

Final
Second Quarterly
Groundwater Monitoring Report

La Bajada Mine
Santa Fe National Forest, New Mexico

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LIST OF ACRONYMS

| | |
|--------|--|
| °C | degrees Centigrade |
| °F | degrees Fahrenheit |
| μS/cm | micro Siemens per centimeter |
| amsl | above mean sea level |
| AOC | analytes of concern |
| bgs | below ground surface |
| COC | chain-of-custody |
| DO | dissolved oxygen |
| DTW | depth-to-water |
| EPA | United States Environmental Protection Agency |
| GPS | Global Positioning System |
| mg/L | milligram per liter |
| MS | matrix spike |
| MSD | matrix spike duplicate |
| mV | millivolt |
| NDA | no data available |
| NMAC | New Mexico Administrative Code |
| NMED | New Mexico Environment Department |
| NTU | Nephelometric Turbidity Unit |
| ORP | oxidation-reduction potential |
| pCi/g | pico Curies per gram |
| QC | quality control |
| RL | Reporting Limit |
| RPD | Relative Percent Difference |
| SAP | Sampling and Analysis Plan |
| TDS | Total Dissolved Solids |
| TKN | Total Kjeldahl Nitrogen |
| TOC | top-of-casing |
| USFS | United States Department of Agriculture Forest Service |
| USGS | United States Department of the Interior Geological Survey |
| WESTON | Weston Solutions, Inc. |
| WRCC | Western Regional Climate Center |
| WQS | Water Quality Standard |
| WWTP | Wastewater Treatment Plant |

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1.0 INTRODUCTION

Weston Solutions, Inc. (WESTON®) has been contracted by the United States Department of Agriculture Forest Service (USFS) under contract AG-8371-D-14-0048, to conduct a groundwater investigation for the La Bajada Mine Site (the “Site”) located within the Santa Fe National Forest, New Mexico (Figure 1 and Figure 2). This Monitoring Report summarizes the first two of four quarterly groundwater monitoring events occurring in the third quarter of calendar year 2015 and the first quarter of 2016. WESTON representatives conducted fieldwork on September 21-23, 2015 and January 12-13, 2016.

1.1 SITE NAME AND SAMPLING LOCATION

The project area is located 35 miles southwest of the City of Santa Fe within the Espanola Ranger District of the Santa Fe National Forest in the Northwest ¼ of Section 9, Township 15 North, Range 7 East, Santa Fe County, New Mexico. The geographical coordinates for the historical mine location, which is central to the site, are 35°32'56.82"N 106°12'29.20"W (Figure 1).

The Site can be accessed from Albuquerque by taking Interstate 25 north toward Santa Fe to Highway 16. Take Highway 16 west for approximately 3.5 miles to the intersection with the road for Tetilla Park Recreation Area. Turn right and follow the double-lane paved road for approximately 1 mile to an intersection with a gravel road to La Bajada Village. Turn right onto this road and drive approximately 2 miles to the Site area. The road will cross the Santa Fe River several times before the final destination; therefore, a four wheel drive, high-clearance vehicle is necessary.

1.2 RESPONSIBLE AGENCY

Each of the groundwater monitoring wells included in this groundwater investigation is located on USFS lands and therefore falls under the jurisdiction of the USFS.

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2.0 SITE BACKGROUND

The La Bajada Mine is an abandoned uranium mine site located in the Santa Fe River Canyon in Santa Fe County, New Mexico. The following sections provide a description of Site history, current conditions, previous investigations/remedial actions, and physical characteristics.

2.1 SITE HISTORY

La Bajada first operated as a copper mine beginning in approximately 1915. Most of the production was by the La Bajada Copper Mining Company and occurred in the 1920s (Chenoweth, 1979). In 1928-1929, the mine consisted of two shafts (Whitworth, 1996). Uranium was discovered at the mine in 1950. The underground workings of the mine were declared unsafe in 1957 and subsequent uranium mining was by open pit. An open pit was developed between the two shafts in the early 1960s and mining continued intermittently through 1964 with the final shipment from stockpiled ore occurring in 1966 (Chenoweth, 1979). The pit filled with water once mining operations ceased.

2.2 PREVIOUS INVESTIGATIONS/REMEDIAL ACTIONS

The USFS, under a joint powers agreement with New Mexico Environment Department (NMED), performed a mine reclamation at the Site in 1996. Mine waste material was regraded and capped with a minimum of 1 foot of clean soil. The pit lake was also backfilled with clean soil. Ephemeral stream channels eroding the waste were armored with rock to prevent erosion of mine waste into the Santa Fe River. Available information indicates seven groundwater monitoring wells were installed for post-removal compliance sampling to ensure compliance with New Mexico Water Quality Standards (WQSs). One additional well was discovered during a Site reconnaissance conducted to kick off this project. The USFS and NMED have periodically monitored the wells and submitted groundwater samples for laboratory analysis. Available data, provided by NMED, is in Appendix A.

2.3 PHYSICAL CHARACTERISTICS

2.3.1 Geologic Setting

The La Bajada ore body is found in sedimentary and volcanoclastic sedimentary deposits consisting of the Espinazo Volcanics formed during the Oligocene time (Chenoweth, 1979). Thin veins of uranium mineralization occur in a dark basaltic dike that is north-trending. The deposit consists of various sulfide-mineral veins including pyrite, sphalerite, marcasite, colusite, chalcopyrite, and bornite. The uranium mineralogy of the deposit is not known but brannerite was identified in a single sample examined by the Colorado School of Mines Research Foundation as referenced by Chenoweth (1979) but the majority of uranium is thought to occur in organic material in the vein. At the Hiser-Moore claims, located southwest of La Bajada, yellow uranium minerals occur on joint surfaces near the top of the basaltic dike flow. Evidence of previous erosion of uranium deposits into the Santa Fe River prior to development of the La Bajada mine was documented by Whitworth (1996). Whitworth indicated that “significant

amounts of radioactive elements present in fluvial deposits of the Santa Fe River downstream from the mine may be naturally emplaced and may not be the result of mining operations at La Bajada.”

2.3.2 Hydrogeologic Setting

The La Bajada Mine Site is in the eastern border of the Middle Rio Grande Basin. Groundwater beneath the Site is part of the Santa Fe Group aquifer system and flow downstream of the mine is generally westward and approximately parallel to the course of the Santa Fe River (Whitworth, 1996). Depth-to-water (DTW) at the Site, based on data collected by NMED in 2010, ranges from approximately 13 to 33 feet below ground surface (bgs).

Groundwater data quality reported by Bartolino and Cole (2002) for the northeast basin margin of the Middle Rio Grande Basin indicates sulfate levels are 400 milligrams per liter (mg/L), which exceeds the United States Environmental Protection Agency (EPA) secondary water quality standards.

2.3.3 Hydrologic Setting

The Site is located on the north side of the Santa Fe River, which flows from east to west. After leaving the Santa Fe River Canyon, the river turns and flows approximately northwest into the lower reservoir of the Cochiti Lake, which is a reservoir located at the confluence of the Rio Grande River and the Santa Fe River. The Rio Grande arm and the Santa Fe River arm are connected by a conveyance channel. According to Whitworth (1996), flow between the arms is dependent on water levels. “When the water level in the Rio Grande arm is above 5,355 feet, water flows from the Rio Grande arm through the conveyance channel into the Santa Fe arm. When the water level in the Rio Grande arm is below 5,355 feet, water flows into the Rio Grande arm from the Santa Fe arm.”

The City of Santa Fe Wastewater Treatment Plant (WWTP) is located upstream of the Site on the Santa Fe River. The WWTP discharges its treated effluent to the Santa Fe River. The Santa Fe River is a perennial stream for approximately 3 miles in the Santa Fe arm (Whitworth, 1996). In general, the river is considered perennial, though many reaches are periodically dry and most of its flow is treated effluent from the Santa Fe WWTP (Bartolino and Cole, 2002). The NMED has identified the section of the Santa Fe River from the Cochiti Pueblo boundary to Paseo del Canon (upstream of the Site) impaired for coolwater aquatic life. Causes of impairment include nutrient/eutrophication biological indicators and sedimentation/siltation.

Uranium content in surface water of the Santa Fe River reported by Whitworth (1996) indicates upstream concentrations seem to be slightly higher than uranium concentrations downstream of the La Bajada Mine Site. The La Majada mine prospect is located approximately 3 miles upstream of La Bajada, contributing to naturally occurring uranium concentrations.

2.3.4 Regional Climate

There is a meteorological data station (#291982) at the Cochiti Dam and monthly climate data is available from February 1, 1975 through January 20, 2015. The Cochiti Dam is approximately 8

miles northwest of the Site. Average low temperatures range from 20.6 degrees Fahrenheit (°F) to 61 °F and average high temperatures range from 46.9 °F to 91.3 °F. The coolest month is January and the warmest is July. Average annual precipitation is 12.09 inches with greatest rainfall occurring in July through September. The average snowfall is 9.6 inches mostly occurring in December through February (Western Regional Climate Center [WRCC], 2015).

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3.0 SCOPE OF OBJECTIVES

In conformance with WESTON's combined Project Work Plan and Sampling and Analysis Plan (SAP) (WESTON, 2015a), groundwater monitoring is being conducted for a 1-year period on a quarterly basis beginning in September 2015. WESTON will conduct four Site visits where groundwater monitor wells will be sampled for laboratory analysis. This work is being conducted to determine concentrations of analytes of concern (AOCs), monitor the potential change of depth to groundwater, and determine concentration of AOCs, if present, in onsite surface water. The following general tasks will be performed during each of the four monitoring events:

1. Collect DTW measurements at each well, measured from top of casing (TOC)
2. Purge each well using low-flow purging methods.
3. Monitor purged water for physical water quality parameters such as conductivity, pH, temperature, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity.
4. Collect groundwater samples for laboratory analysis relative to AOCs.
5. Collect surface water samples upstream and downstream of the mine site for laboratory analysis relative to AOCs.

3.1 GROUNDWATER MONITORING OBJECTIVES

The USFS, under joint powers agreement with NMED, performed a mine reclamation at the Site in 1996. The action included capping the mine waste and implementing periodic compliance groundwater monitoring. Eight groundwater monitoring wells were installed at the time to monitor compliance of New Mexico's groundwater quality standards. The wells have not been monitored or sampled since 2010 and new groundwater quality data is needed from each of the wells to determine if concentrations of contaminants in the wells will permit formal closure of the Site.

3.2 SURFACE WATER MONITORING OBJECTIVES

Samples collected from the Santa Fe River will identify upstream and downstream concentrations of AOCs to evaluate potential effects of surface water quality from the site compared to potential upstream sources.

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4.0 FIELD ACTIVITIES

On September 22 and 23, 2015 and January 12 and 16, 2016 groundwater level measurements were collected from all eight onsite wells. Six of the wells were sampled using the EPA standard low flow technique. Two of the wells were dry and unable to be sampled.

4.1 GROUNDWATER LEVEL MEASUREMENTS

Monitor well-specific data obtained from existing reports for well depths, screen interval depths, screen slot size, and well diameter is shown in Table 1. Water level measurements were obtained at each monitor well to determine groundwater depths beneath the site and to determine well sample pump intake setting depths. Depth-to-water measurements collected at each well were measured from the north side TOC using an electronic water level indicator. Measurements collected during each sampling event are presented in Table 2 and were recorded to 100th of a foot for accuracy.

Water depth measurements obtained were converted to elevation depths above mean sea level (amsl) based on estimated elevation measurements provided by a handheld global positioning system (GPS) unit. Although the elevations from handheld GPS units are typically inaccurate, the resulting estimated elevation of groundwater helps to show change over the four quarters. Estimated groundwater elevations and DTW measurements are presented in Figure 3.

Table 1 Monitor Well Construction Data

| Well | Well Depth (feet bgs) | Screen Intervals (feet bgs) | TOC Elevation (feet amsl) ^a | Diameter (inch) | Slot Size (inch) |
|------|--------------------------|-----------------------------------|--|--------------------|---------------------|
| MW-0 | 4.82 | NDA | 5624.347 | 3 | NDA |
| MW-1 | 34.71 | NDA | 5644.475 | 4 | NDA |
| MW-2 | 50.13 | NDA | 5620.036 | 4 | NDA |
| MW-3 | 51.04 | NDA | 5609.798 | 4 | NDA |
| MW-4 | 54.63 | NDA | 5604.988 | 4 | NDA |
| MW-5 | 27.35 | NDA | 5586.418 | 3 | NDA |
| MW-6 | 27.72 | NDA | 5577.459 | 4 | NDA |
| MW-7 | 53.30 | NDA | 5541.436 | 4 | NDA |

amsl: above mean sea level
 bgs: below ground surface
 NDA: No data available

TOC: Top-of-Casing
 MW: Monitor Well

Table 2 Current Monitor Well Water Level Data

| Well | September 2015 | | January 2016 | |
|------|---|--|---|--|
| | Depth-to-Water ^a (feet below TOC) | Water Level Elevation (feet amsl) ^b | Depth-to-Water ^a (feet below TOC) | Water Level Elevation (feet amsl) ^b |
| MW-0 | Dry | Dry | Dry | Dry |
| MW-1 | 19.17 | 5625.305 | 18.59 | 5625.885 |
| MW-2 | 20.03 | 5600.006 | 18.15 | 5601.886 |
| MW-3 | 21.23 | 5588.568 | 20.62 | 5589.178 |
| MW-4 | 35.87 | 5569.118 | 35.09 | 5569.898 |
| MW-5 | 25.92 | 5560.498 | 25.56 | 5560.858 |
| MW-6 | Dry | Dry | Dry | Dry |
| MW-7 | 13.43 | 5528.006 | 13.12 | 5528.316 |

a Depth-to-water measured from the north side of the top of each well casing.

b Elevation data collected with non-survey grade handheld GPS unit.

amsl: above mean sea level

TOC: Top-of-Casing

bgs: below ground surface

MW: Monitor Well

4.2 SURFACE WATER SAMPLING

Surface water samples were collected at upstream and downstream locations relative to the mine site in accordance with the SAP. Water quality parameters (conductivity, pH, temperature, ORP, and DO) were measured using a water quality meter.

