc	13	2	0	0	15	0
10	32	c2	15	0	0	15	0	0
11	52	f1	15	0	0	8	7	0
12	13	Qc	15	0	0	0	15	0
13	92	Qc	12	3	0	0	15	0
14	53	f1	4	11	0	15	0	0
15	14	Qt	0	15	0	0	15	0
Average			**10.3**	**4.7**	**0.0**	**4.5**	**10.5**	**0.0**
Percent of total			**68.4%**	**31.6%**	**0.0%**	**30.2%**	**69.8%**	**0.0%**
Sample CALA-02-47844, Location ID LA-02-20865, Lower Array, Lower 1/3								
1	35	c2	5	10	0	15	0	0
2	56	Qt	15	0	0	0	15	0
3	16	c3(?)	15	0	0	15	0	0
4	76	Qc	11	4	0	0	15	0
5	57	Qt	10	5	0	0	15	0
6	17	c3	6	9	0	15	0	0
7	97	Qc	12	3	0	0	15	0
8	58	Qt	7	8	0	0	15	0
9	18	c3	13	2	0	15	0	0
10	99	Qc	15	0	0	0	15	0
11	37	c2	5	10	0	15	0	0
12	100	Qc	5	10	0	0	15	0
13	39	c2	15	0	0	15	0	0
14	80	Qc	13	2	0	0	15	0
15	79	Qc	5	10	0	0	15	0
Average			**10.1**	**4.9**	**0.0**	**6.0**	**9.0**	**0.0**
Percent of total			**67.6%**	**32.4%**	**0.0%**	**40.0%**	**60.0%**	**0.0%**

Table B-3.0-3
Characteristics of Sediment in
Composite Samples from Small Mammal Trapping Arrays in Reach P-3W

Sub-Sample Number	Trap Number	Geomorphic Unit	Thickness Fine Facies Sediment (cm)	Thickness Coarse Facies Sediment (cm)	Thickness Post-Fire Sediment (cm)	Thickness Post-1942 Pre-Fire Sediment (cm)	Thickness Pre-1943 Sediment or Colluvium (cm)	Thickness Other (fill or disturbed material) (cm)
Sample CAPU-02-47849, Location ID PU-02-20869, Upper Array, Upper 1/3								
1	81	Qc	15	0	0	0	15	0
2	62	Qt	13	2	0	0	15	0
3	41	f1	0	15	2	0	13	0
4	2	c2	15	0	15	0	0	0
5	42	f1	15	0	3	0	12	0
6	23	f1	6	9	2	0	13	0
7	3	f1	15	0	12	3	0	0
8	4	f1	15	0	5	10	0	0
9	26	f1	15	0	15	0	0	0
10	27	f1	15	0	15	0	0	0
11	84	Qt	15	0	0	0	15	0
12	65	Qt	15	0	0	0	15	0
13	86	Qt	10	5	0	0	15	0
14	47	Qt	15	0	0	0	15	0
15	67	Qt	15	0	0	0	15	0
Average			**12.9**	**2.1**	**4.6**	**0.9**	**9.5**	**0.0**
Percent of total			**86.2%**	**13.8%**	**30.7%**	**5.8%**	**63.6%**	**0.0%**
Sample CAPU-02-47850, Location ID PU-02-20870, Upper Array, Middle 1/3								
1	9	c2	15	0	15	0	0	0
2	68	Qt	15	0	0	0	15	0
3	49	Qt	15	0	0	0	15	0
4	89	Qt	15	0	0	0	15	0
5	70	Qt	15	0	0	0	15	0
6	10	c2	15	0	15	0	0	0
7	51	Qt	15	0	0	0	15	0
8	11	c2	15	0	10	5	0	0
9	72	Qt	15	0	0	0	15	0
10	52	Qt	15	0	0	0	15	0
11	33	f1	15	0	3	0	12	0
12	92	Qt	15	0	0	0	15	0
13	93	Qt	15	0	0	0	15	0
14	34	f1	15	0	3	0	12	0
15	32	f1	15	0	1	0	14	0
Average			**15.0**	**0.0**	**3.1**	**0.3**	**11.5**	**0.0**
Percent of total			**100.0%**	**0.0%**	**20.9%**	**2.2%**	**76.9%**	**0.0%**

Table B-3.0-3 (continued)

Sub-Sample Number	Trap Number	Geomorphic Unit	Thickness Fine Facies Sediment (cm)	Thickness Coarse Facies Sediment (cm)	Thickness Post-Fire Sediment (cm)	Thickness Post-1942 Pre-Fire Sediment (cm)	Thickness Pre-1943 Sediment or Colluvium (cm)	Thickness Other (fill or disturbed material) (cm)
Sample CAPU-02-47851, Location ID PU-02-20871 Upper Array, Lower 1/3								
1	16	f1	15	0	2	0	13	0
2	35	Qt	15	0	0	0	15	0
3	17	f1	15	0	9	0	6	0
4	18	f1	15	0	15	0	0	0
5	36	Qt	15	0	0	0	15	0
6	56	Qt	15	0	0	0	15	0
7	57	Qt	15	0	0	0	15	0
8	76	Qt	13	2	0	0	15	0
9	97	Qt	12	3	0	0	15	0
10	79	Qt	15	0	0	0	15	0
11	78	Qt	15	0	0	0	15	0
12	99	Qt	13	2	0	0	15	0
13	100	Qt	15	0	0	0	15	0
14	60	Qt	15	0	0	0	15	0
15	40	Qt	15	0	0	0	15	0
Average			**14.5**	**0.5**	**1.7**	**0.0**	**13.3**	**0.0**
Percent of total			**96.9%**	**3.1%**	**11.6%**	**0.0%**	**88.4%**	**0.0%**
Sample CAPU-03-49802 Location ID PU-03-21409, Uppermost Array, Lower 1/3								
1	21	Qt	15	0	0	0	15	0
2	61	c3	15	0	3	12	0	0
3	82	c3	8	7	4	11	0	0
4	42	c2	15	0	13	2	0	0
5	83	c3	9	6	2	13	0	0
6	23	f1	15	0	2	0	13	0
7	84	f1	15	0	7	8	0	0
8	4	Qt	15	0	0	0	15	0
9	44	c2	15	0	10	5	0	0
10	5	Qt	15	0	0	0	15	0
11	26	Qt	15	0	0	0	15	0
12	45	c2	15	0	12	3	0	0
13	66	c3	3	12	3	12	0	0
14	3	Qt	15	0	0	0	15	0
15	67	c2	15	0	7	8	0	0
Average			**13.3**	**1.7**	**4.2**	**4.9**	**5.9**	**0.0**
Percent of total			**88.9%**	**11.1%**	**28.0%**	**32.9%**	**39.1%**	**0.0%**

Table B-3.0-3 (continued)

Sub-Sample Number	Trap Number	Geomorphic Unit	Thickness Fine Facies Sediment (cm)	Thickness Coarse Facies Sediment (cm)	Thickness Post-Fire Sediment (cm)	Thickness Post-1942 Pre-Fire Sediment (cm)	Thickness Pre-1943 Sediment or Colluvium (cm)	Thickness Other (fill or disturbed material) (cm)
Sample CAPU-03-49803 Location ID PU-03-21410, Uppermost Array, Middle 1/3								
1	50	c2	15	0	15	0	0	0
2	91	Qt	15	0	0	0	15	0
3	70	Qt	15	0	0	0	15	0
4	92	Qt	15	0	0	0	15	0
5	51	c2	6	9	15	0	0	0
6	73	c2	15	0	15	0	0	0
7	8	c3	12	3	0	15	0	0
8	30	f1	15	0	1	0	14	0
9	53	c2	0	15	15	0	0	0
10	31	f1	15	0	6	0	9	0
11	12	Qt	5	10	0	0	15	0
12	13	Qt	13	2	0	0	15	0
13	94	Qt	15	0	0	0	15	0
14	74	c2	15	0	15	0	0	0
15	34	Qt	15	0	0	0	15	0
Average			**12.4**	**2.6**	**5.5**	**1.0**	**8.5**	**0.0**
Percent of total			**82.7%**	**17.3%**	**36.4%**	**6.7%**	**56.9%**	**0.0%**
Sample CAPU-03-49804 Location ID PU-03-21411, Uppermost Array, Upper 1/3								
1	55	c2	15	0	15	0	0	0
2	75	c2	15	0	15	0	0	0
3	35	Qt	13	2	0	0	15	0
4	95	Qt	10	5	0	0	15	0
5	16	Qt	15	0	0	0	15	0
6	36	Qt	13	2	0	0	15	0
7	76	c2	15	0	15	0	0	0
8	38	Qt	11	4	0	0	15	0
9	57	c2	5	10	15	0	0	0
10	18	Qt	15	0	0	0	15	0
11	98	Qt	15	0	0	0	15	0
12	19	Qt	13	2	0	0	15	0
13	60	c2	11	4	15	0	0	0
14	79	c2	9	6	15	0	0	0
15	99	Qt	15	0	0	0	15	0
Average			**12.7**	**2.3**	**6.0**	**0.0**	**9.0**	**0.0**
Percent of total			**84.4%**	**15.6%**	**40.0%**	**0.0%**	**60.0%**	**0.0%**

Table B-3.0-4
Characteristics of Sediment in
Composite Samples from Small Mammal Trapping Arrays in Guaje Canyon

Sub-Sample Number	Trap Number	Geomorphic Unit	Thickness Fine Facies Sediment (cm)	Thickness Coarse Facies Sediment (cm)	Thickness Post-Fire Sediment (cm)	Thickness Post-1942 Pre-Fire Sediment (cm)	Thickness Pre-1943 Sediment or Colluvium (cm)	Thickness Other (fill or disturbed material) (cm)
Sample CAGU-02-47864, Location ID GU-02-20902, Lower Array, Lower 1/3								
1	1	Qc	0	15	0	0	15	0
2	62	f1	15	0	4	11	0	0
3	82	f1	15	0	2	13	0	0
4	63	f1	15	0	7	8	0	0
5	44	f1	15	0	2	13	0	0
6	24	f1	15	0	15	0	0	0
7	4	Qc	0	15	0	0	15	0
8	5	Qc	0	15	0	0	15	0
9	25	f1	15	0	15	0	0	0
10	45	f1	15	0	4	11	0	0
11	85	Disturbed	15	0	0	0	0	15
12	66	f1	10	5	0	15	0	0
13	26	f1	0	15	15	0	0	0
14	47	f1	15	0	3	12	0	0
15	87	Disturbed	15	0	1	0	0	14
Average			**10.7**	**4.3**	**4.5**	**5.5**	**3.0**	**1.9**
Percent of total			**71.1%**	**28.9%**	**30.2%**	**36.9%**	**20.0%**	**12.9%**
Sample CAGU-02-47865, Location ID GU-02-20903, Lower Array, Middle 1/3								
1	28	f1	15	0	15	0	0	0
2	9	f1	12	3	8	7	0	0
3	49	f1	15	0	1	14	0	0
4	89	Disturbed	15	0	0	0	0	15
5	30	f1	15	0	2	13	0	0
6	11	Qc	0	15	0	0	15	0
7	51	f1	15	0	0	15	0	0
8	71	f1	15	0	0	15	0	0
9	92	Qt	15	0	0	0	15	0
10	73	f1	15	0	7	8	0	0
11	53	f1	15	0	3	12	0	0
12	14	Qc	0	15	0	0	15	0
13	34	f1	3	12	3	12	0	0
14	74	f1	15	0	2	13	0	0
15	94	Qt	15	0	0	0	15	0
Average			**12.0**	**3.0**	**2.7**	**7.3**	**4.0**	**1.0**
Percent of total			**80.0%**	**20.0%**	**18.2%**	**48.4%**	**26.7%**	**6.7%**