4.3 GROUNDWATER SAMPLING

For all monitoring events, groundwater samples were collected from each monitor well located at the Site except for the two dry wells (MW-0 and MW-6). Samples were collected using low-flow purging technology to minimize disturbance of the well. Physical water quality indicators were measured during purging to assess groundwater stability. Groundwater samples were collected in conformance with EPA guidance for “Standard Operating Procedure for Low-Stress/Minimal Drawdown Groundwater Sample Collection” to the best extent practical.

4.3.1 Monitor Well Purging

Purging at each monitor well was accomplished by using low-flow pumping methods where emphasis is placed on minimal drawdown within the well allowing sample collection at ambient flow conditions. Each well was purged and sampled with either a variable speed peristaltic pump or a variable speed pneumatic operated bladder pump. Wetted parts of the peristaltic pump consisted of only disposable polyethylene and silicone tubing. Wetted parts of the bladder pump consisted of stainless steel or disposable polyethylene components. The internal wetted bladder pump components consisted of a disposable pump bladder along with disposable supply air and discharge tubing. Disposable bladders and tubing components consisted of new polyethylene materials. The following procedures were used to implement site purging and sampling methods.

1. The DTW was measured from the north side of the top of each well casing using an electronic water level indicator. Measurements were recorded to 100th of a foot. The

water level indicator was cleaned with an Alconox detergent solution and rinsed with distilled water between each well.

2. Unless noted otherwise, the pump was lowered into the well upon recording well DTW measurements and set at approximately 5 to 10 feet below the ground water interface.
3. At low flow withdrawal, groundwater was purged from the well until physical water quality parameters stabilized according to the criteria listed below. Water quality parameters (conductivity, pH, temperature, ORP, and DO) were measured using a flow-through cell in combination with a water quality meter. Water quality measurements were recorded at 5-minute intervals.
 - a. Conductivity to within 3% of average over three consecutive readings
 - b. pH \pm 0.1 pH units
 - c. Temperature \pm 0.5°C
 - d. ORP \pm 10% millivolts (mV)
 - e. DO \pm 10% mg/L
 - f. Turbidity \pm 10% Nephelometric Turbidity Units (NTUs)
4. An independent turbidity meter was used to record turbidity measurements.
5. Sample collection containers were filled directly from the dedicated well pump tubing.

4.3.2 Groundwater Sampling

Groundwater samples were collected at each well location for AOCs after water quality stabilization parameters were satisfied. Groundwater samples were submitted under chain of custody (COC) record to Accutest Laboratories (Accutest) in San Jose, CA for laboratory analysis using the analytical methods prescribed.

At each well location, groundwater samples for all analyses were transferred directly from the dedicated pump tubing into the appropriate sample containers. Sample volume collected for metals analyses was filtered using a 0.45 micron filter. Sample containers were furnished by the laboratory and were pre-preserved.

Sample containers were processed for shipment to the laboratory under COC record. Samples were submitted under standard turnaround times. One duplicate sample was collected from MW-3 for both sampling events completed to-date. One equipment blank sample was collected. Samples were analyzed by Accutest for select dissolved metals, combined radium-226 and -228, anions (chloride, sulfate, nitrate-nitrite), Total Kjeldahl Nitrogen (TKN), total dissolved solids (TDS), and total alkalinity. Select metals include: aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, cobalt, copper, magnesium, manganese, molybdenum, nickel, potassium, silver, sodium, strontium, thallium, uranium, vanadium, and zinc.

4.4 DECONTAMINATION PROCEDURES

Decontamination procedures were completed in accordance with EPA guidance, and sampling equipment was decontaminated consistently to assure the quality of groundwater samples collected. Sampling equipment was decontaminated after samples were collected from each

monitor well. Equipment was also decontaminated if contact was made with potentially contaminated water or surfaces.

Decontamination procedures used included a preliminary phosphate-free detergent (Alconox[®]) wash and distilled water rinse followed by a nitric acid rinse (10% concentration) and secondary distilled water rinse. Equipment was allowed to air dry after each rinse event. Disposable equipment intended for one-time use was not decontaminated, but was packaged for appropriate disposal.

4.5 DEVIATIONS FROM SAMPLING AND ANALYSIS PLAN

The SAP instructed using the variable speed pneumatic bladder pump to sample all of the groundwater monitoring wells. During the course of the September 2015 sampling event, the field team was unable to drive onto the Site and had to hike in all of the equipment. The peristaltic pump was used to sample as many wells as possible because it requires less equipment to operate. Monitoring wells MW-1, MW-2, MW-3, and MW-7 were purged and sampled with the peristaltic pump. Monitoring wells MW-4 and MW-5 were purged and sampled with the bladder pump due to inadequate head pressure for the peristaltic pump to work properly. To maintain consistency, each well was sampled using the same pump type between the first quarter and second quarter sampling events.

For the September 2015 and January 2016 sampling events initial gauging of all of the wells revealed that MW-0 and MW-6 were dry; therefore, groundwater samples were not collected from these wells. It was also noticed that the well casing for MW-0 may be broken approximately 1.5 feet below TOC.

5.0 SAMPLING RESULTS

A total of six groundwater samples, with one field duplicate and one equipment blank were collected during each sampling effort. Samples were analyzed as described in Section 4.2.2. Physical water quality stabilization parameters of conductivity, DO, water temperature, ORP, pH, and turbidity were measured in the field during well purging activities.

Table A-1 (Appendix A) provides a summary of surface water laboratory analytical results. Table A-2 provides groundwater results; groundwater quality stabilization measurements are presented in Table A-3; and average groundwater quality measurements are shown in Table A-4 (Appendix A). Figures 4 and 5 show detected analytes, by location, for the first and second quarterly events, respectively. Laboratory analytical reports for the current sampling event, including COC records, are provided in Appendix B. Laboratory analytical reports for the first quarterly sampling event (September 2015) were provided in the First Quarterly Monitoring Report (WESTON, 2015b). Field notes from the current sampling event are included in Appendix C and photographs from sampling activities are presented in the photograph log contained in Appendix D. Laboratory analytical results for samples were compared to applicable New Mexico Groundwater Standards and applicable New Mexico Surface Water Standards.

5.1 PHYSICAL WATER QUALITY MEASUREMENTS

Physical water quality measurements were collected during purging operations and are included in Table A-2 (Appendix A). Averaged physical water quality values for each sampling event are summarized in Table A-3 (Appendix A). Measurements recorded included parameters such as temperature, specific conductivity, dissolved oxygen, ORP, pH, and turbidity. These measurements are used to provide a general indication of groundwater stability within the saturated zone formation.

A brief summary of each water quality parameter measured along with the average result recorded at each well is provided below.

5.1.1 Temperature

The temperature of groundwater is fairly constant and is less than the mean air temperature above ground surface. At higher temperatures minerals tend to dissolve more readily. An increase in temperature by 1°C can potentially increase specific conductance by approximately 2 percent (Todd, 1980).

The average temperature across all wells during the September 2015 sampling event was determined to be 18.17 °C (64.71°F) and the range of average temperature readings among each well was 17.18 °C (62.92°F [MW-1]) to 20.27°C (68.49°F [MW-3]). The high ambient temperature reported by the National Weather Service (NWS) for the Santa Fe area on September 22-23 was 77 °F and 74 °F, respectively.

The average temperature across all wells during the January 2016 sampling event was determined to be 14.00 °C (57.20°F) and the range of average temperature readings among each well was 13.49 °C (56.28°F [MW-7]) to 15.41°C (59.74°F [MW-3]). The high ambient

temperature reported by the NWS for the Santa Fe area on January 12-13 was 43°F and 45°F, respectively.

5.1.2 pH

An indicator of hydrogen ion potential, pH is used to determine the acidity or alkaline condition of groundwater. The pH scale ranges from 0 to 14, with 7 being neutral. A pH unit of less than 7 is indicative of acidic water and a pH greater than 7 is indicative of alkaline or basic water. The pH of water can be affected by the dissociation of water molecules and of acids and bases dissolved in water contributing to disruption of mineral deposits.

During the September 2015 sampling event, the average pH across the site was determined to be 6.60 and the pH range representative of average measurements recorded at each well was between 6.29 (MW-3) and 6.91 (MW-2).

During the January 2016 sampling event, the average pH across the site was determined to be 7.29 and the pH range representative of the average measurements recorded at each well was between 6.96 (MW-4) and 7.52 (MW-1).

5.1.3 Specific Conductivity

Specific conductivity measures the ability of water to carry an electric current. This ability depends on the presence of ions; on their total concentration, mobility, and valence; and on the temperature of measurement (AWWA, 2003). The larger the conductance, the more mineralized the water. Most substances dissolved in water dissociate into ions that can conduct electrical current whereby the conductivity of water serves as an indicator of the amount of material dissolved in the water.

During the September 2015 sampling event, the average conductivity across the site was determined to be 799 micro Siemens per centimeter ($\mu\text{S}/\text{cm}$) and the conductivity range representative of average measurements recorded at each well was between 538 $\mu\text{S}/\text{cm}$ (MW-2) and 1,576 $\mu\text{S}/\text{cm}$ (MW-3).

During the January 2016 sampling event, the average conductivity across the site was determined to be 1,303 $\mu\text{S}/\text{cm}$ and conductivity range representative of average measurements recorded at each well was between 1,048 $\mu\text{S}/\text{cm}$ (MW-5) and 2,153 $\mu\text{S}/\text{cm}$ (MW-3).

5.1.4 Total Dissolved Solids

Total dissolved solids (TDS) was not measured in the field but was analyzed at the laboratory. As a comparison of estimated values of TDS at the Site, TDS concentration of palatable waters should not exceed 500 mg/L and waters containing more than 4,000 mg/L of TDS are considered unfit for human consumption (AWWA, 2003). The United States Geological Survey (USGS) classifies water based on dissolved solids as the following:

- Less than 1,000 mg/L: Fresh
- 1,000 – 3,000 mg/L: Slightly saline
- 3,000 – 10,000 mg/L: Moderately saline

- 10,000 – 35,000 mg/L: Very saline
- More than 35,000 mg/L: Briny

During the September 2015 sampling event, the average results for TDS analysis across the Site was determined to be 767.8 mg/L and the range of results was between 475 mg/L (MW-5) and 1,790 mg/L (MW-3).

During the January 2016 sampling event, the average results for TDS analysis across the Site was determined to be 962.3 mg/L and the range of results was between 496 mg/L (MW-5) and 1970 mg/L (MW-3).

5.1.5 Dissolved Oxygen

DO is a measure of oxygen in water in the form of a dissolved gas that is available for chemical reactions, and sustaining micro-organisms and/or aquatic organisms. DO is a function of water temperature and salinity where low concentrations are representative of anaerobic conditions. The water temperature affects the amount of DO in water where colder water can absorb more oxygen, producing higher DO values, while warmer water produces lower values. DO in shallow groundwater is typically less than 10 mg/L and in deeper waters can be virtually absent (AWWA, 2003). The oxygen content of groundwater in depths greater than 100 to 150 feet bgs is generally considered low (Driscoll, 1989). DO typically decreases in concentration and/or is consumed due to oxidation of organic materials and/or micro-organisms present in the vadose zone as water percolates to the groundwater table and subsequent saturated zone.

During the September 2015 sampling event, the average DO level across the site was determined to be 3.44 mg/L and the range representative of average measurements recorded at each well was between 1.49 mg/L (MW-4) and 6.53 mg/L (MW-2).

During the January 2016 sampling event, the average DO level across the site was determined to be 1.84 mg/L and the range representative of the average measurements recorded at each well was between 1.20 mg/L (MW-3) and 2.58 (MW-4).

5.1.6 Oxidation-Reduction Potential

ORP can be used as a qualitative indicator of aerobic versus anaerobic conditions. ORP of groundwater ranges from -400 to 800 mV (Wiedemeier, 1999). Groundwater with high electron acceptors has a higher electrical potential and is considered oxidizing whereas water with a low electrical potential is considered a reducing environment. ORP values of less than 50 mV are considered representative of a reducing environment (Whitlock and Kelly, 2010).

During the September 2015 sampling event, the average ORP level across the Site was determined to be 153.4 mV and the ORP range representative of average measurements recorded at each well was between 34.9 mV (MW-5) and 232.1 mV (MW-1).

During the January 2016 sampling event, the average ORP level across the Site was determined to be 1.6 mV and the ORP range representative of average measurements recorded at each well was between -85.4 mV (MW-3) and 108.0 mV (MW-4).

5.1.7 Turbidity

Turbidity is an optical property caused by suspended particles in water. Turbidity measurements provide an indication of water clarity where turbidity can be influenced by well construction, well purging practices, and formation matter. Turbidity levels can often affect accurate determination of dissolved concentrations of organic and inorganic analytes. Natural turbidity levels in groundwater may exceed 10 NTUs (YSI, 2005).

During the September 2015 sampling event, the average turbidity level measured across the site was 9.51 NTUs, and the turbidity range representative of average measurements recorded at each well was between 3.18 NTUs (MW-1) and 22.76 NTUs (MW-5).

During the January 2016 sampling event, the average turbidity level measured across the site was 17.16 NTUs, and the turbidity range representative of the average measurements recorded at each well was between 1.26 NTUs (MW-7) and 53.92 (MW-1).

5.2 LABORATORY ANALYTICAL RESULTS

5.2.1 Surface Water – General Water Quality Parameters

Additional water quality parameters including total alkalinity (hydroxide alkalinity, carbonate alkalinity, and bicarbonate alkalinity), ions (chloride and sulfate), TDS, nitrate-nitrite, and TKN were analyzed.