Table B-3.0-4 (continued)

Sub-Sample Number	Trap Number	Geomorphic Unit	Thickness Fine Facies Sediment (cm)	Thickness Coarse Facies Sediment (cm)	Thickness Post-Fire Sediment (cm)	Thickness Post-1942 Pre-Fire Sediment (cm)	Thickness Pre-1943 Sediment or Colluvium (cm)	Thickness Other (fill or disturbed material) (cm)
Sample CAGU-02-47866, Location ID GU-02-20904, Lower Array, Upper 1/3								
1	35	c3	15	0	0	15	0	0
2	56	f1	15	0	3	12	0	0
3	76	f1	15	0	2	13	0	0
4	96	Qt	15	0	1	0	14	0
5	97	Qt	5	10	0	0	15	0
6	57	f1	10	5	0	15	0	0
7	17	Qc	0	15	0	0	15	0
8	18	Qc	5	10	0	0	15	0
9	38	f1	5	10	0	15	0	0
10	78	f1	15	0	0	15	0	0
11	39	Qt	6	9	0	0	15	0
12	100	Qt	15	0	2	0	13	0
13	80	Qt	0	15	0	0	15	0
14	60	c3	15	0	9	6	0	0
15	20	Qc	12	3	0	0	15	0
Average			**9.9**	**5.1**	**1.1**	**6.1**	**7.8**	**0.0**
Percent of total			**65.8%**	**34.2%**	**7.6%**	**40.4%**	**52.0%**	**0.0%**
Sample CAGU-02-47922, -47923, -47924, Location ID GU-02-20907, Upper Array, Lower 1/3								
1	1	f1	1	14	1	14	0	0
2	42	c3?	15	0	15	0	0	0
3	2	Qc	1	14	1	0	14	0
4	43	c3	15	0	15	0	0	0
5	63	f1	15	0	0	15	0	0
6	83	f1	11	4	3	12	0	0
7	44	f1	7	8	7	8	0	0
8	85	c3	15	0	15	0	0	0
9	64	c3	3	12	3	12	0	0
10	25	Qc	15	0	0	0	15	0
11	66	c3	7	8	3	12	0	0
12	26	Qc	10	5	2	0	13	0
13	87	c3	7	8	14	1	0	0
14	27	Qc	9	6	1	0	14	0
15	7	Qc	8	7	0	0	15	0
Average			**9.3**	**5.7**	**5.3**	**4.9**	**4.7**	**0.0**
Percent of total			**61.8%**	**38.2%**	**35.6%**	**32.9%**	**31.6%**	**0.0%**

Table B-3.0-4 (continued)

Sub-Sample Number	Trap Number	Geomorphic Unit	Thickness Fine Facies Sediment (cm)	Thickness Coarse Facies Sediment (cm)	Thickness Post-Fire Sediment (cm)	Thickness Post-1942 Pre-Fire Sediment (cm)	Thickness Pre-1943 Sediment or Colluvium (cm)	Thickness Other (fill or disturbed material) (cm)
Sample CAGU-02-47867, Location ID GU-02-20905, Upper Array, Middle 1/3								
1	28	f1	15	0	1	14	0	0
2	68	c3	15	0	4	11	0	0
3	49	f1	15	0	15	0	0	0
4	89	f1	15	0	7	8	0	0
5	29	f1	2	13	2	13	0	0
6	9	Qc	4	11	1	0	14	0
7	11	f1	15	0	4	11	0	0
8	31	f1	15	0	15	0	0	0
9	71	f1	15	0	6	9	0	0
10	91	f1-road	15	0	3	12	0	0
11	72	f1	15	0	6	9	0	0
12	52	f1	15	0	15	0	0	0
13	93	Qc	15	0	0	0	15	0
14	53	f1	15	0	14	1	0	0
15	13	Qc	4	11	1	0	14	0
Average			**12.7**	**2.3**	**6.3**	**5.9**	**2.9**	**0.0**
Percent of total			**84.4%**	**15.6%**	**41.8%**	**39.1%**	**19.1%**	**0.0%**
Sample CAGU-02-47868, Location ID GU-02-20906, Upper Array, Upper 1/3								
1	75	Qc	15	0	0	0	15	0
2	15	f1	4	11	4	11	0	0
3	56	Qt	15	0	0	0	15	0
4	36	f1	15	0	2	13	0	0
5	76	Disturbed	6	9	0	15	0	0
6	96	Qt	15	0	2	0	13	0
7	98	Disturbed	3	12	0	0	0	15
8	37	f1	15	0	2	13	0	0
9	78	f1	15	0	9	6	0	0
10	99	Qc	6	9	2	0	13	0
11	18	Qc	0	15	0	0	15	0
12	58	f1	15	0	15	0	0	0
13	59	f1	15	0	8	7	0	0
14	20	f1	6	9	1	14	0	0
15	40	f1	15	0	15	0	0	0
Average			**10.7**	**4.3**	**4.0**	**5.3**	**4.7**	**1.0**
Percent of total			**71.1%**	**28.9%**	**26.7%**	**35.1%**	**31.6%**	**6.7%**

Table B-3.0-5
Summary of Characteristics of Sediment in Composite Samples from Small Mammal Trapping Arrays

Reach	Trapping Array	Sub-Array	Sample ID	Location ID	Percent Fine Facies Sediment	Percent Coarse Facies Sediment	Percent Post-Fire Sediment	Percent Post-1942 Pre-Fire Sediment	Percent Pre-1943 Sediment or Colluvium	Percent Other (fill or disturbed material)
AC-3	Lower	Lower 1/3	CAPU-02-47846	PU-02-20866	45.2	54.8	11.1	55.6	33.3	0
AC-3	Lower	Middle 1/3	CAPU-02-47847	PU-02-20867	66.7	33.3	0	55.6	44.4	0
AC-3	Lower	Upper 1/3	CAPU-02-47848	PU-02-20868	72.6	27.4	0	54.1	45.9	0
AC-3	Upper	Lower 1/2	CAPU-03-49805	PU-03-21412	78.3	21.7	0	39.2	60.8	0
AC-3	Upper	Upper 1/2	CAPU-03-49806	PU-03-21413	81.7	18.3	0	37.5	62.5	0
				Average	**68.9**	**31.1**	**2.2**	**48.4**	**49.4**	**0.0**
LA-1C	Upper	Upper 1/3	CALA-02-47839	LA-02-20860	68.9	31.1	0	21.8	71.6	6.7
LA-1C	Upper	Middle 1/3	CALA-02-47840	LA-02-20861	61.8	38.2	1.8	18.2	66.7	13.3
LA-1C	Upper	Lower 1/3	CALA-02-47841	LA-02-20862	72.9	27.1	0	37.3	52	10.7
LA-1C	Lower	Upper 1/3	CALA-02-47842	LA-02-20863	82.2	17.8	0	20	80	0
LA-1C	Lower	Middle 1/3	CALA-02-47843	LA-02-20864	68.4	31.6	0	30.2	69.8	0
LA-1C	Lower	Lower 1/3	CALA-02-47844	LA-02-20865	67.6	32.4	0	40	60	0
				Average	**70.3**	**29.7**	**0.3**	**27.9**	**66.7**	**5.1**
P-3W	Upper	Upper 1/3	CAPU-02-47849	PU-02-20869	86.2	13.8	30.7	5.8	63.6	0
P-3W	Upper	Middle 1/3	CAPU-02-47850	PU-02-20870	100	0	20.9	2.2	76.9	0
P-3W	Upper	Lower 1/3	CAPU-02-47851	PU-02-20871	96.9	3.1	11.6	0	88.4	0
P-3W	Uppermost	Lower 1/3	CAPU-03-49802	PU-03-21409	88.9	11.1	28	32.9	39.1	0
P-3W	Uppermost	Middle 1/3	CAPU-03-49803	PU-03-21410	82.7	17.3	36.4	6.7	56.9	0
P-3W	Uppermost	Upper 1/3	CAPU-03-49804	PU-03-21411	84.4	15.6	40	0	60	0
				Average	**89.9**	**10.2**	**27.9**	**7.9**	**64.2**	**0.0**
Guaje	Lower	Lower 1/3	CAGU-02-47864	GU-02-20902	71.1	28.9	30.2	36.9	20	12.9
Guaje	Lower	Middle 1/3	CAGU-02-47865	GU-02-20903	80	20	18.2	48.4	26.7	6.7
Guaje	Lower	Upper 1/3	CAGU-02-47866	GU-02-20904	65.8	34.2	7.6	40.4	52	0
Guaje	Upper	Lower 1/3	CAGU-02-47922	GU-02-20907	61.8	38.2	35.6	32.9	31.6	0
Guaje	Upper	Middle 1/3	CAGU-02-47867	GU-02-20905	84.4	15.6	41.8	39.1	19.1	0
Guaje	Upper	Upper 1/3	CAGU-02-47868	GU-02-20906	71.1	28.9	26.7	35.1	31.6	6.7
				Average	**72.4**	**27.6**	**26.7**	**38.8**	**30.2**	**4.4**

Table B-3.0-6
Small Mammals Submitted for Pesticides/PCBs, Metals, Isotopic Plutonium, Gamma Scan, and Strontium-90 Laboratory Analyses

Sample ID	Ear Tag No.	Species Code	Canyon and Array
CAPU-02-49235	427	PEMA[a]	Upper Pueblo
CAPU-02-49236	399	PEMA	Upper Pueblo
CAPU-02-49237	320	PEMA	Upper Pueblo
CAPU-02-49238	301	PEMA	Upper Pueblo
CAPU-02-49239	324	PETR[b]	Upper Pueblo
CAPU-02-49240	381	PETR	Upper Pueblo
CAPU-02-49241	322	PEBO[c]	Upper Pueblo
CAPU-02-49242	383	PEBO	Acid
CAPU-02-49243	65	PEBO	Acid
CAPU-02-49244	338	PEBO	Acid
CAPU-02-49245	27	PEBO	Acid
CAPU-02-49246	64	PEBO	Acid
CAPU-02-49247	55	PEMA	Acid
CAPU-02-49248	58	PEMA	Acid
CAPU-02-49249	28	PEBO	Acid
CAPU-02-49250	76	PEMA	Acid
CAPU-02-49251	79	PEMA	Acid
CAGU-02-49185	4	PEBO	Lower Guaje
CAGU-02-49186	17	PEBO	Lower Guaje
CAGU-02-49187	45	PEBO	Upper Guaje
CAQC-03-50660	n/a[d]	SWWE[e]	n/a
CALA-02-49210	317	PEMA	Lower Los Alamos
CALA-02-49211	380	PEBO	Lower Los Alamos
CALA-02-49212	345	PEBO	Lower Los Alamos
CALA-02-49213	337	PEBO	Upper Los Alamos
CALA-02-49214	325	PEBO	Lower Los Alamos
CALA-02-49215	389	PEBO	Upper Los Alamos
CALA-02-49216	378	PEBO	Upper Los Alamos
CALA-02-49217	330	PEMA	Upper Los Alamos
CALA-02-49218	395	PEMA	Upper Los Alamos
CALA-02-49219	339	PEMA	Upper Los Alamos
CALA-02-49220	321	PETR	Upper Los Alamos
CAGU-02-49188	43	PEBO	Upper Guaje
CAGU-02-49189	73	PEBO	Lower Guaje
CAGU-02-49190	83	PEBO	Upper Guaje
CAGU-02-49191	448	PEMA	Upper Guaje