Alkalinity

Alkalinity is a measure of the buffering capacity of water (i.e., its ability to resist sudden changes in pH). Generally it is desirable to have alkalinity concentrations that range from 20 to 200 mg/L CaCO₃. During the September 2015 sampling event, total alkalinity, which occurred predominantly as bicarbonate alkalinity, was consistent between both samples at 175 mg/L CaCO₃ (SW-1) and 172 mg/L CaCO₃ (SW-2). Results were similar during the January 2016 sampling event at 176 mg/L CaCO₃ (SW-1) and 186 mg/L CaCO₃ (SW-2).

Chloride, Sulfate, and TDS

The source of chloride in natural surface waters is generally due to dissolution of minerals. It is a contributor to TDS and conductivity. During the September 2015 sampling event, chloride was detected in both samples at 59.9 mg/L (SW-1) and 60.7 mg/L (SW-2). Concentrations of chloride were consistent in January 2016 with results of 64.7 mg/L (SW-1) and 59.2 mg/L (SW-2).

Sulfate is derived from dissolution of sulfur-bearing minerals and contributes to acidity in water. During the September 2015 sampling event, sulfate was detected in both samples at 47.7 mg/L (SW-1) and 46.9 mg/L (SW-2). Concentrations of sulfate were consistent in January 2016 with results of 57.4 mg/L (SW-1) and 59.2 mg/L (SW-2). There are no New Mexico surface water quality standards for chloride or sulfate and the concentrations of both ions detected are typical of other natural waters. During the September 2015 sampling event TDS was consistent in both

samples at 413 mg/L (SW-1) and 392 mg/L (SW-2). Results were consistent during the January 2016 sampling event TDS at 426 mg/L (SW-1) and 450 mg/L (SW-2).

Nitrate-Nitrite and TKN

During the September 2015 sampling event, nitrate-nitrite was not detected in either of the samples above the laboratory reporting limit (RL). However, during the January 2016 sampling event nitrate-nitrite was detected in both samples at 1.8 mg/L (SW-1) and 1.5 mg/L (SW-2). TKN was detected in one sample above the laboratory RL at 0.63 mg/L (SW-1). Results were consistent during the January 2016 sampling event where TKN was not detected over the laboratory RL in either of the samples. TKN represents the sum of organic nitrogen, ammonia, and ammonium and is usually analyzed at WWTPs. The TKN goal for treated effluent from WWTPs is <10 mg/L (NMED, 2007).

5.2.2 Surface Water – Metals and Radionuclides

During the September 2015 sampling event, dissolved metals detected above RLs for surface water samples collected were reported for boron, calcium, magnesium, nickel, potassium, sodium, strontium, uranium, and zinc (Table A-1, Appendix A). In January 2016, dissolved metals detected above RLs in surface water were reported for arsenic, boron, calcium, magnesium, manganese, potassium, sodium, strontium, uranium, and zinc (Table A-1, Appendix A). None of the detections exceeded any of the New Mexico Surface Water Standards. Combined radium-226 and -228 was not detected above the laboratory RL during either event.

5.2.3 Groundwater – General Water Quality Parameters

General water quality parameters were also analyzed in collected groundwater samples. Results are described below.

Alkalinity

During the September 2015 sampling event total alkalinity, which occurred as bicarbonate alkalinity, ranged from 300 mg/L CaCO₃ (MW-5) to 559 mg/L CaCO₃ (MW-3). Results were consistent in January 2016 at concentrations of 250 mg/L CaCO₃ (MW-5) to 570 mg/L CaCO₃ (MW-7).

Chloride, Sulfate, and TDS

Chloride was detected in all samples above the laboratory RL ranging from 15.7 mg/L (MW-2) to 104 (MW-5) in September 2015. Detections of chloride during January 2016 were similar, ranging from 35.9 mg/L (MW-3) to 70.6 mg/L (MW-1). Sulfate concentrations in September 2015 ranged from 69.0 mg/L (MW-7) to 768 mg/L (MW-3). Detections of sulfate during January 2016 were similar, ranging from 71.4 mg/L (MW-5) to 826 (MW-3). The NM Groundwater Standard for sulfate is 600 mg/L, which is exceeded in MW-3 and the duplicate taken from MW-3 during both sampling events.

During the September 2015 sampling event, TDS ranged from 475 mg/L (MW-5) to 1,790 mg/L (MW-3). Results were consistent in January 2016 at concentrations of 496 mg/L (MW-5) to

1970 mg/L (MW-3). The NM Groundwater Standard for TDS is 1,000 mg/L, which was exceeded in MW-3 and the duplicate taken from MW-3.

Nitrate-Nitrite and TKN

Nitrate-nitrite was detected in September 2015 in two samples: 0.11 mg/L (MW-7) and 0.14 mg/L (MW-2). During January 2016 nitrate-nitrite was detected in four samples ranging from 0.18 mg/L (MW-7) to 0.60 mg/L (MW-4). All samples are below the NM Groundwater Standard for nitrate of 10 mg/L. During September 2015, TKN was detected in only one sample at a concentration of 0.23 mg/L (MW-5). During January 2016, TKN was detected in only one sample at a concentration of 0.18 mg/L (MW-2).

5.2.4 Groundwater – Metals and Radionuclides

During the September 2015 sampling event, dissolved metals detected above laboratory RLs in collected groundwater samples were reported for arsenic, boron, calcium, magnesium, manganese, molybdenum, nickel, potassium, sodium, strontium, thallium, uranium, and zinc. The January 2016 sampling event showed a similar list of dissolved metals detected above laboratory RLs and include boron, calcium, cobalt, magnesium, manganese, nickel, potassium, sodium, strontium, uranium, and zinc. For both sampling events dissolved metal concentrations that exceed the NM Groundwater Standards are manganese and uranium, as described further below.

- Manganese was detected in monitoring wells MW-3 and MW-5 at 0.886 mg/L and 0.887 mg/L, respectively during the September 2015 sampling event. Similarly, manganese was detected in monitoring wells MW-3 and MW-5 at 1.16 mg/L and 0.408 mg/L, respectively in January 2016. Each of these results exceeds the NM Groundwater Standard of 0.2 mg/L.
- During both sampling events uranium was detected in all of the wells but only MW-3 and MW-4 exceed the NM Groundwater Standard of 0.03 mg/L. Sample results from September 2015 contained concentrations of 0.334 mg/L and 0.0960 mg/L, and results from January 2016 contained concentrations of 0.363 mg/L and 0.0765 mg/L, respectively.

All groundwater results were analyzed for radium-226 and radium-228. Radium-226 was not detected above the laboratory RL in any sample. Radium-228 was detected above the laboratory RL in one sample during the September 2015 event. The duplicate taken from MW-3 contained radium-228 at a concentration of 1.16 pico Curie per liter (pCi/L). The NM Groundwater Standard for combined radium-226 and -228 is 30 pCi/L.

5.3 FIELD QUALITY CONTROL SAMPLES

Field Quality Control (QC) samples are intended to evaluate conditions resulting from field activities and serve to accomplish two primary goals: identification of potential field contamination and determination of sampling variability.

5.3.1 Equipment Blanks

A single equipment blank (EB-1) was collected during each sampling event following the methods identified in the approved SAP. The equipment blank was analyzed for the same list of metals using identical analytical methods as the primary groundwater samples. Laboratory analytical results reported for the equipment blank sample showed no analytes were detected above the laboratory RL during the September 2015 and January 2016 sampling events.

5.3.2 Field Duplicate Samples

Field duplicate samples are collected to evaluate the precision of laboratory analyses by calculation of the relative percent difference (RPD) between the original and duplicate samples as described in Section 4.3 of the approved SAP. During each sampling event, a field duplicate was collected at MW-3 and analyzed for total metals, general water quality parameters, and radionuclides consistent with the primary sample analyses.

During the September 2015 sampling event detectable concentrations of alkalinity as bicarbonate, alkalinity as CaCO₃, boron, calcium, chloride, cobalt, magnesium, manganese, nickel, potassium, radium-228, sodium, strontium, sulfate, total dissolved solids and uranium, were found in the primary sample and the field duplicate sample (Tables A-1 and A-2, Appendix A). Calculated RPDs for the detected metals ranged from 0 – 3.1%, which fall within the acceptance criterion of 20% stated in the approved SAP.

During the January 2016 sampling event detectable concentrations of alkalinity as bicarbonate, alkalinity as CaCO₃, boron, calcium, chloride, cobalt, magnesium, manganese, nickel, potassium, sodium, strontium, sulfate, total dissolved solids and uranium, were found in the primary sample and the field duplicate sample (Tables A-1 and A-2, Appendix A). Calculated RPDs were all within the acceptance criterion and ranged from 0 – 6.8%, which do fall within the acceptance criterion of 20% stated in the approved SAP.

5.4 LABORATORY QUALITY CONTROL SAMPLES

Laboratory QC samples are analyzed by Accutest as part of the standard laboratory QC protocols to monitor the precision and accuracy of the results of its analytical procedures. In part, laboratory QC samples consist of matrix spike and matrix spike duplicates (MS/MSD) for inorganic analysis. During all sampling events, WESTON requested that the sample collected at MW-7 be used for MS/MSD analyses. MS/MSD results were within acceptable percent recovery and RPD criteria for each sampling event.

5.5 DATA REVIEW AND VALIDATION

WESTON conducted a verification evaluation of each laboratory analytical data package in accordance with the approved SAP to evaluate quality and usability of the data set. After review it appears that all collected data should be considered useable and acceptable. The following conditions were identified during the laboratory data verification process:

-
- Requested analyses and all pertinent information were recorded on the COC form and the laboratory data package included an accurate copy of the COC.
 - The laboratory data package did not include a case narrative; however, footnotes were included on data sheets to present additional information. No non-conformances were noted.
 - Several results were flagged J to indicate results were between the laboratory RL and the method detection limit.
 - During the September 2015 sampling event, the serial dilution indicated possible matrix interference for strontium. All strontium results are greater than the laboratory RL and did not require dilution. Data quality should not be affected.
 - No additional data quality issues were present during the January 2016 sampling event.

6.0 SUMMARY

The data collected in September 2015 and January 2016 was compared to applicable NM WQS and historical concentrations (Tables A-1 and A-2, Appendix A). Exceedances of applicable standards from the September 2015 and January 2016 along with historical rounds of sampling are summarized below.

Concentrations of AOCs in the upstream and downstream samples collected from the Santa Fe River did not exceed any NM Surface Water standard during the most recent two sampling events. Historically, the river was only sampled on two other occasions (August 2002 and April 2003). In April 2003, the upstream and downstream surface water samples exceeded the NM Surface Water standard of Livestock Watering for nitrate-nitrite of 0.132 mg/L with concentrations of 0.92 mg/L and 0.96 mg/L, respectively. No other AOCs were detected at concentrations exceeding standards in historically collected samples.

MW-1 did not exhibit concentrations of any AOCs that exceed any of the NM Groundwater Standards during the past two rounds of sampling, which is generally consistent with previous sampling. Historically, manganese was detected at 0.21 mg/L in April 2003, which exceeded the standard of 0.2 mg/L. Manganese was only analyzed once previous to 2003 (August 2002); results from August 2002 and those obtained after April 2003 have been below the standard.

Similarly, concentrations of AOCs in MW-2 also did not exceed any of the NM Groundwater Standards during the past two rounds of sampling. In August 2002, manganese was analyzed for the first time and detected at 0.68 mg/L, which exceeded the NMGS of 0.2 mg/L. Analytical results from April 2003 (0.47 mg/L) also exceeded the standard; however, results obtained since April 2003 have been below the standard.

During the two most recent rounds of sampling, concentrations of sulfate, TDS, manganese, and uranium in MW-3 exceeded their respective NM Groundwater Standards. Sulfate was detected at 728 mg/L in September 2015 and 822 mg/L in January 2016, which exceeds the NM Groundwater Standard of 600 mg/L. Historically sulfate been detected in MW-3 at concentrations ranging from a maximum of 1,430 mg/L (March 1999) to 948 mg/L (June 2010). The concentration from September 2015 is the historical low and results show a general downward trend. TDS was detected at 1,790 mg/L in September 2015 and 1,940 mg/L in January 2016. Historical concentrations range from 2,740 mg/L (March 1999) to 2,140 mg/L. Similar to sulfate, the TDS concentration from September 2015 is the historical low and a general downward trend is shown. The NM Groundwater Standard for TDS is 1,000 mg/L. Manganese was detected at 0.886 mg/L during September 2015 and 1.16 mg/L during January 2016, both exceed the groundwater standard of 0.2 mg/L. Historically, manganese has been detected in MW-3 at concentrations ranging from a maximum of 7.1 mg/L (April 2003) to <0.001 mg/L (June 2010). Uranium was detected at 0.334 mg/L in September 2015 and 0.363 mg/L in January 2015. These concentrations are down from the historical maximum of 0.65 mg/L detected in March 1999. The groundwater standard for uranium is 0.03 mg/L.

Concentrations of uranium detected in MW-4 were detected at 0.0969 mg/L in September 2015 and 0.0765 mg/L in January 2016. These concentrations exceeded the NM Groundwater Standard of 0.03 mg/L. Historically uranium has been detected in MW-4 ranging from the

maximum of 0.16 mg/L (September 1998) to the 0.028 (October 1996). No other AOCs have currently or historically exceeded their NM Groundwater Standard.

The only AOC detected at a concentration greater than the groundwater standard in MW-5 during the two most recent rounds of sampling was manganese at a concentration of 0.887 mg/L in September 2015 and 0.408 mg/L in January 2016. Historically manganese results in MW-5 ranged from 0.36 mg/L (April 2003) to 0.57 mg/L (August 2002). During March 1998 and March 1999 uranium was detected at concentrations exceeding the NM Groundwater Standard (0.066 mg/L and 0.036 mg/L, respectively). Uranium was detected during the September 2015 sampling event at a concentration of 0.0125 mg/L, which is the historical low.