Table B-3.0-6 (continued)

Sample ID	Ear Tag No.	Species Code	Canyon and Array
CAGU-02-49192	60	PEMA	Upper Guaje
CAGU-02-49193	70	PEMA	Upper Guaje
CAGU-02-49194	5	PEMA	Upper Guaje
CAGU-02-49195	33	PEMA	Upper Guaje
CAGU-02-49196	37	PEMA	Upper Guaje
CAQC-03-50661	n/a	SWWE	n/a
CALA-02-49221	336	PETR	Lower Los Alamos
CALA-02-49222	391	PETR	Lower Los Alamos
CALA-02-49223	326	PEMA	Lower Los Alamos
CALA-02-49224	341	PEMA	Lower Los Alamos
CALA-02-49225	310	PETR	Lower Los Alamos
CAPU-03-50608	241	PEMA	Acid
CAPU-03-50609	243	PEMA	Acid
CAPU-03-50610	248	PEMA	Acid
CAPU-03-50611	247	PEMA	Acid
CAPU-03-50612	244	PEMA	Acid
CAPU-03-50613	245	PETR	Acid
CAPU-03-50614	275	PEBO	Acid
CAPU-03-50615	274	PEBO	Acid
CAPU-03-50616	272	PEBO	Acid
CAPU-03-50617	246	PEBO	Acid
CAPU-03-50618	238	PEBO	Acid
CAPU-03-50619	225	REME	Upper Pueblo
CAPU-03-50620	239	PEBO	Acid
CAPU-03-50621	221	REME[f]	Lower Pueblo
CAQC-03-50662	n/a	SWWE	n/a
CALA-03-50623	23	PEBO	Lower Los Alamos
CALA-03-50624	66	PEBO	Upper Los Alamos
CALA-03-50625	3882	PEBO	Upper Los Alamos
CALA-03-50626	14	PEBO	Lower Los Alamos
CALA-03-50627	46	PEBO	Lower Los Alamos
CALA-03-50628	3468	PEBO	Upper Los Alamos
CALA-03-50629	82	PEMA	Lower Los Alamos
CAGU-03-50640	67	PEBO	Upper Guaje
CAGU-03-50641	81	PEBO	Lower Guaje
CAGU-03-50642	3484	PEBO	Lower Guaje
CAGU-03-50643	13	PEMA	Lower Guaje
CAGU-03-50644	10	PEMA	Upper Guaje
CAGU-03-50645	257	PEBO	Upper Guaje

Table B-3.0-6 (continued)

Sample ID	Ear Tag No.	Species Code	Canyon and Array
CAGU-03-50646	262	PEBO	Lower Guaje
CAGU-03-50647	252	PEMA	Upper Guaje
CAGU-03-50648	251	PEMA	Upper Guaje
CAGU-03-50649	254	PEMA	Upper Guaje
CAGU-03-50650	261	PEMA	Upper Guaje
CAGU-03-50651	256	PEBO	Upper Guaje
CAGU-03-50652	263	REME	Lower Guaje
CAQC-03-50663	n/a	SWWE	n/a
CAPU-03-50588	229	REME	Upper Pueblo
CAPU-03-50589	214	PEMA	Upper Pueblo
CAPU-03-50590	217	PEBO	Lower Pueblo
CAPU-03-50591	211	PEMA	Upper Pueblo
CAPU-03-50592	206	PEMA	Lower Pueblo
CAPU-03-50593	204	PEBO	Lower Pueblo
CAPU-03-50594	220	PETR	Lower Pueblo
CAPU-03-50595	231	PEBO	Lower Pueblo
CAPU-03-50596	218	PETR	Lower Pueblo
CAPU-03-50597	353	PETR	Lower Pueblo
CAPU-03-50598	233	PETR	Lower Pueblo
CAPU-03-50599	228	PETR	Upper Pueblo
CAPU-03-50600	224	PEMA	Upper Pueblo
CAPU-03-50601	235	PEMA	Lower Pueblo
CAPU-03-50602	237	PETR	Upper Pueblo
CAPU-03-50603	210	PEMA	Upper Pueblo
CAPU-03-50604	215	PEBO	Upper Pueblo
CAPU-03-50605	207	PEBO	Lower Pueblo
CAPU-03-50606	216	PEBO	Upper Pueblo
CAPU-03-50607	250	PEMA	Acid
CAQC-03-50664	n/a	SWWE	n/a

[a] PEMA = Deer mouse (Peromyscus maniculatus).
[b] PETR = Pinyon mouse (Peromyscus truei).
[c] PEBO = Brush mouse (Peromyscus boylii).
[d] n/a = Not applicable (QC mouse).
[e] SWWE= Swiss Webster mouse (QC mouse).
[f] REME = Western harvest mouse (Reithrodontomys megalotis).

Table B-3.0-7
Sediment Submitted for Laboratory Analyses

Reach	Sample ID	Location ID	Sample Type	Depth (cm)	Date Collected	Analytical Suites	Notes
LA-1C	CALA-02-47839	LA-02-20860	Composite	0–15	7/29/02	Standard*	Array 1, 1st composite sample (upper/upper)
LA-1C	CALA-02-47840	LA-02-20861	Composite	0–15	7/29/02	Standard	Array 1, 2nd composite sample (upper/middle)
LA-1C	CALA-02-47841	LA-02-20862	Composite	0–15	7/29/02	Standard	Array 1, 3rd composite sample (upper/lower)
LA-1C	CALA-02-47842	LA-02-20863	Composite	0–15	7/29/02	Standard	Array 2, 1st composite sample (lower/upper)
LA-1C	CALA-02-47843	LA-02-20864	Composite	0–15	7/29/02	Standard	Array 2, 2nd composite sample (lower/middle)
LA-1C	CALA-02-47844	LA-02-20865	Composite	0–15	7/29/02	Standard	Array 2, 3rd composite sample (lower/lower)
P-3W	CAPU-02-47849	PU-02-20869	Composite	0–15	7/26/02	Standard	Array 1, 1st composite sample (upper 1/3)
P-3W	CAPU-02-47850	PU-02-20870	Composite	0–15	7/26/02	Standard	Array 1, 2nd composite sample (middle 1/3)
P-3W	CAPU-02-47851	PU-02-20871	Composite	0–15	7/26/02	Standard	Array 1, 3rd composite sample (lower 1/3)
AC-3	CAPU-02-47848	PU-02-20868	Composite	0–15	7/26/02	Standard	Array 1, 1st composite sample (upper 1/3)
AC-3	CAPU-02-47847	PU-02-20867	Composite	0–15	7/26/02	Standard	Array 1, 2nd composite sample (middle 1/3)
AC-3	CAPU-02-47846	PU-02-20866	Composite	0–15	7/26/02	Standard	Array 1, 3rd composite sample (lower 1/3)
Guaje	CAGU-02-47868	GU-02-20906	Composite	0–15	7/25/02	Standard	Array 1, 1st composite sample (upper/upper)
Guaje	CAGU-02-47867	GU-02-20905	Composite	0–15	7/25/02	Standard	Array 1, 2nd composite sample (upper/middle)
Guaje	CAGU-02-47922	GU-02-20907	Composite	0–15	7/25/02	Standard+PAH	Array 1, 3rd composite sample (upper/lower)
Guaje	CAGU-02-47866	GU-02-20904	Composite	0–15	7/25/02	Standard	Array 2, 1st composite sample (lower/upper)
Guaje	CAGU-02-47865	GU-02-20903	Composite	0–15	7/25/02	Standard	Array 2, 2nd composite sample (lower/middle)
Guaje	CAGU-02-47864	GU-02-20902	Composite	0–15	7/25/02	Standard	Array 2, 3rd composite sample (lower/lower)
Guaje	CAGU-02-47863	GU-02-20904	Composite	0–15	7/25/02	Standard	QA duplicate of CAGU-02-47866
DP-1W	CALA-02-47906	21-10931	Grab	0–22	7/31/02	Standard+PAH	None
DP-2	CALA-02-47900	21-05500	Grab	0–30	7/30/02	Standard+PAH	None
LA-0	CALA-02-47894	LA-00221	Grab	0–30	7/29/02	Standard+PAH	None
LA-1W	CALA-02-47891	LA-00146	Grab	0–30	7/29/02	Standard+PAH	None
LA-1C	CALA-02-47888	LA-00179	Grab	0–30	7/29/02	Standard+PAH	None
LA-2W	CALA-02-47885	LA-00041	Grab	0–30	7/29/02	Standard+PAH	None
LA-3E	CALA-02-47897	LA-10009	Grab	0–30	7/30/02	Standard+PAH	None
LA-3E	CALA-02-47909	LA-10009	Grab	0–30	7/30/02	Standard+PAH	QA duplicate of CALA-02-47897
AC-1	CAPU-02-47919	PU-10013	Grab	0–30	7/30/02	Standard+PAH	None
AC-3	CAPU-02-47910	PU-10110	Grab	0–30	7/26/02	Standard+PAH	None
P-3W	CAPU-02-47916	PU-02-20873	Grab	0–30	7/30/02	Standard+PAH	None
P-3E	CAPU-02-47913	PU-02-20872	Grab	0–30	7/30/02	Standard+PAH	None
LA-1W	CALA-03-49799	LA-00141	Grab	0–30	11/20/02	Standard+PAH	None
LA-1W	CALA-03-49800	LA-00143	Grab	0–30	11/20/02	Standard+PAH	None

*Standard = Pesticides/PCBs, target analyte list metals with cyanide, isotopic plutonium, gamma spectroscopy radionuclides, and strontium-90.