MW-6 was dry during the September 2015 and January 2016 rounds of sampling and therefore not sampled. Historically, only uranium has been detected at concentrations exceeding the groundwater standard at this location. In March and June of 1999, uranium was detected in MW-6 at 0.037 mg/L and 0.041 mg/L, which exceed the standard of 0.03 mg/L.

No AOCs were detected at MW-7 during the two most recent rounds of sampling or during any of the previous sampling events that exceed a NM Groundwater Standard.

7.0 REFERENCES

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FIGURES

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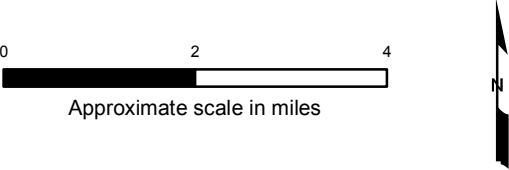


Legend

- Points of Interest
- La Bajada Mine
- Dirt Road
- Indian Route
- State Route
- Interstate
- Rivers and Streams
- Lake

Baselayer Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
 Baselayer Date: 2011

Figure 1
 Site Vicinity Map
 La Bajada Mine Groundwater Investigation
 Santa Fe National Forest, New Mexico



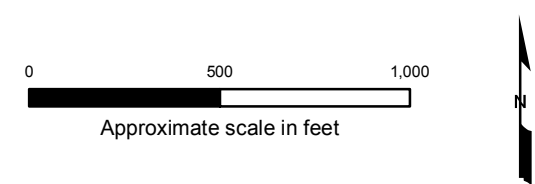


Legend

- ▲ Surface Water Sample Locations
- Monitor Well
- Dirt Road
- Rivers and Streams

Baselayer Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
 Baselayer Date: 2011

Figure 2
 Well Location Map
 La Bajada Mine Groundwater Investigation
 Santa Fe National Forest, New Mexico





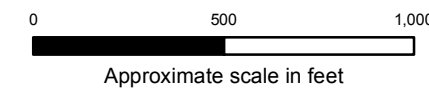
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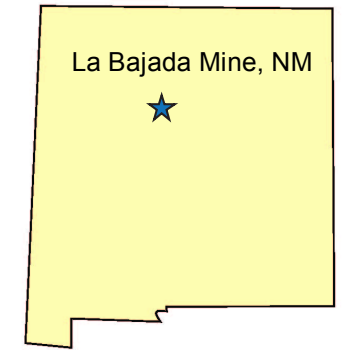
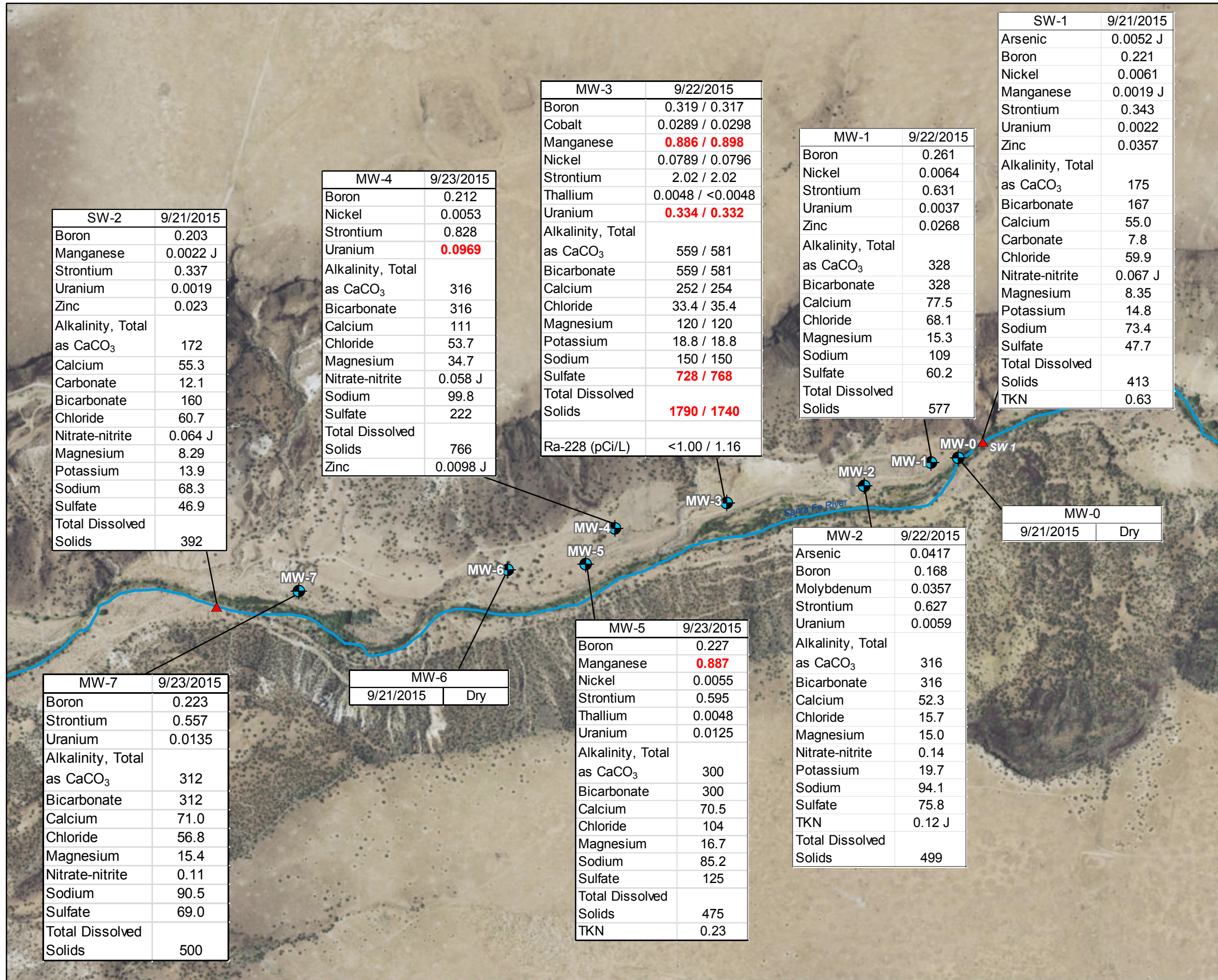
- ▲ Surface Water Sample Locations
- Monitor Well
- Dirt Road
- Rivers and Streams

Notes:
Depth to water measured at the north side of the top of each well casing.

Baselayer Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
Baselayer Date: 2011

Figure 3
Depth-to-Water Measurements
La Bajada Mine Groundwater Investigation
Santa Fe National Forest, New Mexico





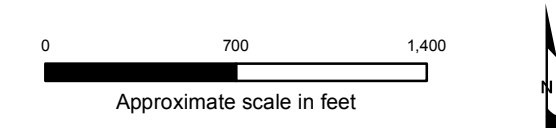
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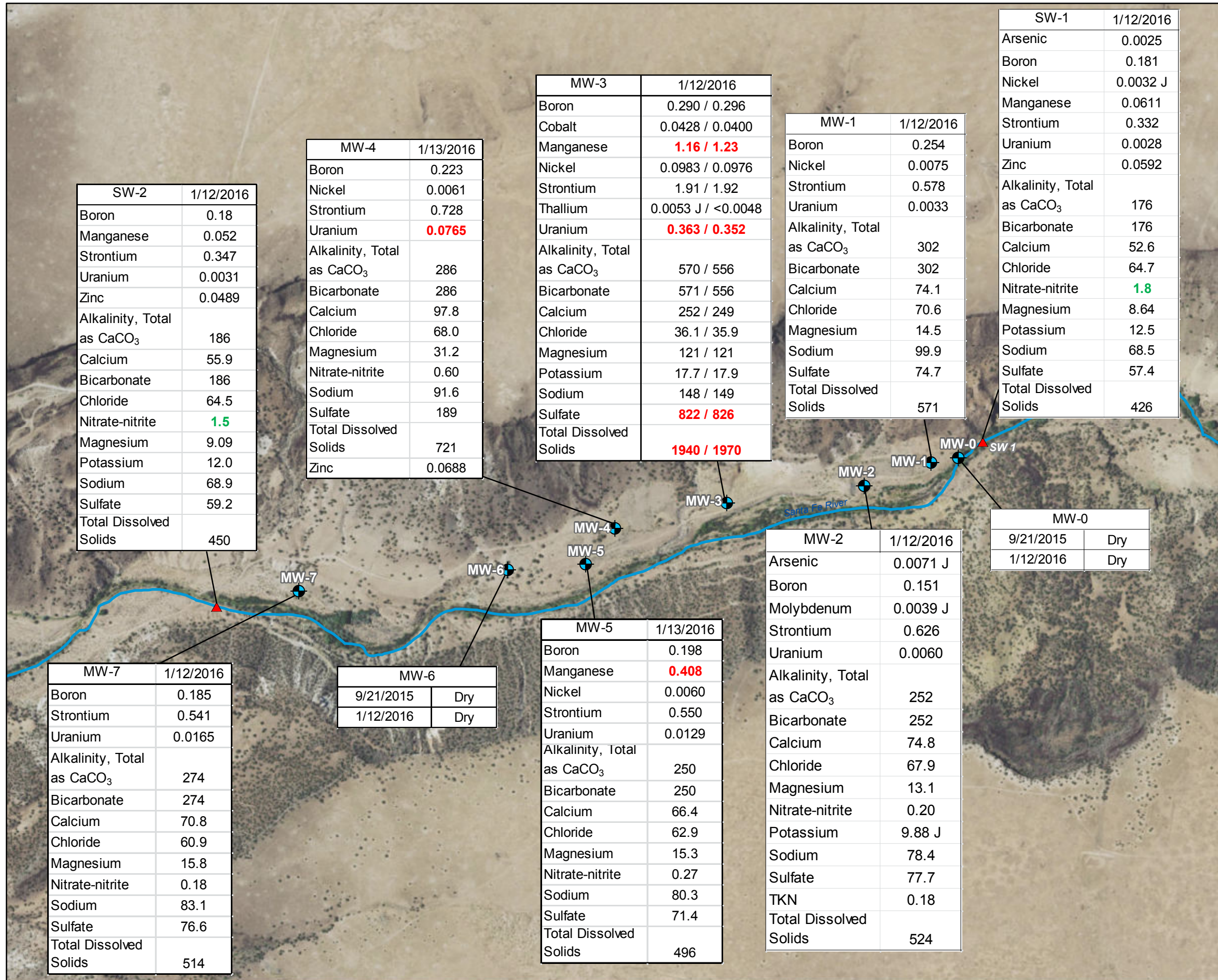
- ▲ Surface Water Sample Locations
- Monitor Well
- Dirt Road
- Rivers and Streams

Note:
 Results shown in mg/L unless noted
 Only results above the laboratory reporting limit are shown.
Red Text: Result exceeds NM Water Quality Standard

Baselayer Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
 Baselayer Date: 2011

Figure 4
 Analytical Results - Sept 2015
 La Bajada Mine Groundwater Investigation
 Santa Fe National Forest, New Mexico





| SW-2 | 1/12/2016 |
|--|-----------|
| Boron | 0.18 |
| Manganese | 0.052 |
| Strontium | 0.347 |
| Uranium | 0.0031 |
| Zinc | 0.0489 |
| Alkalinity, Total as CaCO ₃ | 186 |
| Calcium | 55.9 |
| Bicarbonate | 186 |
| Chloride | 64.5 |
| Nitrate-nitrite | 1.5 |
| Magnesium | 9.09 |
| Potassium | 12.0 |
| Sodium | 68.9 |
| Sulfate | 59.2 |
| Total Dissolved Solids | 450 |

| MW-4 | 1/13/2016 |
|--|-----------|
| Boron | 0.223 |
| Nickel | 0.0061 |
| Strontium | 0.728 |
| Uranium | 0.0765 |
| Alkalinity, Total as CaCO ₃ | 286 |
| Bicarbonate | 286 |
| Calcium | 97.8 |
| Chloride | 68.0 |
| Magnesium | 31.2 |
| Nitrate-nitrite | 0.60 |
| Sodium | 91.6 |
| Sulfate | 189 |
| Total Dissolved Solids | 721 |
| Zinc | 0.0688 |

| MW-3 | 1/12/2016 |
|--|--------------------|
| Boron | 0.290 / 0.296 |
| Cobalt | 0.0428 / 0.0400 |
| Manganese | 1.16 / 1.23 |
| Nickel | 0.0983 / 0.0976 |
| Strontium | 1.91 / 1.92 |
| Thallium | 0.0053 J / <0.0048 |
| Uranium | 0.363 / 0.352 |
| Alkalinity, Total as CaCO ₃ | 570 / 556 |
| Bicarbonate | 571 / 556 |
| Calcium | 252 / 249 |
| Chloride | 36.1 / 35.9 |
| Magnesium | 121 / 121 |
| Potassium | 17.7 / 17.9 |
| Sodium | 148 / 149 |
| Sulfate | 822 / 826 |
| Total Dissolved Solids | 1940 / 1970 |

| MW-1 | 1/12/2016 |
|--|-----------|
| Boron | 0.254 |
| Nickel | 0.0075 |
| Strontium | 0.578 |
| Uranium | 0.0033 |
| Alkalinity, Total as CaCO ₃ | 302 |
| Bicarbonate | 302 |
| Calcium | 74.1 |
| Chloride | 70.6 |
| Magnesium | 14.5 |
| Sodium | 99.9 |
| Sulfate | 74.7 |
| Total Dissolved Solids | 571 |

| SW-1 | 1/12/2016 |
|--|-----------|
| Arsenic | 0.0025 |
| Boron | 0.181 |
| Nickel | 0.0032 J |
| Manganese | 0.0611 |
| Strontium | 0.332 |
| Uranium | 0.0028 |
| Zinc | 0.0592 |
| Alkalinity, Total as CaCO ₃ | 176 |
| Bicarbonate | 176 |
| Calcium | 52.6 |
| Chloride | 64.7 |
| Nitrate-nitrite | 1.8 |
| Magnesium | 8.64 |
| Potassium | 12.5 |
| Sodium | 68.5 |
| Sulfate | 57.4 |
| Total Dissolved Solids | 426 |

| MW-0 | |
|-----------|-----|
| 9/21/2015 | Dry |
| 1/12/2016 | Dry |

| MW-7 | 1/12/2016 |
|--|-----------|
| Boron | 0.185 |
| Strontium | 0.541 |
| Uranium | 0.0165 |
| Alkalinity, Total as CaCO ₃ | 274 |
| Bicarbonate | 274 |
| Calcium | 70.8 |
| Chloride | 60.9 |
| Magnesium | 15.8 |
| Nitrate-nitrite | 0.18 |
| Sodium | 83.1 |
| Sulfate | 76.6 |
| Total Dissolved Solids | 514 |

| MW-6 | |
|-----------|-----|
| 9/21/2015 | Dry |
| 1/12/2016 | Dry |

| MW-5 | 1/13/2016 |
|--|-----------|
| Boron | 0.198 |
| Manganese | 0.408 |
| Nickel | 0.0060 |
| Strontium | 0.550 |
| Uranium | 0.0129 |
| Alkalinity, Total as CaCO ₃ | 250 |
| Bicarbonate | 250 |
| Calcium | 66.4 |
| Chloride | 62.9 |
| Magnesium | 15.3 |
| Nitrate-nitrite | 0.27 |
| Sodium | 80.3 |
| Sulfate | 71.4 |
| Total Dissolved Solids | 496 |

| MW-2 | 1/12/2016 |
|--|-----------|
| Arsenic | 0.0071 J |
| Boron | 0.151 |
| Molybdenum | 0.0039 J |
| Strontium | 0.626 |
| Uranium | 0.0060 |
| Alkalinity, Total as CaCO ₃ | 252 |
| Bicarbonate | 252 |
| Calcium | 74.8 |
| Chloride | 67.9 |
| Magnesium | 13.1 |
| Nitrate-nitrite | 0.20 |
| Potassium | 9.88 J |
| Sodium | 78.4 |
| Sulfate | 77.7 |
| TKN | 0.18 |
| Total Dissolved Solids | 524 |



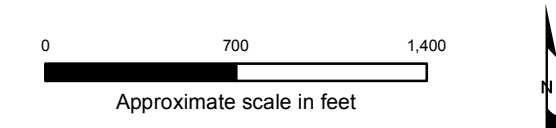
Legend

- ▲ Surface Water Sample Locations
- Monitor Well
- Dirt Road
- Rivers and Streams

Note:
 Results shown in mg/L unless noted
 Only results above the laboratory reporting limit are shown.
 Red Text: Result exceeds NM Water Quality Standard

Baselayer Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
 Baselayer Date: 2011

Figure 5
 Analytical Results - Jan 2016
 La Bajada Mine Groundwater Investigation
 Santa Fe National Forest, New Mexico



APPENDIX A

Data Summary Tables

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**Table A-1 Summary of Surface Water Analytical Results
La Bajada Mine Site, Santa Fe National Forest, NM**

| Sample Location | Date Sample Collected | Potassium | Sodium | Hardness (Ca Mg) | Calcium | Magnesium | Alk (CO3 & HCO3) | Alkalinity, Total as CaCO3 | Hydroxide Alkalinity | Carbonate | Bicarbonate | Chloride | Sulfate | TDS | Nitrate-nitrite | Ammonia | TKN | Aluminum | Antimony | Arsenic | Barium | Beryllium | Boron | Cadmium | Chromium | Cobalt | Copper | Lead | Iron | Manganese | Mercury | Molybdenum | Nickel | Selenium | Silicon | Silver | Strontium | Thallium | Tin | Uranium | Vanadium | Zinc | Ra-226 (pCi/L) | Ra-228 (pCi/L) |
|---|-----------------------|-----------|--------|------------------|---------|-----------|------------------|----------------------------|----------------------|-----------|-------------|----------|---------|-----|-----------------|---------|--------|----------------------|----------|----------|----------|-----------|-------|----------|----------|----------|----------|-------|------|-------------------|--------------------|-------------------|---------------------------|--------------------|---------|---------|-----------|----------|------|---------|----------|--------|----------------|----------------|
| SW-1 | 12-Jan-16 | 12.5 | 68.5 | -- | 52.6 | 8.64 | -- | 176 | <5.0 | <5.0 | 176 | 64.7 | 57.4 | 426 | 1.8 | -- | <0.18 | <0.027 | <0.0012 | 0.0025 | 0.0996 J | <0.0060 | 0.181 | <0.0030 | <0.00060 | 0.0011 J | 0.0030 J | -- | -- | 0.0611 | -- | 0.0027 J | 0.0032 J | -- | -- | <0.0015 | 0.332 | <0.0048 | -- | 0.0028 | 0.0017 J | 0.0592 | <1.00 | <1.00 |
| SW-1 | 21-Sep-15 | 14.8 | 73.4 | -- | 55.0 | 8.35 | -- | 175 | <5.0 | 7.8 | 167 | 59.9 | 47.7 | 413 | 0.067 J | -- | 0.63 | <0.027 | <0.0012 | 0.0052 J | 0.0975 J | <0.0006 | 0.221 | <0.0003 | 0.0007 J | 0.0018 J | 0.0028 J | -- | -- | 0.0019 J | -- | 0.0068 J | 0.0061 | -- | -- | <0.0015 | 0.343 | <0.0048 | -- | 0.0022 | 0.0062 J | 0.0357 | <1.00 | <1.00 |
| LBM Upstream | 15-Apr-03 | 12.5 | 99.2 | 176 | 55.9 | 8.87 | 270 | -- | -- | 10.1 | 319 | 44.7 | 46.2 | 532 | 0.92 | <0.1 | 0.78 | <0.1 | -- | -- | 0.1 | <0.05 | 0.3 | <0.1 | <0.1 | <0.05 | <0.1 | -- | <0.1 | <0.05 | -- | <0.1 | <0.1 | -- | 10 | <0.1 | 0.6 | -- | <0.1 | 0.008 | <0.1 | <0.1 | -- | -- |
| LBM Upstream | 20-Aug-02 | 13.1 | 106 | 168 | 54.1 | 7.99 | 273 | -- | -- | 35.3 | 297 | 66.9 | 36.7 | 478 | -- | -- | -- | <0.1 | -- | -- | 0.1 | <0.05 | 0.3 | <0.1 | <0.1 | <0.05 | <0.1 | -- | <0.1 | <0.05 | -- | <0.1 | <0.1 | -- | 13 | <0.1 | 0.5 | -- | <0.1 | 0.013 | <0.1 | <0.1 | -- | -- |
| LBM Midstream | 15-Apr-03 | 12.7 | 106 | 184 | 58.9 | 8.92 | 279 | -- | -- | 20.6 | 320 | 46.8 | 47.9 | 566 | 0.96 | <0.1 | 0.806 | <0.1 | -- | -- | 0.1 | <0.05 | 0.2 | <0.1 | <0.1 | <0.05 | <0.05 | -- | <0.1 | <0.05 | -- | <0.1 | <0.1 | -- | 10 | <0.1 | 0.6 | -- | <0.1 | 0.008 | <0.1 | <0.1 | -- | -- |
| LBM Midstream | 20-Aug-02 | 13.2 | 107 | 167 | 53.6 | 7.99 | 277 | -- | -- | 35.8 | 302 | 63.5 | 36.7 | 516 | -- | -- | -- | <0.1 | -- | -- | 0.1 | <0.05 | 0.3 | <0.1 | <0.1 | <0.05 | <0.1 | -- | <0.1 | <0.05 | -- | <0.1 | <0.1 | -- | 13 | <0.1 | 0.4 | -- | <0.1 | 0.012 | <0.1 | <0.1 | -- | -- |
| SW-2 | 12-Jan-16 | 12.0 | 68.9 | -- | 55.9 | 9.09 | -- | 186 | <5.0 | <5.0 | 186 | 64.5 | 59.2 | 450 | 1.5 | -- | 0.18 J | <0.027 | <0.0012 | 0.0027 J | 0.102 J | <0.00060 | 0.18 | <0.00030 | <0.00060 | 0.0010 J | 0.0026 J | -- | -- | 0.052 | -- | 0.0031 J | 0.0033 J | -- | -- | <0.0015 | 0.347 | <0.0048 | -- | 0.0031 | 0.0021 J | 0.0489 | <1.00 | <1.00 |
| SW-2 | 21-Sep-15 | 13.9 | 68.3 | -- | 55.3 | 8.29 | -- | 172 | <5.0 | 12.1 | 160 | 60.7 | 46.9 | 392 | 0.064 J | -- | 0.14 J | <0.027 | <0.0012 | 0.0032 J | 0.0963 J | <0.00060 | 0.203 | <0.0003 | 0.0006 J | 0.0019 J | 0.0026 J | -- | -- | 0.0022 J | -- | 0.0062 J | 0.0047 J | -- | -- | <0.0015 | 0.337 | <0.0048 | -- | 0.0019 | 0.0052 J | 0.023 | <1.00 | <1.00 |
| LBM Downstream | 15-Apr-03 | 11.9 | 100 | 177 | 56.9 | 8.49 | 270 | -- | -- | 16.8 | 313 | 45.3 | 47.4 | 566 | 0.9 | <0.1 | 0.917 | <0.1 | -- | -- | 0.1 | <0.05 | 0.3 | <0.1 | <0.1 | <0.05 | <0.1 | -- | <0.1 | <0.05 | -- | <0.1 | <0.1 | -- | 11 | <0.1 | 0.5 | -- | <0.1 | 0.008 | <0.1 | <0.1 | -- | -- |
| LBM Downstream | 20-Aug-02 | 12.9 | 105 | 163 | 52.4 | 7.92 | 259 | -- | -- | 36 | 279 | 67.2 | 36.2 | 538 | -- | -- | -- | <0.1 | -- | -- | 0.1 | <0.05 | 0.3 | <0.1 | <0.1 | <0.05 | <0.1 | -- | <0.1 | <0.05 | -- | <0.1 | <0.1 | -- | 12 | <0.1 | 0.4 | -- | <0.1 | 0.011 | <0.1 | <0.1 | -- | -- |
| Surface Water - Drinking Water Source [NMAC 20.6.4.900(J)] | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.006 | -- | 0.01 | 2.0 | 0.004 | -- | 0.005 | 0.1 | -- | 1.3 | 0.015 | -- | -- | 0.002 ^d | -- | 0.7 | 0.05 | -- | -- | -- | 0.002 | -- | 0.03 | -- | -- | 5 | |
| Surface Water - Irrigation ^a [NMAC 20.6.4.900(J)] | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 5.0 | -- | 0.100 | -- | -- | 0.75 | 0.01 | 0.1 | 0.05 | 0.2 | 5 | -- | -- | 1.0 ^d | -- | 0.13 0.25 ^a | -- | -- | -- | -- | -- | 0.1 | -- | -- | -- | | |
| Surface Water - Livestock Watering [NMAC 20.6.4.900(J)] | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.132 | -- | -- | -- | -- | 0.200 | -- | -- | 5,000 | 0.05 | 1 | 1 | 0.5 | 0.1 | -- | -- | 0.01 ^d | -- | -- | 0.05 | -- | -- | -- | -- | -- | 0.1 | -- | -- | 0.03 | |
| Surface Water - Wildlife Habitat [NMAC 20.6.4.900(J)] | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.77 ^d | -- | -- | 0.005 ^d | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Surface Water - Aquatic Life (acute) [NMAC 20.6.4.900(L,J)] | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 1.84 | -- | 0.512 ^{b,c} | -- | 0.340 | -- | -- | -- | 0.00098 | 0.345 | -- | 0.0075 | 0.033 | -- | 2.444 | 1.4 ^d | 7.92 ^d | 0.28 | 0.02 ^d | -- | 0.001 | -- | -- | -- | -- | 0.093 | -- | -- | |
| Surface Water - Aquatic Life (chronic) [NMAC 20.6.4.900(L,J)] | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.277 | -- | 0.205 ^{b,c} | -- | 0.150 | -- | -- | -- | 0.00029 | 0.045 | -- | 0.0055 | 0.001 | -- | 1.35 | 0.77 ^d | 1.85 ^d | 0.031 | 0.005 ^d | -- | 0.001 | -- | -- | -- | 0.07 | -- | -- | | |

Historical data provided by New Mexico Environment Department. Metals criteria are for dissolved metals unless otherwise noted.

All results in milligrams per liter (mg/L) except radium-226 and -228, which are in pico Curies per liter (pCi/L).

a Dissolved selenium in presence of >500 mg/L Sulfate is 0.25 mg/L.

b Hardness dependent surface water criteria based on average hardness in available surface water samples of 55.3 mg/L.

c Aquatic life acute and chronic criteria for aluminum are based on total recoverable concentrations. All other metals are based on dissolved concentrations.

d Drinking water source, livestock watering, and wildlife habitat criteria based on total mercury. Aquatic life acute and chronic are based on dissolved mercury. Irrigation criterion for molybdenum based on dissolved metal; aquatic life acute and chronic molybdenum based on dissolved concentrations. Aquatic life and wildlife habitat criteria for selenium based on total recoverable concentrations.

e Ammonia presented as mg/L N. Criteria based on pH and whether salmonids are present. The average pH of available surface water results (8.8) used.

Red text indicates result exceeds a human health standard. Green text indicates result exceeds an ecological standard.