Table B-3.0-8
Crosswalk Among Sediment Sample IDs, Worm Sample IDs, Locations, and Dates

Reach	Location ID	Depth (cm)	Sediment Sample ID, Chemical Analysis	Sediment Sample ID, Earthworm Mortality Test	Soil Sample Collection Date	Worm Sample ID, Chemical Analysis	Toxicity Test Termination Date	Sediment Sample ID, Plant Germination Test
Guaje	GU-02-20907	0–15	CAGU-02-47922	CAGU-02-47923	7/25/02	CAGU-03-50168	9/17/02	CAGU-02-47924
LA-2W	LA-00041	0–30	CALA-02-47885	CALA-02-47886	7/29/02	CALA-03-50152	9/17/02	CALA-02-47887
LA-1C	LA-00179	0–30	CALA-02-47888	CALA-02-47889	7/29/02	CALA-03-50153	9/17/02	CALA-02-47890
LA-1W	LA-00146	0–30	CALA-02-47891	CALA-02-47892	7/29/02	CALA-03-50160	9/17/02	CALA-02-47893
LA--0	LA-00221	0–30	CALA-02-47894	CALA-02-47895	7/29/02	CALA-03-50154	9/17/02	CALA-02-47896
LA-3E	LA-10009	0–30	CALA-02-47897	CALA-02-47898	7/30/02	CALA-03-50155	9/17/02	CALA-02-47899
DP-2	21-05500	0–30	CALA-02-47900	CALA-02-47901	7/30/02	CALA-03-50156	9/17/02	CALA-02-47902
DP-1W	21-10931	0–22	CALA-02-47906	CALA-02-47907	7/31/02	CALA-03-50157	9/17/02	CALA-02-47905
AC-3	PU-10110	0–30	CAPU-02-47910	CAPU-02-47911	7/26/02	CAPU-03-50162	9/17/02	CAPU-02-47912
P-3E	PU-02-20872	0–30	CAPU-02-47913	CAPU-02-47914	7/30/02	CAPU-03-50163	9/17/02	CAPU-02-47915
P-3W	PU-00141	0–30	CAPU-02-47916	CAPU-02-47917	7/30/02	CAPU-03-50164	9/17/02	CAPU-02-47918
AC-1	PU-10013	0–30	CAPU-02-47919	CAPU-02-47920	7/30/02	CAPU-03-50165	9/17/02	CAPU-02-47921
n/a*	n/a	n/a	Negative Control	Negative Control	n/a	CALA-03-50161	9/17/02	n/a
LA-1W	LA-00141	0–30	CALA-03-49796	CALA-03-49799	11/20/02	CALA-03-50158	1/3/03	n/a
LA-1W	LA-00143	0–30	CALA-03-49797	CALA-03-49800	11/20/02	CALA-03-50159	1/3/03	n/a
n/a	n/a	n/a	Negative Control	Negative Control	n/a	CAPU-03-50166	1/3/03	n/a

*n/a = Not applicable.

Table B-3.0-9
Sediment and Surface Water Samples Submitted for Laboratory Analyses

Media	Reach	Sample ID	Location ID	Sample Type	Depth (cm)	Date Collected	Analytical Suites
c1 sediment	DP-1C	CALA-02-47937	LA-02-20913	Grab	0–5	7/31/02	Standard[a]
water	DP-1C	CALA-02-47947	LA-02-20913	Grab	n/a[b]	7/31/02	Standard
c1 sediment	LA-0	CALA-02-47939	LA-02-20914	Grab	0–5	7/30/02	Standard
water	LA-0	CALA-02-47949	LA-02-20914	Grab	n/a	7/30/02	Standard
c1 sediment	LA-1FW	CALA-02-47941	LA-02-20915	Grab	0–5	7/30/02	Standard
water	LA-1FW	CALA-02-47950	LA-02-20915	Grab	n/a	7/30/02	Standard
c1 sediment	LA-4W	CALA-02-47929	LA-02-20909	Grab	0–5	7/30/02	Standard
water	LA-4W	CALA-02-47946	LA-02-20909	Grab	n/a	7/30/02	Standard
c1 sediment	LA-5	CALA-02-47927	LA-02-20908	Grab	0–5	7/30/02	Standard
water	LA-5	CALA-02-47945	LA-02-20908	Grab	n/a	7/30/02	Standard
c1 sediment	P-3E	CAPU-02-47959	PU-02-20920	Grab	0–5	7/31/02	Standard
water	P-3E	CAPU-02-47961	PU-02-20920	Grab	n/a	7/31/02	Standard
c1 sediment	DP-4	CALA-02-47933	LA-02-20911	Grab	0–5	7/31/02	Standard
c1 sediment	LA-1W	CALA-02-47931	LA-02-20910	Grab	0–5	7/31/02	Standard
c1 sediment	LA-3W	CALA-02-47935	LA-02-20912	Grab	0–5	7/31/02	Standard
c1 sediment	AC-1	CAPU-02-47953	PU-02-20917	Grab	0–5	7/30/02	Standard
c1 sediment	AC-3	CAPU-02-47955	PU-02-20918	Grab	0–5	7/31/02	Standard
c1 sediment	P-1FW	CAPU-02-47957	PU-02-20919	Grab	0–5	7/31/02	Standard

[a] Standard = Pesticides/PCBs, target analyte list metals with cyanide, isotopic plutonium, gamma spectroscopy radionuclides, strontium-90, americium-241, and PAHs.
[b] n/a = Not applicable.

Table B-3.0-10
Crosswalk Between Sediment, Surface Water, and
***Chironomus tentans* Growth and Survival Toxicity Bioassay**

Reach	Location ID	Sediment Sample ID	Water Sample ID	EPA 100.2 Sample ID	Date Collected
DP-1C	LA-02-20913	CALA-02-47938	CALA-02-47966	CALA-02-47966	7/31/02
LA-0	LA-02-20914	CALA-02-47940	CALA-02-47964	CALA-02-47964	7/30/02
LA-1FW	LA-02-20915	CALA-02-47942	CALA-02-47965	CALA-02-47965	7/30/02
LA-4W	LA-02-20909	CALA-02-47930	CALA-02-47963	CALA-02-47963	7/30/02
LA-5	LA-02-20908	CALA-02-47928	CALA-02-47962	CALA-02-47962	7/30/02
P-3E	PU-02-20920	CAPU-02-47972	CAPU-02-47960	CAPU-02-47960	7/31/02
DP-4	LA-02-20911	CALA-02-47934	n/a *	CALA-02-47934	7/31/02
LA-1W	LA-02-20910	CALA-02-47932	n/a	CALA-02-47932	7/31/02
LA-3W	LA-02-20912	CALA-02-47936	n/a	CALA-02-47936	7/31/02
AC-1	PU-02-20917	CAPU-02-47954	n/a	CAPU-02-47954	7/30/02
AC-3	PU-02-20918	CAPU-02-47956	n/a	CAPU-02-47956	7/31/02
P-1FW	PU-02-20919	CAPU-02-47958	n/a	CAPU-02-47958	7/31/02

*n/a = Not applicable.

Table B-4.1-1
Ash Samples from the Cerro Grande Burn Area

Sample ID	Location ID	Watershed	Collection Date	Begin Depth (cm)	End Depth (cm)	Analytical Suite													
						Americium-241 (alpha spectroscopy)	Gamma Spectroscopy Radionuclides	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Stontium-90	Target Analyte List Metals	Uranium	Semivolatile Organic Compounds	Dioxins and Furans	Cyanide	Alkalinity	Anions	Total Organic Carbon
CABG-00-0066	BG-00014	Los Alamos Canyon	6/9/2000	0	6	x	x	x	x	x	x	x	x	x	x		x	x	
CABG-00-0067	BG-00015	Los Alamos Canyon	6/9/2000	0	6	x	x	x	x	x	x	x	x	x	x		x	x	
CABG-00-0068	BG-00016	Los Alamos Canyon	6/9/2000	0	6	x	x	x	x	x	x	x	x	x	x		x	x	
CABG-00-0070	BG-00018	Pueblo Canyon	6/9/2000	0	6	x	x	x	x	x	x	x	x	x	x		x	x	
CABG-00-0105	BG-00014	Los Alamos Canyon	6/9/2000	0	6														x
CABG-00-0106	BG-00015	Los Alamos Canyon	6/9/2000	0	6														x
CABG-00-0107	BG-00016	Los Alamos Canyon	6/9/2000	0	6														x
CABG-00-0109	BG-00018	Pueblo Canyon	6/9/2000	0	6														x
CABG-01-0002	BG-00037	Rendija Canyon	5/17/2001	0	1		x	x			x	x							
CABG-01-0003	BG-00038	Rendija Canyon	5/17/2001	0	2		x	x			x	x							
CABG-01-0004	BG-00039	Rendija Canyon	5/17/2001	0	1		x	x			x	x							
CABG-01-0005	BG-00040	Rendija Canyon	5/17/2001	0	1		x	x			x	x							
CABG-01-0006	BG-00041	Rendija Canyon	5/17/2001	0	2		x	x			x								
CABG-01-0010	BG-00042	Los Alamos Canyon	6/1/2001	0	2		x	x			x	x		x	x				
CABG-01-0013	BG-00043	Los Alamos Canyon	6/1/2001	0	3		x	x			x	x		x	x				
CABG-01-0016	BG-00044	Los Alamos Canyon	6/1/2001	0	1		x	x			x	x		x	x				
CABG-01-0021	BG-00046	Chupaderos Canyon	7/23/2001	0	2		x	x			x	x							
CABG-01-0022	BG-00047	Chupaderos Canyon	7/23/2001	0	2		x	x			x	x							
CABG-01-0094	BG-00125	Rendija Canyon	12/3/2001	0	2	x	x	x			x								
CABG-01-0095	BG-00126	Rendija Canyon	12/3/2001	0	2	x	x	x			x	x				x			
CABG-01-0096	BG-00127	Rendija Canyon	12/3/2001	0	2	x	x	x			x								

Note: A blank cell in the analytical suite columns indicates that the sample was not analyzed for that suite.

Table B-4.1-2
Baseline Sediment Samples Collected Within and Downstream from the Cerro Grande Burn Area

Sample ID	Location ID	Canyon, Area	Collection Date	Begin Depth (cm)	End Depth (cm)	Analytical Suite																			Sediment Texture*	Sediment Facies	Geomorphic Position
						Americium-241 (alpha spectroscopy)	Gamma Spectroscopy Radionuclides	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Stontium-90	Tritium	Target Analyte List Metals	Cyanide	Uranium	Dioxins and Furans	High Explosives	PCBs and Pesticides	Semivolatile Organic Compounds	Alkalinity	Anions	Total Organic Carbon	Particle Size and Organic Matter			
CA18-00-0042	18-10103	Pajarito, west of NM 501	6/29/2000	0	15	x	x	x		x			x	x	x		x	x	x					muck or silt	Fine	Puddle outside main channel
CABG-00-0064	BG-00012	Los Alamos, Reservoir	6/9/2000	0	6	x	x	x	x	x	x		x		x	x			x	x	x			csi (muck)	Fine	Reservoir bottom
CABG-00-0065	BG-00013	Pueblo, west of Diamond Drive	6/9/2000	0	6	x	x	x	x	x	x		x		x	x			x	x	x			csi (muck)	Fine	Ponded area behind road fill
CABG-00-0069	BG-00017	South Fork Pajarito, west of NM 501	6/9/2000	0	6	x	x	x	x	x	x		x		x	x	x		x	x	x			csi (muck)	Fine	Ponded area behind road fill
CABG-00-0081	BG-00019	Pueblo, west of Diamond Drive	8/3/2000	0	10		x	x		x	x	x			x								x	fsi (muck)	Fine	Ponded area behind road fill
CABG-00-0088	BG-00028	Garcia, west of NM 30	9/19/2000	0	7		x	x		x	x	x	x	x	x	x							x	fsi (muck)	Fine	Overbank
CABG-00-0089	BG-00029	Garcia, west of NM 30	9/19/2000	0	5		x	x		x	x	x	x	x	x	x							x	csi (muck)	Fine	Overbank
CABG-00-0090	BG-00029	Garcia, west of NM 30	9/19/2000	9	16		x	x		x	x	x	x	x	x	x							x	fsi	Fine	Overbank
CABG-00-0103	BG-00012	Los Alamos, Reservoir	6/9/2000	0	6																	x	x	csi (muck)	Fine	Reservoir bottom
CABG-00-0104	BG-00013	Pueblo, west of Diamond Drive	6/9/2000	0	6																	x	x	csi (muck)	Fine	Ponded area behind road fill
CABG-00-0108	BG-00017	South Fork Pajarito, west of NM 501	6/9/2000	0	6																	x	x	csi (muck)	Fine	Ponded area behind road fill

Table B-4.1-2 (continued)

Sample ID	Location ID	Canyon, Area	Collection Date	Begin Depth (cm)	End Depth (cm)	Analytical Suite																	Sediment Texture*	Sediment Facies	Geomorphic Position
						Americium-241 (alpha spectroscopy)	Gamma Spectroscopy Radionuclides	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Stontium-90	Tritium	Target Analyte List Metals	Cyanide	Uranium	Dioxins and Furans	High Explosives	PCBs and Pesticides	Semivolatile Organic Compounds	Alkalinity	Anions	Total Organic Carbon	Particle Size and Organic Matter			
CABG-02-0001	BG-00148	Los Alamos, Reservoir	10/28/2001	451	470	x	x	x			x		x										x	fsi (clayey silt)	Fine	Center of reservoir
CABG-02-0002	BG-00148	Los Alamos, Reservoir	10/28/2001	406	432	x	x	x			x		x										x	fsi (silty muck)	Fine	Center of reservoir
CABG-02-0003	BG-00148	Los Alamos, Reservoir	10/28/2001	370	388	x	x	x			x		x										x	csi (silty muck)	Fine	Center of reservoir
CABG-02-0004	BG-00148	Los Alamos, Reservoir	10/28/2001	329	354	x	x	x			x		x										x	fs	Fine	Center of reservoir
CABG-02-0005	BG-00148	Los Alamos, Reservoir	10/28/2001	354	370	x	x	x			x		x										x	ms	Fine	Center of reservoir
CABG-02-0006	BG-00148	Los Alamos, Reservoir	10/28/2001	289	329	x	x	x			x		x										x	csi	Fine	Center of reservoir
CABG-02-0007	BG-00148	Los Alamos, Reservoir	10/28/2001	231	289	x	x	x			x		x										x	fsi (muck)	Fine	Center of reservoir
CABG-02-0008	BG-00148	Los Alamos, Reservoir	10/28/2001	173	193	x	x	x			x		x										x	csi (muck)	Fine	Center of reservoir
CABG-02-0009	BG-00148	Los Alamos, Reservoir	10/28/2001	109	132	x	x	x			x		x										x	fsi (muck)	Fine	Center of reservoir
CABG-02-0010	BG-00148	Los Alamos, Reservoir	10/28/2001	132	142	x	x	x			x		x										x	csi (muck)	Fine	Center of reservoir
CABG-02-0011	BG-00148	Los Alamos, Reservoir	10/28/2001	3	27	x	x	x			x		x										x	fsi (muck)	Fine	Center of reservoir
CABG-02-0012	BG-00148	Los Alamos, Reservoir	10/28/2001	27	39	x	x	x			x		x										x	csi	Fine	Center of reservoir
CABG-02-0013	BG-00148	Los Alamos, Reservoir	10/28/2001	39	54	x	x	x			x		x										x	fs	Fine	Center of reservoir

Table B-4.1-2 (continued)

Sample ID	Location ID	Canyon, Area	Collection Date	Begin Depth (cm)	End Depth (cm)	Analytical Suite																		Sediment Texture*	Sediment Facies	Geomorphic Position
						Americium-241 (alpha spectroscopy)	Gamma Spectroscopy Radionuclides	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Stontium-90	Tritium	Target Analyte List Metals	Cyanide	Uranium	Dioxins and Furans	High Explosives	PCBs and Pesticides	Semivolatile Organic Compounds	Alkalinity	Anions	Total Organic Carbon	Particle Size and Organic Matter			
CABG-02-0014	BG-00148	Los Alamos, Reservoir	10/28/2001	76	97	x	x	x			x		x										x	fsi (muck)	Fine	Center of reservoir
CABG-02-0015	BG-00148	Los Alamos, Reservoir	10/28/2001	97	109	x	x	x			x		x										x	vfs	Fine	Center of reservoir
CABG-02-0016	BG-00149	Los Alamos, Reservoir	11/1/2001	36	43	x	x	x			x		x										x	fs	Fine	North side of reservoir
CABG-02-0017	BG-00149	Los Alamos, Reservoir	11/1/2001	87	102	x	x	x			x		x										x	ms	Coarse	North side of reservoir
CABG-02-0018	BG-00150	Los Alamos, Reservoir	11/1/2001	78	137	x	x	x			x		x										x	cs (gravel)	Coarse	North side of reservoir
CAGU-00-0001	GU-10000	Guaje, west of Forest Road 416	8/11/2000	0	5		x	x			x		x	x									x	cs	Coarse	Active channel
CAGU-00-0002	GU-10001	Guaje, west of Forest Road 416	8/11/2000	0	12		x	x			x		x	x									x	vfs	Fine	Edge of channel, c2 unit
CAGU-00-0003	GU-10001	Guaje, west of Forest Road 416	8/11/2000	50	59		x	x			x		x	x									x	csi (muck)	Fine	Edge of channel, c2 unit
CAGU-00-0004	GU-10002	Guaje, west of Forest Road 416	8/11/2000	10	25		x	x			x		x	x									x	fsi (muck)	Fine	Slackwater area, floodplain
CAGU-00-0005	GU-10003	Guaje, west of Forest Road 416	8/11/2000	0	23		x	x			x		x	x									x	ms (stratified)	Fine	Floodplain
CARE-00-0001	RE-10000	Rendija, east of Sportsman's Club	8/11/2000	0	5		x	x			x		x	x									x	csi (organic rich)	Fine	c1b side channel
CARE-00-0002	RE-10000	Rendija, east of Sportsman's Club	8/11/2000	8	18		x	x			x		x	x									x	fs	Fine	c1b side channel

Table B-4.1-2 (continued)

Sample ID	Location ID	Canyon, Area	Collection Date	Begin Depth (cm)	End Depth (cm)	Analytical Suite																		Sediment Texture*	Sediment Facies	Geomorphic Position
						Americium-241 (alpha spectroscopy)	Gamma Spectroscopy Radionuclides	Isotopic Plutonium	Isotopic Thorium	Isotopic Uranium	Stontium-90	Tritium	Target Analyte List Metals	Cyanide	Uranium	Dioxins and Furans	High Explosives	PCBs and Pesticides	Semivolatile Organic Compounds	Alkalinity	Anions	Total Organic Carbon	Particle Size and Organic Matter			
CARE-00-0003	RE-10001	Rendija, east of Sportsman's Club	8/11/2000	0	16		x	x			x		x	x									x	ms (stratified)	Fine	Abandoned channel, c3 unit
CARE-00-0004	RE-10002	Rendija, east of Sportsman's Club	8/11/2000	0	3		x	x			x		x	x									x	fsi (muck)	Fine	Scour hole in c1b unit
CARE-00-0005	RE-10003	Rendija, east of Sportsman's Club	8/11/2000	7	20		x	x			x		x	x									x	vcs	Coarse	Active channel
CARE-01-0001	RE-10005	Rendija, east of Sportsman's Club	7/30/2001	0	4		x	x			x		x						x				x	fsi (ashy silt)	Fine	Overbank
CARE-01-0002	RE-10006	Rendija, east of Sportsman's Club	7/30/2001	0	4		x	x			x		x						x				x	fsi (ashy silt)	Fine	Overbank
CAWA-00-0026	WA-10037	Water, west of NM 501	6/29/2000	0	6	x	x	x		x			x	x	x		x	x	x					muck or dark vfs	Fine	Ponded area behind road fill

Note: A blank cell in the analytical suite columns indicates that the sample was not analyzed for that suite.

* Median particle size in <2 mm fraction shown where particle size data are available; cs = coarse sand; csi = coarse silt; fs = fine sand; fsi = fine silt; ms = medium sand; vcs = very coarse sand; vfs = very fine sand.

Table B-4.1-3
Post-Fire Sediment Samples in Los Alamos Canyon

Sample ID	Location ID	Reach	Geomorphic Unit or Location	Sediment Facies	Collection Date	Begin Depth (cm)	End Depth (cm)	Analytical Suite											Sediment Texture[a]	Notes
								Gamma Spectroscopy Radionuclides	Isotopic Plutonium	Isotopic Uranium	Stontium-90	Tritium	Target Analyte List Metals	Cyanide	Uranium	Dioxins and Furans	Semivolatile Organic Compounds	Particle Size and Organic Matter		
CALA-00-0106	LA-10000	LA-5E	c1b	Fine	9/15/2000	21	29	x	x	x	x	x	x	x	x	x		x	csi (silty muck)	With disseminated woody material, basal post-fire layer
CALA-00-0107	LA-10001	LA-5E	c1b	Fine	9/15/2000	0	14	x	x	x	x	x	x	x	x	x		x	fs (finely stratified)	—[b]
CALA-00-0108	LA-10002	LA-5E	c1	Coarse	9/15/2000	0	10	x	x	x	x	x	x	x	x	x		x	cs	—
CALA-00-0109	LA-10003	LA-5E	f1	Fine	9/15/2000	13	33	x	x	x	x	x	x	x	x	x		x	csi (silty to very fine sandy muck)	Basal post-fire layer
CALA-00-0110	LA-10004	LA-5E	f1	Fine	9/15/2000	0	14	x	x	x	x	x	x	x	x	x		x	csi with some muck	—
CALA-00-0111	LA-10009	LA-3FE	Behind weir	Fine	9/7/2000	0	12	x	x	x	x	x	x	x	x	x	x	x	fsi (clayey muck)	Slackwater deposit behind fill material in channel
CALA-00-0112	LA-10010	LA-3FE	Behind weir	Fine	9/7/2000	0	3	x	x	x	x	x	x	x	x	x	x	x	csi (silty muck)	—
CALA-00-0113	LA-10004	LA-5E	f1	Fine	9/15/2000	14	26	x	x	x	x	x	x	x	x	x		x	csi (silty muck)	Fining upwards; w/ disseminated woody debris
CALA-01-0004	LA-10042	LA-4FE	Overbank	Fine	3/6/2001	0	6	x	x		x		x					x	vfs (silty fs to ms with some muck)	—
CALA-01-0005	LA-10043	LA-4FE	Overbank	Fine	3/6/2001	0	2	x	x		x		x					x	csi (silty muck)	—
CALA-01-0006	LA-10044	LA-4FE	Overbank	Fine	3/6/2001	0	6	x	x		x		x					x	fsi (silty muck)	—
CALA-01-0007	LA-10045	LA-4FE	c2	Fine	3/6/2001	0	5	x	x		x		x					x	fsi (silty muck)	—
CALA-01-0008	LA-10046	LA-4FE	c2	Fine	3/6/2001	0	8	x	x		x		x					x	vfs	—
CALA-01-0009	LA-10048	LA-4FE	c1b or c2	Coarse	3/6/2001	2	5	x	x		x		x					x	ms plus muck	—
CALA-01-0010	LA-10049	LA-4FE	c2	Fine	3/6/2001	0	7	x	x		x		x					x	fs	—
CALA-01-0011	LA-10047	LA-4FE	Overbank	Fine	3/6/2001	0	9	x	x		x		x					x	vfs (silty fs to ms with some muck)	—
CALA-01-0012	LA-10047	LA-4FE	Overbank	Fine	3/6/2001	0	9	x	x		x								vfs (silty fs to ms with some muck)	Field duplicate of CALA-01-0011