**Table A-2 Summary of Groundwater Analytical Results
La Bajada Mine Site, Santa Fe National Forest, NM**

| Sample Location | Date Sample Collected | Potassium | Sodium | Hardness (Ca Mg) | Calcium | Magnesium | Alk (CO3 & HCO3) | Alkalinity, Total as CaCO3 | Hydroxide Alkalinity | Carbonate | Bicarbonate | Chloride | Sulfate | TDS | Nitrate-nitrite | Ammonia ^a | TKN | Aluminum | Antimony | Arsenic | Barium | Beryllium | Boron | Cadmium | Chromium | Cobalt | Copper | Lead | Iron | Manganese | Mercury | Molybdenum | Nickel | Selenium | Silicon | Silver | Strontium | Thallium | Tin | Uranium | Vanadium | Zinc | Re-226 (pCi/L) | Re-228 (pCi/L) |
|-------------------|-----------------------|-------------------|--------|------------------|---------|-----------|------------------|----------------------------|----------------------|-----------|-------------|----------|------------|--------------|-----------------|----------------------|--------|----------|----------|----------|----------|-----------|--------|-----------|----------|----------|----------|--------|-------|--------------|---------|------------|---------|----------|---------|---------|-----------|----------|-------|--------------|----------|----------|----------------|----------------|
| MW-0 | 12-Jan-16 | Dry - Not Sampled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MW-0 | 22-Sep-15 | Dry - Not Sampled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MW-1 | 12-Jan-16 | 6.98 J | 99.9 | -- | 74.1 | 14.5 | -- | 302 | <5.0 | <5.0 | 302 | 70.6 | 74.7 | 571 | 0.072 J | -- | <0.18 | <0.027 | <0.0012 | 0.0058 J | 0.0568 J | <0.00060 | 0.254 | 0.00030 J | <0.00060 | 0.0020 J | 0.0098 J | -- | -- | 0.0097 J | -- | 0.0029 J | 0.0075 | -- | -- | <0.0015 | 0.578 | <0.0048 | -- | 0.0033 | 0.0062 J | <0.0031 | <1.00 | <1.00 |
| MW-1 | 22-Sep-15 | 7.36 J | 109 | 257 | 77.5 | 15.3 | -- | 328 | <5.0 | <5.0 | 328 | 68.1 | 60.2 | 577 | 0.081 J | -- | <0.020 | <0.027 | <0.0012 | 0.0058 J | 0.0626 J | <0.00060 | 0.261 | <0.00030 | <0.00060 | 0.0017 J | 0.0071 J | -- | -- | 0.0061 J | -- | 0.0024 J | 0.0064 | -- | -- | <0.0015 | 0.631 | <0.0048 | -- | 0.0037 | 0.0060 J | 0.0268 | <1.00 | <1.00 |
| MW-1 | 16-Jun-10 | 7.05 | 113 | 260 | 76.7 | 16.7 | 297 | -- | -- | -- | 363 | 71.5 | 65 | 564 | 0.28 | -- | <0.1 | 0.01 | <0.001 | 0.007 | <0.1 | <0.001 | 0.2 | <0.001 | <0.001 | 0.002 | <0.01 | <0.001 | 0.004 | -- | 0.004 | <0.01 | -- | -- | <0.001 | 0.005 | 0.008 | <0.01 | -- | -- | -- | -- | | |
| MW-1 | 15-Apr-03 | 7.55 | 84.6 | 244 | 74 | 14.5 | 285 | -- | -- | 0 | 348 | 46 | 51.4 | 560 | <0.1 | <0.1 | 0.613 | 0.4 | -- | -- | <0.1 | <0.05 | 0.3 | <0.1 | <0.1 | <0.05 | <0.1 | <0.05 | <0.1 | <0.1 | <0.1 | -- | -- | 21 | <0.1 | 0.5 | -- | <0.1 | 0.006 | <0.1 | <0.1 | -- | -- | |
| MW-2 ^c | 20-Aug-02 | 7.38 | 93.5 | 258 | 78.3 | 15.1 | 277 | -- | -- | 0 | 338 | 63.6 | 61.7 | 576 | -- | -- | -- | <0.1 | -- | -- | <0.1 | <0.05 | 0.2 | <0.1 | -- | <0.05 | <0.1 | <0.05 | <0.1 | <0.1 | <0.1 | -- | -- | 21 | <0.1 | 0.6 | -- | <0.1 | 0.004 | <0.1 | <0.1 | -- | -- | |
| MW-1 | 22-Jun-99 | 5.92 | 70.7 | 222 | 67.6 | 13 | 280 | -- | -- | 0 | 342 | 53.6 | 60.5 | 534 | <0.1 | <0.1 | 0.21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.005 | -- | -- | -- | -- |
| MW-1 | 25-Mar-99 | 6.23 | 75.2 | 229 | 69.1 | 13.6 | 250 | -- | -- | 0 | 305 | 55.7 | 62.8 | 520 | <0.1 | <0.1 | 0.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.007 | -- | -- | -- | -- |
| MW-1 | 11-Sep-98 | 5.69 | 70.5 | 252 | 77.2 | 14.3 | 254 | -- | -- | 0 | 310 | 50 | 63.3 | 552 | <0.1 | <0.1 | 0.232 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.004 | -- | -- | -- | -- | |
| MW-1 | 26-Mar-98 | 6.22 | 75.1 | 243 | 74.4 | 13.8 | 254 | -- | -- | 0 | 310 | 52.1 | 68.2 | 482 | -- | -- | -- | -- | <0.001 | 0.012 | 0.1 | <0.001 | -- | <0.001 | <0.001 | -- | -- | -- | -- | -- | -- | 0.01 | <0.005 | -- | -- | -- | <0.001 | -- | -- | -- | -0.01 | 0.2 | | |
| MW-1 | 16-Oct-96 | -- | -- | -- | 74 | 14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | <0.001 | 0.012 | <0.1 | <0.001 | -- | <0.001 | <0.001 | -- | -- | -- | -- | -- | -- | 0.01 | <0.005 | -- | -- | -- | <0.001 | -- | -- | -- | 0.04 | 0.4 | | |
| MW-1 | 2-Apr-96 | -- | -- | -- | 71 | 14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | <0.001 | 0.01 | <0.1 | <0.001 | -- | <0.001 | <0.001 | -- | -- | -- | -- | -- | -- | <0.002 | -- | -- | <0.01 | <0.005 | -- | -- | -- | -- | -- | -- | | |
| MW-1 | 27-Mar-96 | 7 | 73 | 229 | 68 | 15 | -- | -- | -- | 3.8 | 310 | 46 | 53 | 462 | 0.1 | <0.1 | 0.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.003 | -- | -- | 0.09 | 1 | | |
| MW-2 | 12-Jan-16 | 9.88 J | 78.4 | -- | 74.8 | 13.1 | -- | 252 | <5.0 | <5.0 | 252 | 67.9 | 77.7 | 524 | 0.20 | -- | 0.18 | <0.027 | <0.0012 | 0.0071 J | 0.104 J | <0.00060 | 0.151 | <0.00030 | <0.00060 | 0.0010 J | 0.0037 J | -- | -- | 0.00020 J | -- | 0.0039 J | 0.0052 | -- | -- | <0.0015 | 0.626 | <0.0048 | -- | 0.0060 | 0.0073 J | 0.0102 J | <1.00 | <1.00 |
| MW-2 | 22-Sep-15 | 19.7 | 94.1 | 192 | 52.3 | 15.0 | -- | 316 | <5.0 | <5.0 | 316 | 15.7 | 75.8 | 499 | 0.14 | -- | 0.12 J | <0.027 | <0.0012 | 0.0417 | 0.0446 J | <0.00060 | 0.168 | <0.00030 | 0.0007 J | <0.0004 | 0.0041 J | -- | -- | 0.0003 J | -- | 0.0357 | 0.001 J | -- | -- | <0.0015 | 0.627 | <0.0048 | -- | 0.0059 | 0.0089 J | 0.0104 J | <1.00 | <1.00 |
| MW-2 | 16-Jun-10 | 8 | 84.9 | 161 | 48.3 | 9.67 | 240 | -- | -- | 0 | 293 | 33.4 | 38.9 | 398 | 0.21 | -- | <0.1 | <0.001 | 0.007 | <0.1 | <0.001 | 0.2 | <0.001 | <0.001 | 0.001 | <0.01 | <0.001 | 0.005 | -- | 0.004 | <0.01 | -- | -- | <0.001 | 0.005 | 0.012 | <0.01 | -- | -- | 0.005 | 0.0089 J | 0.0104 J | <1.00 | <1.00 |
| MW-2 | 15-Apr-03 | 9.06 | 92.6 | 201 | 62.9 | 10.7 | 280 | -- | -- | 11 | 330 | 41.7 | 46.5 | 550 | <0.1 | <0.1 | 0.243 | 0.3 | -- | -- | <0.1 | <0.05 | 0.2 | <0.1 | <0.1 | <0.05 | <0.05 | -- | 0.2 | 0.47 | -- | <0.1 | <0.1 | -- | 11 | <0.1 | 0.5 | -- | <0.1 | 0.012 | <0.1 | <0.1 | -- | -- |
| MW-3 ^c | 20-Aug-02 | 10.9 | 105 | 195 | 61.5 | 10.2 | 265 | -- | -- | 0 | 324 | 65.2 | 48 | 450 | <0.1 | <0.1 | 0.243 | 0.3 | -- | -- | <0.1 | <0.05 | 0.3 | <0.1 | -- | <0.05 | <0.1 | -- | <0.1 | <0.1 | <0.1 | <0.1 | -- | 16 | <0.1 | 0.5 | -- | <0.1 | 0.006 | <0.1 | <0.1 | -- | -- | |
| MW-2 | 22-Jun-99 | 8.56 | 83.6 | 167 | 52.4 | 8.9 | 279 | -- | -- | 0 | 341 | 51.7 | 36.7 | 510 | <0.1 | <0.1 | 0.41 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.007 | -- | -- | -- | -- | |
| MW-2 | 25-Mar-99 | 6.62 | 84.2 | 163 | 50.4 | 9.08 | 247 | -- | -- | 3.12 | 298 | 51.2 | 34.9 | 464 | <0.1 | <0.1 | 0.32 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.009 | -- | -- | -- | -- | |
| MW-2 | 11-Sep-98 | 7.87 | 78.7 | 183 | 57.2 | 9.7 | 233 | -- | -- | 0 | 284 | 51.9 | 36.8 | 498 | <0.1 | 0.138 | 0.375 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.006 | -- | -- | -- | -- | | |
| MW-2 | 26-Mar-98 | 6.11 | 91.4 | 166 | 50.8 | 9.63 | 256 | -- | -- | 4.8 | 308 | 44.8 | 43.2 | 416 | -- | -- | -- | -- | <0.001 | 0.011 | <0.1 | <0.001 | -- | <0.001 | <0.001 | -- | -- | -- | -- | -- | -- | <0.002 | -- | 0.01 | <0.005 | -- | -- | <0.001 | -- | -- | 0.016 | -- | 0.08 | 0.31 |
| MW-2 | 16-Oct-96 | -- | -- | -- | 74 | 14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | <0.02 | <0.001 | 0.012 | <0.1 | <0.05 | 0.2 | <0.1 | <0.1 | <0.05 | <0.1 | <0.001 | <0.1 | <0.05 | <0.002 | <0.01 | <0.1 | <0.005 | 19 | <0.1 | 0.6 | <0.001 | <0.1 | 0.004 | <0.1 | -- | 0.04 | 0.4 |
| MW-2 | 2-Apr-96 | -- | -- | -- | 71 | 14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | <0.1 | -- | 0.01 | <0.1 | <0.1 | 0.2 | <0.1 | <0.1 | <0.05 | <0.1 | <0.1 | <0.1 | <0.05 | <0.002 | <0.1 | <0.1 | <0.005 | 19 | <0.1 | 0.4 | -- | <0.1 | 0.003 | <0.1 | -- | -- | |
| MW-2 | 27-Mar-96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | |
| MW-3 | 12-Jan-16 | 17.7 | 148 | -- | 252 | 121 | -- | 570 | <5.0 | <5.0 | 570 | 36.1 | 822 | 1,940 | <0.041 | -- | <0.18 | <0.027 | <0.0012 | <0.0025 | 0.0458 J | <0.00060 | 0.290 | <0.00030 | <0.00060 | 0.0428 | 0.0023 J | -- | -- | 1.16 | -- | 0.0108 J | 0.0983 | -- | -- | <0.0015 | 1.91 | 0.0053 J | -- | 0.363 | <0.00060 | <0.0031 | <1.00 | <1.00 |
| MW-3 (duplicate) | 12-Jan-16 | 17.9 | 149 | -- | 249 | 121 | -- | 556 | <5.0 | <5.0 | 556 | 35.9 | 826 | 1,970 | <0.041 | -- | <0.18 | <0.027 | <0.0012 | 0.0044 J | 0.0464 J | <0.00060 | 0.296 | <0.00030 | <0.00060 | 0.0400 | 0.0023 J | -- | -- | 1.23 | -- | 0.0107 J | 0.0976 | -- | -- | <0.0015 | 1.92 | <0.0048 | -- | 0.352 | <0.00060 | 0.0032 J | <1.00 | <1.00 |
| MW-3 | 22-Sep-15 | 18.8 | 150 | 1,123 | 252 | 120 | -- | 559 | <5.0 | <5.0 | 559 | 33.4 | 728 | 1,790 | <0.041 | -- | <0.020 | <0.027 | <0.0012 | <0.0025 | 0.0458 J | <0.00060 | 0.319 | 0.0003 J | 0.0006 J | 0.0289 | <0.0018 | -- | -- | 0.886 | -- | 0.0115 J | 0.0789 | -- | -- | <0.0015 | 2.02 | 0.0048 | -- | 0.334 | <0.00060 | 0.0055 J | <1.00 | <1.00 |
| MW-3 (duplicate) | 22-Sep-15 | 18.8 | 150 | 1,128 | 254 | 120 | -- | 581 | <5.0 | <5.0 | 581 | 35.4 | 768 | 1,740 | <0.041 | -- | 0.11 J | <0.027 | <0.0012 | 0.0029 J | 0.046 J | <0.00060 | 0.317 | 0.0003 J | <0.00060 | 0.0298 | <0.0018 | -- | -- | 0.898 | -- | 0.0112 J | 0.0796 | -- | -- | <0.0015 | 2.02 | <0.0048 | -- | 0.332 | <0.00060 | 0.0066 J | <1.00 | 1.16 |
| MW-3 | 16-Jun-10 | 21.4 | 176 | 1,240 | 236 | 158 | 495 | -- | -- | 0 | 604 | 33.6 | 948 | 2,140 | <0.1 | <0.1 | <0.01 | <0.001 | 0.008 | <0.1 | <0.001 | 0.2 | <0.001 | 0.001 | <0.001 | <0.01 | <0.01 | <0.001 | <0.01 | <0.001 | 0.007 | <0.01 | -- | -- | <0.001 | --</ | | | | | | | | |