Table B-4.1-3 (continued)

Sample ID	Location ID	Reach	Geomorphic Unit or Location	Sediment Facies	Collection Date	Begin Depth (cm)	End Depth (cm)	Analytical Suite											Sediment Texture[a]	Notes
								Gamma Spectroscopy Radionuclides	Isotopic Plutonium	Isotopic Uranium	Stontium-90	Tritium	Target Analyte List Metals	Cyanide	Uranium	Dioxins and Furans	Semivolatile Organic Compounds	Particle Size and Organic Matter		
CALA-01-0193	LA-10108	LA-4FE	c3	Fine	9/27/2001	0	4	x	x		x		x					x	csi	—
CALA-01-0194	LA-10108	LA-4FE	c3	Fine	9/27/2001	4	10	x	x		x		x					x	fs (stratified, with ms)	Possibly pre-2001
CALA-01-0195	LA-10109	LA-4FE	c2 or c3	Fine	9/27/2001	0	3	x	x		x		x					x	csi (slightly ashy)	With some ms-sized pumice
CALA-01-0196	LA-10110	LA-4FE	f2	Fine	9/27/2001	0	2	x	x		x		x					x	csi (slightly ashy)	Slackwater deposit in side drainage
CALA-01-0197	LA-10111	LA-4FE	c3	Fine	9/27/2001	0	3	x	x		x		x					x	ms	—
CALA-01-0198	LA-10112	LA-4FE	c2	Fine	9/27/2001	0	5	x	x		x		x					x	csi (ashy, finely stratified)	—
CALA-01-0199	LA-10113	LA-4FE	c1	Coarse	9/27/2001	3	6	x	x		x		x					x	vcs	Bar in side channel
CALA-01-0200	LA-10114	LA-4FE	c2	Fine	9/27/2001	0	3	x	x		x		x					x	csi (ashy, finely stratified)	—
CALA-01-0201	LA-10115	LA-5E	c2	Fine	9/27/2001	0	5	x	x		x		x					x	csi (ashy, finely laminated)	—
CALA-01-0202	LA-10116	LA-5E	f1	Fine	9/27/2001	0	15	x	x		x		x					x	vfs	—
CALA-01-0203	LA-10116	LA-5E	f1	Fine	9/27/2001	16	23	x	x		x		x					x	vfs	—
CALA-01-0204	LA-10117	LA-5E	c1	Coarse	9/27/2001	0	15	x	x		x		x					x	cs (stratified)	—
CALA-01-0205	LA-10118	LA-5E	c1b	Fine	9/27/2001	0	5	x	x		x		x					x	csi	—
CALA-01-0206	LA-10119	LA-5E	c1b	Fine	9/27/2001	0	5	x	x		x		x					x	vfs	—
CALA-01-0207	LA-10120	LA-3FE	Behind weir	Fine	10/2/2001	19	23	x	x		x		x					x	csi	—
CALA-01-0208	LA-10120	LA-3FE	Behind weir	Coarse	10/2/2001	23	39	x	x		x		x					x	cs	—
CALA-01-0209	LA-10121	LA-3FE	Behind weir	Fine	10/2/2001	0	3	x	x		x		x					x	csi (stratified)	—
CALA-01-0210	LA-10122	LA-3FE	Behind weir	Coarse	10/2/2001	0	14	x	x		x		x					x	cs	—
CALA-01-0211	LA-10123	LA-3FE	Behind weir	Fine	10/2/2001	17	20	x	x		x		x					x	csi	—
CALA-01-0212	LA-10124	LA-3FE	Behind weir	Fine	10/2/2001	2	12	x	x		x		x					x	fsi (muck)	—
CALA-01-0213	LA-10116	LA-5E	f1	Fine	9/27/2001	0	15	x	x		x								vfs	Field duplicate of CALA-01-0202

Table B-4.1-3 (continued)

Sample ID	Location ID	Reach	Geomorphic Unit or Location	Sediment Facies	Collection Date	Begin Depth (cm)	End Depth (cm)	Analytical Suite											Sediment Texture[a]	Notes
								Gamma Spectroscopy Radionuclides	Isotopic Plutonium	Isotopic Uranium	Stontium-90	Tritium	Target Analyte List Metals	Cyanide	Uranium	Dioxins and Furans	Semivolatile Organic Compounds	Particle Size and Organic Matter		
CALA-01-0214	LA-10125	LA-3FE	Behind weir	Fine	10/2/2001	0	9	x	x		x								Moderately ashy silt	Upper deposit in backwater area
CALA-01-0526	LA-10124	LA-3FE	Behind weir	Fine	10/2/2001	15	22	x	x		x		x					x	fsi (muck)	3 muck layers separated by 1–2 mm vfs
CALA-01-0527	LA-10125	LA-3FE	Behind weir	Fine	10/2/2001	0	9	x	x		x		x					x	fsi (moderately ashy)	Upper deposit in backwater area
CALA-01-0528	LA-10125	LA-3FE	Behind weir	Fine	10/2/2001	9	10	x	x		x		x					x	fsi (slightly ashy)	—
CALA-02-44929	LA-10108	LA-4FE	c3	Fine	2/27/2002	0	4									x	x		csi	Resample of CALA-01-0193
CALA-02-44930	LA-10108	LA-4FE	c3	Fine	2/27/2002	4	10									x	x		fs (stratified, with ms)	Resample of CALA-01-0194
CALA-02-44932	LA-10110	LA-4FE	f2	Fine	2/27/2002	0	2									x	x		csi (slightly ashy)	Resample of CALA-01-0196
CALA-02-44933	LA-10111	LA-4FE	c3	Fine	2/27/2002	0	3									x	x		ms	Resample of CALA-01-0197
CALA-02-44934	LA-10112	LA-4FE	c2	Fine	2/27/2002	0	5									x	x		csi (ashy, finely stratified)	Resample of CALA-01-0198
CALA-02-44935	LA-10113	LA-4FE	c1	Coarse	2/27/2002	3	6									x	x		vcs	Resample of CALA-01-0199
CALA-02-44936	LA-10114	LA-4FE	c2	Fine	2/27/2002	0	3									x	x		csi (ashy, finely stratified)	Resample of CALA-01-0200
CALA-02-44958	LA-02-19558	LA-4FE	f2	Fine	2/27/2002	0	6									x	x		ashy, silty vfs	Resample replacement for CALA-01-0195
CALA-02-44960	LA-10111	LA-4FE	c3	fine	2/27/2002	0	3									x	x		ms	field duplicate of CALA-02-44933

Note: A blank cell in the analytical suite columns indicates that the sample was not analyzed for that suite.

[a] Median particle size in < 2 mm fraction shown where particle size data are available; cs = coarse sand; csi = coarse silt; fs = fine sand; fsi = fine silt; ms = medium sand; vcs = very coarse sand; vfs = very fine sand.

[b] — = No note.

Table B-4.1-4
Post-Fire Sediment Samples in Pueblo Canyon

Sample ID	Location ID	Reach	Geomorphic Setting	Sediment Facies	Collection Date	Begin Depth (cm)	End Depth (cm)	Analytical Suite					Sediment Texture[a]	Notes
								Gamma Spectroscopy Radionuclides	Isotopic Plutonium	Stontium-90	Target Analyte List Metals	Particle Size and Organic Matter		
CAPU-01-0017	PU-10178	P-4E	Overbank	Fine	8/6/2001	0	2	x	x	x	x	x	csi (ashy)	—[b]
CAPU-01-0018	PU-10179	P-4E	Overbank	Fine	8/6/2001	0	1	x	x	x	x	x	fsi (ashy)	—
CAPU-01-0019	PU-10178	P-4E	Overbank	Coarse	8/6/2001	2	9	x	x	x	x	x	ms	—
CAPU-01-0020	PU-10180	P-4E	Overbank	Fine	8/6/2001	2	5	x	x	x	x	x	csi (moderately ashy)	—
CAPU-01-0021	PU-10181	P-4E	Overbank	Fine	8/6/2001	0	8	x	x	x	x	x	fsi (muck)	In large scour hole
CAPU-01-0022	PU-10182	P-4E	Channel	Coarse	8/6/2001	0	13	x	x	x	x	x	cs	—
CAPU-01-0023	PU-10183	P-4E	Overbank	Fine	8/6/2001	0	2	x	x	x	x	x	csi (moderately ashy)	—
CAPU-01-0024	PU-10184	P-4E	Overbank	Fine	8/6/2001	0	2	x	x	x	x	x	fsi (ashy)	—
CAPU-01-0025	PU-00152	P-3E	Overbank	Fine	8/6/2001	0	2	x	x	x	x	x	fsi (moderately ashy)	—
CAPU-01-0026	PU-10185	P-3E	Overbank	Fine	8/6/2001	0	1	x	x	x	x	x	fsi (ashy)	—
CAPU-01-0027	PU-10185	P-3E	Overbank	Fine	8/6/2001	1	3	x	x	x	x	x	csi (slightly ashy)	—
CAPU-01-0028	PU-10186	P-3E	Overbank	Fine	8/6/2001	0	2	x	x	x	x	x	fsi (moderately ashy)	—
CAPU-01-0029	PU-10187	P-3W	Channel	Coarse	8/6/2001	0	17	x	x	x	x	x	cs	—
CAPU-01-0030	PU-10188	P-3W	Overbank	Fine	8/6/2001	0	3	x	x	x	x	x	csi (moderately ashy)	—
CAPU-01-0031	PU-10189	P-3W	Overbank	Fine	8/6/2001	0	2	x	x	x	x	x	csi (ashy)	—
CAPU-01-0032	PU-10190	P-1W	Overbank	Fine	8/6/2001	0	8	x	x	x	x	x	csi (muck)	—
CAPU-01-0033	PU-10191	P-1W	Overbank	Fine	8/6/2001	1	2	x	x	x	x	x	csi (muck)	—
CAPU-01-0034	PU-10192	P-1W	Overbank	Fine	8/6/2001	0	18	x	x	x	x	x	fs	—
CAPU-01-0035	PU-10194	P-1W	Overbank	Fine	8/6/2001	0	1	x	x	x	x	x	csi (slightly ashy)	—
CAPU-01-0036	PU-10190	P-1W	Overbank	Fine	8/6/2001	8	16	x	x	x	x	x	csi (muck)	Possibly year 2000 deposit
CAPU-01-0037	PU-10193	P-1W	Overbank	Fine	8/6/2001	0	1	x	x	x	x	x	csi (w/ organic matter)	—
CAPU-01-0038	PU-10195	P-1E	Overbank	Fine	8/6/2001	0	2	x	x	x	x	x	csi (ashy)	—
CAPU-01-0039	PU-10196	P-1E	Overbank	Fine	8/6/2001	0	3	x	x	x	x	x	csi (slightly ashy)	—

Table B-4.1-4 (continued)

Sample ID	Location ID	Reach	Geomorphic Setting	Sediment Facies	Collection Date	Begin Depth (cm)	End Depth (cm)	Analytical Suite					Sediment Texture[a]	Notes
								Gamma Spectroscopy Radionuclides	Isotopic Plutonium	Stontium-90	Target Analyte List Metals	Particle Size and Organic Matter		
CAPU-01-0040	PU-10197	P-1E	Overbank	Fine	8/6/2001	0	2	x	x	x	x	x	fsi (ashy)	—
CAPU-01-0041	PU-10198	P-1E	Overbank	Fine	8/6/2001	0	7	x	x	x	x	x	fs	Contains little or no ash
CAPU-01-0042	PU-10197	P-1E	Overbank	Fine	8/6/2001	3	7	x	x	x	x	x	csi (ashy)	—
CAPU-01-0043	PU-10199	P-1E	Overbank	Fine	8/6/2001	0	2	x	x	x	x	x	csi (slightly ashy)	—
CAPU-01-0044	PU-00114	P-1E	Overbank	Fine	8/6/2001	3	7	x	x	x	x	x	fs	—
CAPU-01-0045	PU-10200	P-1E	Channel	Coarse	8/6/2001	0	8	x	x	x	x	x	cs	—
CAPU-01-0046	PU-10188	P-3W	Overbank	Fine	8/24/2001	1	5	x	x	x	x	x	csi (partly ashy)	Fining upward layer
CAPU-01-0047	PU-10188	P-3W	Overbank	Fine	8/24/2001	5	10	x	x	x	x	x	csi (partly ashy)	Fining upward layer
CAPU-01-0048	PU-10201	P-3W	Overbank	Fine	8/24/2001	0	1	x	x	x	x	x	csi	—
CAPU-01-0049	PU-10202	P-2W	Overbank	Fine	8/24/2001	0	10	x	x	x	x	x	vfs (slightly ashy)	—
CAPU-01-0050	PU-10203	P-2W	Overbank	Fine	8/24/2001	0	2	x	x	x	x	x	csi (moderately ashy)	—
CAPU-01-0051	PU-10203	P-2W	Overbank	Fine	8/24/2001	2	10	x	x	x	x	x	csi	—
CAPU-01-0052	PU-10204	P-2W	Overbank	Fine	8/24/2001	0	13	x	x	x	x	x	fsi	—
CAPU-01-0053	PU-10205	P-2W	Overbank	Fine	8/24/2001	0	2	x	x	x	x	x	vfs (moderately ashy)	—
CAPU-01-0054	PU-10206	P-2W	Channel	Coarse	8/24/2001	0	8	x	x	x	x	x	cs	—
CAPU-01-0055	PU-10207	P-2W	Overbank	Fine	8/24/2001	0	3	x	x	x	x	x	csi (moderately ashy)	—
CAPU-01-0056	PU-10208	P-2W	Overbank	Fine	8/24/2001	6	14	x	x	x	x	x	csi (slightly ashy)	—
CAPU-01-0057	PU-10188	P-3W	Overbank	Fine	8/6/2001	0	3	x	x	x			csi (moderately ashy)	Field duplicate of CAPU-01-0030
CAPU-01-0058	PU-10192	P-1W	Overbank	Fine	8/6/2001	0	18	x	x	x			fs	Field duplicate of CAPU-01-0034

Note: A blank cell in the analytical suite columns indicates that the sample was not analyzed for that suite.

[a] Median particle size in < 2 mm fraction shown where particle size data are available; cs = coarse sand; csi = coarse silt; fs = fine sand; fsi = fine silt; ms = medium sand; vcs = very coarse sand; vfs = very fine sand.

[b] — = No note.

Table B-4.1-5
Particle-Size and Organic-Matter Data from Fire-Affected Sediment Samples

Sample ID	Gravel (> 2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Organic Matter (wt %)	Total Silt + Clay (wt %)	Median Particle Size Class[a]	Sediment Facies
CABG-00-0081	0.0	0.0	1.1	1.4	1.7	1.3	5.2	61.1	27.8	12.1	94.1	fsi	Fine
CABG-00-0088	18.0	0.7	0.9	2.0	3.6	2.2	29.2	37.0	24.2	15.8	90.4	fsi	Fine
CABG-00-0089	40.6	0.1	0.3	0.9	5.7	31.6	50.7	5.6	5.2	2.3	61.5	csi	Fine
CABG-00-0090	0.0	1.1	2.9	3.3	2.2	1.4	30.3	34.7	23.8	13.7	88.8	fsi	Fine
CABG-00-0103	0.0	0.0	0.9	1.5	1.1	1.4	89.7	2.6	2.6	na[b]	94.9	csi	Fine
CABG-00-0104	0.0	0.0	0.2	0.4	0.5	1.7	48.6	37.2	11.4	na	97.2	csi	Fine
CABG-00-0108	0.0	0.0	0.7	4.3	8.2	15.0	37.7	22.5	11.5	na	71.7	csi	Fine
CABG-02-0001	0.0	0.0	1.0	1.2	1.5	4.6	25.7	45.4	20.6	na	91.7	fsi	Fine
CABG-02-0002	0.1	0.2	1.7	3.1	3.4	3.3	35.7	39.2	13.4	na	88.3	fsi	Fine
CABG-02-0003	0.1	0.3	2.1	2.7	2.7	2.0	54.3	26.7	9.1	na	90.0	csi	Fine
CABG-02-0004	1.4	0.4	4.9	21.7	28.2	14.1	20.3	6.7	3.6	na	30.6	fs	Fine
CABG-02-0005	3.0	4.3	26.9	36.0	14.1	5.3	7.7	2.6	2.9	na	13.2	ms	Fine
CABG-02-0006	0.0	0.1	0.5	1.2	10.8	16.8	51.3	12.6	6.4	na	70.3	csi	Fine
CABG-02-0007	1.0	0.3	2.3	2.3	1.7	1.2	31.4	47.6	13.2	na	92.2	fsi	Fine
CABG-02-0008	0.3	0.2	1.1	1.3	1.8	4.8	42.3	36.8	11.8	na	90.9	csi	Fine
CABG-02-0009	0.2	0.3	2.4	3.2	1.6	1.2	29.4	45.8	16.2	na	91.3	fsi	Fine
CABG-02-0010	0.0	0.1	0.9	2.0	4.9	17.4	50.2	16.7	7.7	na	74.6	csi	Fine
CABG-02-0011	0.1	0.1	1.2	1.4	1.2	1.8	41.6	41.1	11.5	na	94.2	fsi	Fine
CABG-02-0012	0.0	0.0	0.2	0.9	8.6	22.3	42.1	16.6	9.1	na	67.8	csi	Fine
CABG-02-0013	0.4	1.0	3.8	29.8	35.0	13.5	10.7	2.9	3.3	na	16.8	fs	Fine
CABG-02-0014	0.1	0.0	0.1	0.4	0.5	2.1	33.5	44.8	18.6	na	96.9	fsi	Fine
CABG-02-0015	0.6	0.2	1.8	3.0	27.0	24.0	28.5	8.9	6.5	na	43.9	vfs	Fine
CABG-02-0016	1.6	0.5	2.6	10.3	51.0	16.9	11.0	4.1	3.5	na	18.6	fs	Fine
CABG-02-0017	0.6	2.4	33.1	40.6	9.7	3.4	5.2	2.5	3.1	na	10.8	ms	Coarse
CABG-02-0018	57.2	33.9	33.2	14.9	4.4	2.2	4.6	4.2	2.6	na	11.4	cs	Coarse
CAGU-00-0001	15.3	44.5	42.3	9.3	1.8	0.5	0.1	0.6	1.0	0.5	1.7	cs	Coarse
CAGU-00-0002	0.2	0.5	6.7	21.0	11.9	30.3	21.7	4.4	3.3	1.6	29.4	vfs	Fine
CAGU-00-0003	4.9	2.3	5.3	7.1	7.3	8.3	28.4	24.2	16.5	11.8	69.0	csi	Fine
CAGU-00-0004	3.8	0.1	2.3	2.4	1.5	1.4	28.3	48.8	15.3	10.5	92.4	fsi	Fine
CAGU-00-0005	1.8	6.8	22.1	35.7	18.7	6.4	5.7	1.2	3.5	1.3	10.4	ms	Fine
CALA-00-0106	2.9	1.1	2.3	3.2	3.7	6.9	36.5	30.5	15.5	8.6	82.5	csi	Fine
CALA-00-0107	0.4	0.5	7.1	28.8	28.7	15.2	13.1	2.9	3.6	1.5	19.6	fs	Fine
CALA-00-0108	1.9	20.3	50.3	22.5	4.5	0.7	0.3	0.3	1.1	na	1.7	cs	Coarse
CALA-00-0109	0.2	0.5	1.0	1.7	6.0	19.3	48.7	15.7	7.4	5.9	71.8	csi	Fine
CALA-00-0110	5.3	0.9	1.8	2.6	8.0	20.3	46.7	13.6	6.4	7.3	66.7	csi	Fine
CALA-00-0111	2.2	0.0	1.1	1.4	1.5	1.9	26.4	48.0	19.4	8.5	93.8	fsi	Fine
CALA-00-0112	2.4	0.0	0.4	0.5	0.4	0.6	48.6	35.0	14.4	7.6	98.0	csi	Fine
CALA-00-0113	1.1	0.5	0.5	2.8	7.3	15.9	40.7	19.6	12.5	8.3	72.8	csi	Fine
CALA-01-0004	9.1	1.5	6.4	15.5	20.8	15.6	17.2	11.6	11.5	2.8	40.2	vfs	Fine

Table B-4.1-5 (continued)