**Table A-2 Summary of Groundwater Analytical Results
La Bajada Mine Site, Santa Fe National Forest, NM**

| Sample Location | Date Sample Collected | Potassium | Sodium | Hardness (Ca Mg) | Calcium | Magnesium | Alk (CO3 & HCO3) | Alkalinity, Total as CaCO3 | Hydroxide Alkalinity | Carbonate | Bicarbonate | Chloride | Sulfate | TDS | Nitrate-nitrite | Ammonia ^a | TKN | Aluminum | Antimony | Arsenic | Barium | Beryllium | Boron | Cadmium | Chromium | Cobalt | Copper | Lead | Iron | Manganese | Mercury | Molybdenum | Nickel | Selenium | Silicon | Silver | Strontium | Thallium | Tin | Uranium | Vanadium | Zinc | Ra-226 (pCi/L) | Ra-228 (pCi/L) | | | | |
|---|-----------------------|-------------------|--------|------------------|---------|-----------|------------------|----------------------------|----------------------|-----------|-------------|----------|---------|-------|-----------------|----------------------|---------|----------------|----------|----------|----------|-----------|-------|-----------|----------|-------------------|----------|--------|---------|-----------|---------|----------------|------------------|----------|---------|---------|-----------|----------|-------|---------|----------|----------|----------------|----------------|-------|-------|----|----|
| MW-5 | 25-Mar-99 | 6.34 | 85.5 | 201 | 57.4 | 14.1 | 247 | -- | -- | 0 | 301 | 53.7 | 68.7 | 478 | 0.522 | <0.1 | 0.28 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.036 | -- | -- | -- | -- | |
| MW-5 | 11-Sep-98 | 6.83 | 86 | 191 | 55.3 | 12.8 | 220 | -- | -- | 0 | 268 | 49.4 | 55.8 | 492 | 0.16 | <0.1 | 0.805 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.026 | -- | -- | -- | -- |
| MW-5 | 26-Mar-98 | 5.61 | 87.9 | 198 | 57.1 | 13.6 | 257 | -- | -- | 0 | 314 | 47.5 | 56 | 436 | -- | -- | -- | -- | <0.001 | 0.011 | 0.2 | <0.001 | -- | <0.001 | <0.001 | -- | -- | -- | <0.0002 | -- | 0.01 | <0.005 | -- | -- | -- | <0.001 | -- | -- | -- | -- | -- | 0.066 | -- | -- | -0.01 | -0.03 | | |
| MW-5 | 16-Oct-96 | -- | -- | -- | 110 | 24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | <0.001 | 0.015 | <0.1 | <0.001 | -- | <0.1 | <0.1 | -- | -- | -- | <0.0002 | -- | <0.1 | <0.005 | -- | -- | -- | <0.001 | -- | -- | -- | -- | 0.05 | -- | -- | 0.06 | 0.8 | | | |
| MW-5 | 2-Apr-96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| MW-5 | 27-Mar-96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| MW-6 | 12-Jan-16 | Dry - Not Sampled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MW-6 | 23-Sep-15 | Dry - Not Sampled | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MW-6 | 16-Jun-10 | 7.57 | 89.2 | 194 | 54.5 | 14 | 234 | -- | -- | 5.09 | 281 | 37.7 | 56.8 | 414 | 0.27 | -- | <0.1 | <0.01 | <0.001 | 0.008 | <0.1 | <0.001 | 0.2 | <0.001 | <0.001 | 0.002 | <0.01 | <0.001 | -- | 0.007 | <0.01 | -- | -- | <0.001 | -- | <0.001 | -- | -- | 0.018 | 0.010 | <0.01 | -- | -- | | | | | |
| MW-6 | 15-Apr-03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | |
| MW-7 ^c | 20-Aug-02 | 7.19 | 88.9 | 210 | 62.1 | 13.3 | 249 | -- | -- | 0 | 304 | 59.4 | 54.5 | 412 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| MW-6 | 22-Jun-99 | 6.46 | 78.9 | 184 | 54.2 | 11.9 | 255 | -- | -- | 0 | 311 | 57.6 | 60.2 | 496 | 0.211 | <0.1 | 0.91 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.037 | -- | -- | -- | -- |
| MW-6 | 25-Mar-99 | 6.24 | 81.7 | 191 | 55.4 | 12.8 | 245 | -- | -- | 0 | 299 | 53.6 | 64.2 | 474 | 0.634 | <0.1 | 0.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.041 | -- | -- | -- | -- | |
| MW-6 | 11-Sep-98 | 6.05 | 86.6 | 198 | 58.3 | 12.6 | 218 | -- | -- | 0 | 266 | 48.6 | 58.9 | 460 | 0.157 | <0.1 | 0.672 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.04 | -- | -- | -- | -- | | |
| MW-6 | 26-Mar-98 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| MW-6 | 16-Oct-96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | <0.001 | 0.015 | 0.1 | <0.001 | -- | <0.1 | <0.1 | -- | -- | -- | <0.0002 | -- | <0.1 | <0.005 | -- | -- | -- | <0.001 | -- | -- | 0.029 | -- | -- | 0.07 | 1 | -- | -- | | | |
| MW-6 | 2-Apr-96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| MW-6 | 27-Mar-96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | |
| MW-7 | 12-Jan-16 | 5.76 J | 83.1 | -- | 70.8 | 15.8 | -- | 274 | <5.0 | <5.0 | 274 | 60.9 | 76.6 | 514 | 0.18 | -- | <0.18 | <0.027 | <0.0012 | 0.0069 J | 0.0459 J | <0.0060 | 0.185 | 0.00030 U | <0.00060 | 0.0010 J | 0.0040 J | -- | -- | 0.00030 J | -- | 0.0055 J | 0.0045 J | -- | -- | <0.0015 | 0.541 | <0.0048 | -- | 0.0165 | 0.0077 J | <0.0031 | <1.00 | <1.00 | | | | |
| MW-7 | 23-Sep-15 | 6.50 J | 90.5 | 241 | 71.0 | 15.4 | -- | 312 | <5.0 | <5.0 | 312 | 56.8 | 69.0 | 500 | 0.11 | -- | 0.039 J | <0.027 | <0.0012 | 0.0073 J | 0.0486 J | <0.0006 | 0.223 | <0.0003 | <0.0006 | 0.0011 J | 0.0032 J | -- | -- | 0.0006 J | -- | 0.0057 J | 0.0042 J | -- | -- | <0.0015 | 0.557 | <0.0048 | -- | 0.0135 | 0.0099 J | 0.0166 J | <1.00 | <1.00 | | | | |
| MW-7 | 16-Jun-10 | 6.9 | 120 | 318 | 90.6 | 22.3 | 308 | -- | -- | 12.9 | 363 | 80.5 | 98.3 | 632 | <0.1 | -- | <0.1 | <0.01 | <0.001 | 0.007 | <0.1 | <0.001 | 0.3 | <0.001 | <0.001 | <0.001 | <0.01 | <0.001 | -- | -- | 0.005 | <0.01 | -- | -- | <0.001 | -- | 0.025 | 0.009 | <0.01 | -- | -- | | | | | | | |
| MW-7 | 15-Apr-03 | 5.99 | 83 | 240 | 71.6 | 14.9 | 273 | -- | -- | 0 | 333 | 41.4 | 58 | 568 | 0.17 | <0.1 | 0.288 | <0.1 | -- | -- | <0.1 | -- | 0.2 | <0.1 | <0.1 | <0.05 | <0.1 | -- | <0.1 | <0.05 | -- | <0.1 | <0.1 | -- | 15 | <0.1 | 0.5 | -- | <0.1 | 0.019 | <0.1 | <0.1 | -- | -- | | | | |
| MW-7 | 20-Aug-02 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | | |
| MW-7 | 22-Jun-99 | 5.12 | 74.8 | 227 | 68.2 | 13.8 | 280 | -- | -- | 0 | 341 | 51.6 | 66.5 | 526 | <0.1 | <0.1 | 0.23 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.011 | -- | -- | -- | -- | | | |
| MW-7 | 25-Mar-99 | <5 | 72.2 | 228 | 66.8 | 14.8 | 254 | -- | -- | 1.44 | 308 | 53 | 70 | 502 | <0.1 | <0.1 | <0.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.012 | -- | -- | -- | -- | | | | |
| MW-7 | 11-Sep-98 | 5.49 | 80.7 | 254 | 77.4 | 14.9 | 253 | -- | -- | 0 | 309 | 48.6 | 67.8 | 530 | <0.1 | <0.1 | 0.455 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 0.009 | -- | -- | -- | -- | | | | | |
| MW-7 | 26-Mar-98 | <5 | 78 | 241 | 71.7 | 15 | 247 | -- | -- | 0 | 301 | 48.3 | 79.8 | 468 | -- | -- | -- | -- | <0.002 | 0.011 | <0.2 | <0.002 | -- | <0.002 | <0.002 | -- | -- | -- | <0.0002 | -- | <0.02 | <0.005 | -- | -- | -- | <0.002 | -- | 0.01 | -- | -- | 0.02 | 0 | -- | -- | | | | |
| MW-7 | 16-Oct-96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | |
| MW-7 | 2-Apr-96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | |
| MW-7 | 27-Mar-96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | | | | |
| Groundwater Standards [NMAC 20.6.2,3103] | | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | 250 | 600 | 1,000 | -- | -- | -- | 5 ^b | -- | 0.1 | 1.0 | -- | 0.75 | 0.01 | 0.05 | 0.05 ^b | 1.0 | 0.05 | 1.0 | 0.2 | 0.002 | 1 ^b | 0.2 ^b | 0.05 | -- | 0.05 | -- | -- | 0.03 | -- | 10.0 | 30 | | | | | | |

Historical data provided by New Mexico Environment Department. Metals criteria are for dissolved metals unless otherwise noted.

All results in milligrams per liter (mg/L) except radium-226 and -228, which are in pico Curies per liter (pCi/L).

a Ammonia presented as mg/L N.

b Identified standards are for irrigation use.

c Well identifiers were incorrectly recorded during August 2002 sampling. To maintain consistency with the source data provided by NMED, the Well IDs have not been corrected above; however, the data is being displayed with the correct well location data (e.g., MW1 was incorrectly identified as MW2; MW2 incorrectly identified as MW3; etc.).

Red text indicates result exceeds a standard.