Sample ID	Gravel (> 2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Organic Matter (wt %)	Total Silt + Clay (wt %)	Median Particle Size Class[a]	Sediment Facies
CALA-01-0005	6.5	0.2	0.3	0.7	1.9	9.9	46.9	25.5	14.7	4.2	87.1	csi	Fine
CALA-01-0006	14.1	0.9	1.7	2.7	4.6	7.0	32.5	31.6	18.9	7.1	82.9	fsi	Fine
CALA-01-0007	12.0	0.2	0.9	1.6	1.8	3.8	37.1	33.5	21.1	6.4	91.6	fsi	Fine
CALA-01-0008	22.5	6.9	10.2	12.8	15.7	9.8	13.4	16.6	14.7	4.0	44.7	vfs	Fine
CALA-01-0009	0.1	3.0	19.2	45.6	18.5	4.7	2.4	2.1	4.6	0.8	9.1	ms	Coarse
CALA-01-0010	17.5	3.6	11.3	18.8	20.2	13.7	14.2	7.1	11.0	2.0	32.2	fs	Fine
CALA-01-0011	9.4	0.6	4.3	19.4	17.5	9.7	21.2	13.6	13.5	2.4	48.3	vfs	Fine
CALA-01-0193	0.2	0.1	0.3	1.4	5.8	11.6	55.0	17.6	8.2	3.9	80.8	csi	Fine
CALA-01-0194	7.4	11.2	18.9	18.1	14.4	10.2	13.8	6.3	6.9	2.7	27.0	fs	Fine
CALA-01-0195	0.7	0.2	1.0	2.8	4.0	5.4	49.5	23.8	13.5	7.8	86.7	csi	Fine
CALA-01-0196	0.1	0.0	0.5	1.0	2.0	5.1	54.8	25.5	10.8	5.3	91.1	csi	Fine
CALA-01-0197	0.8	2.6	19.5	36.6	19.8	8.0	7.3	2.6	3.3	1.7	13.3	ms	Fine
CALA-01-0198	0.0	0.0	0.6	1.0	3.8	8.0	39.9	35.2	11.1	5.7	86.2	csi	Fine
CALA-01-0199	42.7	51.9	37.3	7.7	0.8	0.2	0.0	0.0	1.5	0.4	1.5	vcs	Coarse
CALA-01-0200	0.0	0.0	0.2	0.7	3.3	8.2	45.2	35.5	6.7	3.0	87.4	csi	Fine
CALA-01-0201	0.2	0.3	1.0	1.5	2.6	13.8	60.2	13.4	6.1	3.4	79.7	csi	Fine
CALA-01-0202	0.2	0.2	0.7	5.3	22.6	30.5	32.8	4.5	3.1	1.8	40.4	vfs	Fine
CALA-01-0203	0.2	0.2	0.8	11.0	32.1	26.9	22.5	2.8	3.4	1.5	28.8	vfs	Fine
CALA-01-0204	17.0	17.6	41.1	32.2	5.9	1.1	0.5	0.2	1.1	0.4	1.9	cs	Coarse
CALA-01-0205	0.1	0.0	0.7	3.9	12.3	29.3	44.2	5.9	3.5	1.6	53.6	csi	Fine
CALA-01-0206	0.1	0.2	2.2	17.6	29.8	22.0	22.2	3.2	2.8	1.2	28.1	vfs	Fine
CALA-01-0207	0.1	0.1	0.7	1.1	7.7	38.5	41.0	4.7	6.1	2.4	51.8	csi	Fine
CALA-01-0208	12.3	33.6	37.7	11.8	3.1	4.2	5.4	2.1	2.1	0.8	9.5	cs	Coarse
CALA-01-0209	0.0	0.0	1.1	4.2	9.6	13.3	46.3	16.3	8.9	5.6	71.5	csi	Fine
CALA-01-0210	9.9	25.2	37.8	24.5	5.8	1.3	1.8	1.3	2.4	0.9	5.5	cs	Coarse
CALA-01-0211	0.2	0.2	1.1	2.2	12.8	27.5	38.8	8.4	8.7	3.5	55.8	csi	Fine
CALA-01-0212	0.0	0.0	0.1	0.3	0.3	0.6	22.4	55.0	21.1	7.5	98.5	fsi	Fine
CALA-01-0526	0.0	0.0	0.2	0.3	0.3	1.0	20.0	57.5	20.7	6.7	98.2	fsi	Fine
CALA-01-0527	0.0	0.0	0.1	0.4	0.5	0.7	47.2	43.1	7.8	8.1	98.1	fsi	Fine
CALA-01-0528	0.0	0.0	0.2	0.3	0.3	0.8	16.1	61.4	21.0	6.3	98.5	fsi	Fine
CAPU-01-0017	0.1	0.0	0.4	1.3	1.4	4.3	56.0	24.7	11.9	5.2	92.6	csi	Fine
CAPU-01-0018	0.1	0.1	0.3	0.7	0.9	1.3	36.6	42.4	17.9	6.9	96.9	fsi	Fine
CAPU-01-0019	7.4	11.1	33.5	34.5	9.8	2.9	0.1	2.6	5.4	1.1	8.1	ms	Coarse
CAPU-01-0020	0.1	0.0	0.3	1.9	2.6	4.0	46.8	26.9	17.2	10.5	90.9	csi	Fine
CAPU-01-0021	0.0	0.0	0.2	0.4	0.5	0.6	0.0	65.0	33.4	8.7	98.2	fsi	Fine
CAPU-01-0022	6.2	39.3	45.3	10.0	0.9	0.1	0.0	2.1	3.9	0.6	4.4	cs	Coarse
CAPU-01-0023	0.1	0.0	0.2	0.8	1.3	7.1	54.6	23.1	12.8	6.7	90.5	csi	Fine
CAPU-01-0024	0.2	0.1	0.2	0.6	0.6	0.5	46.7	28.8	22.5	9.0	98.0	fsi	Fine
CAPU-01-0025	0.1	0.0	0.1	0.7	1.0	1.9	31.5	44.7	20.0	10.2	96.2	fsi	Fine
CAPU-01-0026	0.1	0.0	0.2	0.6	1.2	1.5	34.8	43.0	18.4	8.0	96.2	fsi	Fine

Table B-4.1-5 (continued)

Sample ID	Gravel (> 2 mm) (wt %)	Very Coarse Sand (2–1 mm) (wt %)	Coarse Sand (1–0.5 mm) (wt %)	Medium Sand (0.5–0.25 mm) (wt%)	Fine Sand (0.25–0.125 mm) (wt %)	Very Fine Sand (0.125–0.0625 mm) (wt %)	Coarse Silt (62.5–15 µm) (wt%)	Fine Silt (15–2 µm) (wt%)	Clay (<2 µm) (wt%)	Organic Matter (wt %)	Total Silt + Clay (wt %)	Median Particle Size Class[a]	Sediment Facies
CAPU-01-0027	0.3	0.1	0.6	0.7	1.5	12.6	61.6	14.1	8.6	2.9	84.3	csi	Fine
CAPU-01-0028	0.3	0.0	0.2	0.4	0.5	1.7	37.7	44.7	14.6	5.8	97.0	fsi	Fine
CAPU-01-0029	4.0	25.9	45.4	17.2	2.3	0.9	0.7	1.9	2.7	0.6	5.3	cs	Coarse
CAPU-01-0030	0.0	0.0	0.2	0.2	0.4	4.3	61.4	21.1	12.2	5.0	94.7	csi	Fine
CAPU-01-0031	0.0	0.1	0.4	0.9	1.0	1.6	53.7	29.0	13.3	6.9	96.0	csi	Fine
CAPU-01-0032	0.6	0.1	1.6	3.2	4.6	10.1	48.3	17.8	14.4	10.1	80.5	csi	Fine
CAPU-01-0033	0.1	0.0	0.3	0.8	1.6	6.4	46.1	32.7	11.8	5.1	90.6	csi	Fine
CAPU-01-0034	0.0	0.0	2.8	21.6	32.0	18.8	14.9	5.3	4.2	1.3	24.4	fs	Fine
CAPU-01-0035	0.8	0.0	0.7	1.7	3.3	15.6	51.4	15.8	11.1	6.1	78.3	csi	Fine
CAPU-01-0036	0.1	0.0	0.5	2.6	3.9	9.3	54.3	21.1	8.1	7.7	83.5	csi	Fine
CAPU-01-0037	0.2	0.0	0.2	1.2	8.2	27.2	47.4	9.6	6.0	3.1	63.0	csi	Fine
CAPU-01-0038	0.1	0.1	0.6	0.9	2.6	10.1	46.5	25.6	13.4	5.4	85.5	csi	Fine
CAPU-01-0039	0.1	0.0	0.3	0.6	2.3	19.1	59.4	10.2	7.7	3.2	77.3	csi	Fine
CAPU-01-0040	0.3	0.0	0.3	0.7	1.3	3.5	40.9	37.7	15.5	4.9	94.1	fsi	Fine
CAPU-01-0041	0.1	0.9	4.9	22.1	30.6	18.6	15.5	3.4	3.9	1.0	22.8	fs	Fine
CAPU-01-0042	0.2	0.1	0.5	1.2	1.5	3.7	46.9	33.4	12.8	5.1	93.1	csi	Fine
CAPU-01-0043	0.1	0.1	0.1	0.3	4.9	23.4	48.9	15.1	7.4	3.0	71.4	csi	Fine
CAPU-01-0044	0.1	3.8	18.8	15.6	19.1	16.6	18.3	4.0	3.8	1.2	26.1	fs	Fine
CAPU-01-0045	6.6	16.6	36.0	27.4	9.3	3.3	3.1	1.4	2.8	0.6	7.3	cs	Coarse
CAPU-01-0046	0.1	0.0	0.3	0.5	0.7	3.4	49.9	32.6	12.5	5.4	95.0	csi	Fine
CAPU-01-0047	0.1	0.0	0.2	0.2	0.7	4.1	55.3	26.6	12.6	4.9	94.5	csi	Fine
CAPU-01-0048	1.0	0.1	0.2	1.0	1.1	2.1	57.0	29.6	8.7	4.9	95.3	csi	Fine
CAPU-01-0049	0.0	0.0	0.1	1.4	18.3	32.8	34.9	7.5	4.8	2.1	47.2	vfs	Fine
CAPU-01-0050	5.6	1.4	3.9	3.7	2.5	1.7	43.4	26.2	16.9	13.3	86.5	csi	Fine
CAPU-01-0051	0.1	0.5	0.4	1.0	5.3	19.8	57.7	9.2	6.0	3.0	72.9	csi	Fine
CAPU-01-0052	3.9	0.3	0.7	0.8	0.6	1.1	27.1	53.0	16.3	7.1	96.4	fsi	Fine
CAPU-01-0053	0.2	1.1	1.5	4.6	20.9	27.3	31.0	7.5	6.1	4.1	44.6	vfs	Fine
CAPU-01-0054	41.2	32.3	32.6	19.4	7.9	2.5	1.0	0.7	3.3	0.6	5.0	cs	Coarse
CAPU-01-0055	0.2	0.4	0.4	0.5	0.8	1.1	47.7	35.1	13.9	6.4	96.7	csi	Fine
CAPU-01-0056	0.1	0.9	1.5	2.5	5.6	14.8	51.7	13.4	9.5	7.2	74.6	csi	Fine
CARE-00-0001	0.1	0.3	0.5	1.5	5.6	19.7	50.8	12.6	8.7	5.4	72.1	csi	Fine
CARE-00-0002	0.2	1.1	10.2	26.9	23.5	15.2	16.2	2.8	3.9	1.4	23.0	fs	Fine
CARE-00-0003	1.3	6.1	20.3	28.8	18.5	10.0	10.1	2.5	3.6	1.5	16.2	ms	Fine
CARE-00-0004	0.3	0.2	1.0	1.7	2.1	4.3	38.3	35.0	17.0	9.4	90.3	fsi	Fine
CARE-00-0005	49.7	52.4	22.3	9.0	3.8	2.6	4.5	2.9	2.4	0.9	9.9	vcs	Coarse
CARE-01-0001	0.2	0.1	0.1	0.4	0.7	0.7	0.7	67.0	30.0	13.3	97.7	fsi	Fine
CARE-01-0002	0.7	0.1	0.2	0.9	1.8	1.3	4.7	64.4	26.3	14.4	95.4	fsi	Fine

[a] <2 mm fraction; cs = coarse sand; csi = coarse silt; fs = fine sand; fsi = fine silt; ms = medium sand; vcs = very coarse sand; vfs = very fine sand.

[b] na = Not available.