**Table A-3
Groundwater Quality Measurements
La Bajada Mine Site, Santa Fe National Forest, NM**

| Location | Date | Time | pH | Temperature (°C) | Specific Conductivity (µS/cm) | ORP | DO (mg/L) | Turbidity (NTU) |
|-----------------------|-----------|------|------|------------------|-------------------------------|-------|-----------|-----------------|
| September 2015 | | | | | | | | |
| SW-1 | 9/21/2015 | 1540 | 8.52 | 18.77 | 449 | 152.6 | 11.48 | NC |
| SW-2 | 9/21/2015 | 1510 | 8.46 | 19.24 | 464 | 175.2 | 11.11 | NC |
| MW-1 | 9/22/2015 | 1000 | 6.64 | 17.18 | 666 | 209.4 | 7.03 | 4.94 |
| | | 1005 | 6.57 | 17.29 | 663 | 225.8 | 9.59 | 4.06 |
| | | 1010 | 6.57 | 16.89 | 662 | 232.6 | 5.31 | 3.49 |
| | | 1015 | 6.62 | 16.83 | 661 | 237.5 | 7.32 | 2.41 |
| | | 1020 | 6.66 | 16.77 | 658 | 238.6 | 7.44 | 2.95 |
| | | 1025 | 6.66 | 17.11 | 657 | 240.2 | 3.80 | 2.38 |
| | | 1030 | 6.73 | 18.20 | 656 | 240.6 | 5.01 | 2.02 |
| MW-2 | 9/22/2015 | 1135 | 7.55 | 19.79 | 570 | 79.9 | 9.26 | 19.60 |
| | | 1140 | 6.75 | 16.89 | 536 | 142.6 | 6.87 | 5.35 |
| | | 1145 | 6.76 | 16.95 | 533 | 161.1 | 6.35 | 3.96 |
| | | 1150 | 6.79 | 16.68 | 534 | 171.2 | 5.67 | 3.41 |
| | | 1155 | 6.83 | 17.09 | 533 | 179.3 | 5.62 | 4.14 |
| | | 1200 | 6.84 | 17.22 | 533 | 188.3 | 5.99 | 6.62 |
| | | 1205 | 6.88 | 17.13 | 530 | 194.6 | 5.98 | 5.01 |
| MW-3 | 9/22/2015 | 1315 | 6.66 | 18.94 | 1582 | 104.2 | 3.09 | 7.73 |
| | | 1320 | 6.39 | 20.08 | 1570 | 129.0 | 3.15 | 7.44 |
| | | 1325 | 6.34 | 20.07 | 1575 | 139.5 | 3.12 | 8.37 |
| | | 1330 | 6.28 | 20.40 | 1574 | 145.9 | 1.89 | 8.26 |
| | | 1335 | 6.17 | 20.88 | 1576 | 163.0 | 1.88 | 8.69 |
| | | 1340 | 6.13 | 20.40 | 1575 | 177.4 | 1.03 | 7.92 |
| | | 1345 | 6.04 | 21.09 | 1580 | 189.6 | 0.71 | 8.02 |
| MW-4 | 9/23/2015 | 1423 | 6.71 | 17.80 | 815 | 95.7 | 1.70 | 24.50 |
| | | 1428 | 6.54 | 17.76 | 807 | 124.2 | 1.47 | 17.4 |
| | | 1433 | 6.54 | 18.35 | 808 | 138.5 | 1.48 | 15.1 |
| | | 1604 | 6.34 | 18.34 | 812 | 128.3 | 1.56 | 10.9 |
| | | 1609 | 6.37 | 18.01 | 810 | 163.2 | 1.45 | 8.81 |
| | | 1614 | 6.16 | 17.23 | 807 | 191.1 | 1.34 | 7.17 |
| | | 1619 | 6.22 | 16.89 | 807 | 199.7 | 1.40 | 6.97 |
| MW-5 | 9/23/2015 | 1212 | 7.06 | 16.52 | 678 | 74.5 | 2.91 | 31.10 |
| | | 1217 | 6.72 | 18.05 | 574 | 78.5 | 1.87 | 27.7 |
| | | 1222 | 6.72 | 19.10 | 575 | 51.1 | 1.91 | 22.8 |
| | | 1227 | 6.87 | 19.99 | 575 | 21.7 | 1.64 | 21.9 |
| | | 1232 | 6.80 | 20.43 | 575 | 14.5 | 1.61 | 20.50 |
| | | 1237 | 6.79 | 20.89 | 577 | 3.1 | 1.56 | 18 |
| | | 1242 | 6.80 | 21.55 | 577 | 0.9 | 1.52 | 17.3 |
| MW-7 | 9/23/2015 | 1023 | 6.81 | 15.77 | 636 | 134.0 | 2.80 | 5.40 |
| | | 1028 | 6.52 | 16.91 | 622 | 174.3 | 2.01 | 3.91 |
| | | 1033 | 6.50 | 16.97 | 619 | 185.6 | 1.98 | 2.09 |
| | | 1038 | 6.49 | 17.12 | 617 | 201.4 | 1.97 | 2.87 |
| | | 1043 | 6.47 | 17.31 | 611 | 216.3 | 2.10 | 2.61 |
| | | 1048 | 6.47 | 17.05 | 613 | 223.9 | 2.01 | 3.08 |
| | | 1053 | 6.47 | 17.32 | 607 | 233.1 | 2.23 | 2.38 |

**Table A-3
Groundwater Quality Measurements
La Bajada Mine Site, Santa Fe National Forest, NM**

| January 2016 | | | | | | | | |
|--------------|-----------|------|------|-------|------|--------|-------|------|
| SW-1 | 1/12/2016 | 900 | 9.31 | -0.58 | 759 | -27.7 | 4.19 | NC |
| SW-2 | 1/12/2016 | 800 | 7.95 | -0.72 | 773 | 28.5 | 10.11 | NC |
| MW-1 | 1/12/2016 | 950 | 8.09 | 8.25 | 1089 | -40.3 | 3.99 | 0.95 |
| | | 955 | 7.49 | 14.10 | 1112 | -65.9 | 1.32 | 49.0 |
| | | 1000 | 7.52 | 14.32 | 1126 | -71.7 | 1.27 | 49.0 |
| | | 1005 | 7.53 | 14.29 | 1129 | -63.8 | 1.34 | 63.2 |
| | | 1010 | 7.53 | 14.36 | 1129 | -66.0 | 16.12 | 57.5 |
| | | 1015 | 7.53 | 14.15 | 1129 | -65.0 | 1.69 | 54.8 |
| | | 1020 | 7.51 | 14.08 | 1128 | -69.1 | 1.42 | 50.0 |
| MW-2 | 1/12/2016 | 1110 | 7.49 | 13.25 | 1057 | -10.3 | 2.77 | 7.81 |
| | | 1115 | 7.40 | 14.73 | 1052 | -19.0 | 1.59 | 1.83 |
| | | 1120 | 7.40 | 15.03 | 1052 | -13.0 | 1.26 | 1.47 |
| | | 1125 | 7.40 | 15.19 | 1050 | -14.8 | 1.18 | 0.89 |
| | | 1130 | 7.40 | 15.13 | 1051 | -10.9 | 1.13 | 0.78 |
| | | 1135 | 7.41 | 15.08 | 1050 | -10.4 | 1.17 | 0.73 |
| | | 1140 | 7.43 | 15.01 | 1049 | -8.1 | 1.13 | 0.65 |
| MW-3 | 1/12/2016 | 1225 | 7.23 | 15.69 | 2622 | -163.5 | 1.55 | 16.6 |
| | | 1230 | 7.14 | 15.59 | 2592 | -126.1 | 1.41 | 7.74 |
| | | 1235 | 7.10 | 15.40 | 2549 | -91.0 | 1.18 | 5.66 |
| | | 1240 | 7.10 | 15.30 | 2554 | -58.6 | 1.05 | 4.05 |
| | | 1245 | 7.08 | 15.20 | 2575 | -45.6 | 1.03 | 5.51 |
| | | 1250 | 7.07 | 15.27 | 26.2 | -27.4 | 0.97 | 3.29 |
| MW-4 | 1/12/2016 | 1100 | 6.99 | 13.26 | 1361 | 105.9 | 4.18 | 22.9 |
| | | 1105 | 6.95 | 14.01 | 1382 | 110.2 | 2.54 | 21.4 |
| | | 1110 | 6.96 | 14.15 | 1380 | 107.7 | 2.34 | 21.5 |
| | | 1115 | 6.96 | 14.13 | 1385 | 107.5 | 2.29 | 13.2 |
| | | 1120 | 6.96 | 14.19 | 1384 | 107.9 | 2.14 | 8.86 |
| | | 1125 | 6.96 | 14.18 | 1383 | 108.8 | 2.01 | 9.21 |
| MW-5 | 1/13/2016 | 910 | 7.43 | 10.52 | 1085 | 27.3 | 2.43 | 43 |
| | | 915 | 7.40 | 11.23 | 1054 | -12.8 | 1.52 | 36.9 |
| | | 920 | 7.39 | 11.82 | 1047 | -20.3 | 1.27 | 29.5 |
| | | 925 | 7.35 | 12.96 | 1043 | -30.6 | 1.20 | 19.6 |
| | | 930 | 7.33 | 12.32 | 1041 | -28.5 | 1.25 | 12.8 |
| | | 935 | 7.30 | 12.84 | 1033 | -34.7 | 1.24 | 9.07 |
| | | 940 | 7.28 | 13.08 | 1031 | -38.4 | 1.29 | 6.32 |
| | | 1420 | 7.42 | 13.16 | 1092 | 84.6 | 3.74 | 2.92 |
| MW-7 | 1/13/2016 | 1425 | 7.34 | 13.77 | 1060 | 84.6 | 2.40 | 1.64 |
| | | 1430 | 7.34 | 13.57 | 1056 | 86.0 | 2.21 | 0.70 |
| | | 1435 | 7.34 | 13.69 | 1047 | 87.0 | 2.08 | 0.31 |
| | | 1440 | 7.35 | 13.24 | 1052 | 87.0 | 1.98 | 0.73 |

°C: Degrees Celsius

DO: Dissolved Oxygen

NC: Not collected

ORP: Oxidation Reduction Potential

µS/cm: micro Siemens per centimeter

mg/L: milligrams per liter

NTU: Nephelometric Turbidity Units

**Table A-4
Average Groundwater Quality Measurements
La Bajada Mine Site, Santa Fe National Forest, NM**

| Well | Average Results | | | | | |
|-----------------------|-----------------|---------------------|----------------------------------|-------------|--------------|--------------------|
| | pH | Temperature (°C) | Specific Conductivity (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) |
| September 2015 | | | | | | |
| MW-1 | 6.64 | 17.18 | 660 | 232.1 | 6.50 | 3.18 |
| MW-2 | 6.91 | 17.39 | 538 | 159.6 | 6.53 | 6.87 |
| MW-3 | 6.29 | 20.27 | 1,576 | 149.8 | 2.12 | 8.06 |
| MW-4 | 6.41 | 17.77 | 809 | 148.7 | 1.49 | 12.98 |
| MW-5 | 6.82 | 19.50 | 590 | 34.9 | 1.86 | 22.76 |
| MW-7 | 6.53 | 16.92 | 618 | 195.5 | 2.16 | 3.19 |
| Site Average: | 6.60 | 18.17 | 799 | 153.4 | 3.44 | 9.51 |
| January 2016 | | | | | | |
| MW-1 | 7.52 | 14.22 | 1,126 | -66.9 | 1.84 | 53.92 |
| MW-2 | 7.42 | 14.77 | 1,052 | -12.4 | 1.46 | 2.02 |
| MW-3 | 7.12 | 15.41 | 2,153 | -85.4 | 1.20 | 7.14 |
| MW-4 | 6.96 | 13.99 | 1,379 | 108.0 | 2.58 | 16.18 |
| MW-5 | 7.35 | 12.11 | 1,048 | -19.7 | 1.46 | 22.46 |
| MW-7 | 7.36 | 13.49 | 1,061 | 85.8 | 2.48 | 1.26 |
| Site Average: | 7.29 | 14.00 | 1,303 | 1.6 | 1.84 | 17.16 |

DO: Dissolved Oxygen

ORP: Oxidation Reduction Potential

NTU: Nephelometric Turbidity Units

°C: Degrees Celsius

µS/cm: micro Siemens/centimeter

mg/L: milligrams per liter

APPENDIX B

Laboratory Analytical Reports

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Effective January 1, 2016, SGS has acquired all of the assets of Accutest Laboratories and will continue to operate as SGS-Accutest. SGS-Accutest is part of SGS, the world's leading inspection, verification, testing and certification company.

Technical Report for

Weston Solutions, Inc.

La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

12767.201.001.0020

Accutest Job Number: C43666

Sampling Dates: 01/12/16 - 01/13/16

Report to:

Weston Solutions, Inc.
960 West Elliot Road Suite 101
Tempe, AZ 85284
b.wethington@westonsolutions.com

ATTN: Barbara Wethington

Total number of pages in report: 62



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.



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DoD ELAP (L-A-B L2242)

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Sample Summary

Weston Solutions, Inc.

Job No: C43666

La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico
Project No: 12767.201.001.0020

| Sample Number | Collected | | Matrix Code | Received | Type | Client Sample ID |
|---------------|-----------|----------|-------------|----------|----------------------|------------------|
| | Date | Time By | | | | |
| C43666-1 | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Ground Water | LB-MW3-011216 |
| C43666-1F | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Groundwater Filtered | LB-MW3-011216 |
| C43666-2 | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Ground Water | LB-MW3-011216-D |
| C43666-2F | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Groundwater Filtered | LB-MW3-011216-D |
| C43666-3 | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Ground Water | LB-MW7-011216 |
| C43666-3D | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Water Dup/MSD | LB-MW7-011216 |
| C43666-3F | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Groundwater Filtered | LB-MW7-011216 |
| C43666-3FD | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Water Dup/MSD | LB-MW7-011216 |
| C43666-3FS | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Water Matrix Spike | LB-MW7-011216 |
| C43666-3S | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Water Matrix Spike | LB-MW7-011216 |
| C43666-4F | 01/13/16 | 00:00 GR | AQ | 01/14/16 | Equip Blank Filtered | LB-EB1-011316 |
| C43666-5 | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Ground Water | LB-SW1-011216 |
| C43666-5F | 01/12/16 | 00:00 GR | AQ | 01/14/16 | Groundwater Filtered | LB-SW1-011216 |



Sample Summary

(continued)

Weston Solutions, Inc.

Job No: C43666

La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

Project No: 12767.201.001.0020

| Sample Number | Collected | | Matrix Received | Code | Type | Client Sample ID |
|---------------|-----------|----------|-----------------|------|----------------------|------------------|
| | Date | Time By | | | | |
| C43666-6 | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-SW2-011216 |
| C43666-6F | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Groundwater Filtered | LB-SW2-011216 |
| C43666-7 | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-MW1-011216 |
| C43666-7F | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Groundwater Filtered | LB-MW1-011216 |
| C43666-8 | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-MW2-011216 |
| C43666-8F | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Groundwater Filtered | LB-MW2-011216 |
| C43666-9 | 01/13/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-MW4-011316 |
| C43666-9F | 01/13/16 | 00:00 GR | 01/14/16 | AQ | Groundwater Filtered | LB-MW4-011316 |
| C43666-10 | 01/13/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-MW5-011316 |
| C43666-10F | 01/13/16 | 00:00 GR | 01/14/16 | AQ | Groundwater Filtered | LB-MW5-011316 |

Summary of Hits

Job Number: C43666
Account: Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico
Collected: 01/12/16 thru 01/13/16

| Lab Sample ID | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---------------|------------------|-----------------|----|-----|-------|--------|
|---------------|------------------|-----------------|----|-----|-------|--------|

C43666-1 LB-MW3-011216

| | | | | | |
|--|------|-----|------|------|---------------------|
| Alkalinity, Bicarbonate | 570 | 5.0 | 5.0 | mg/l | SM2320 B-97 |
| Alkalinity, Total as CaCO ₃ | 570 | 5.0 | 1.5 | mg/l | SM2320 B-97 |
| Chloride | 36.1 | 5.0 | 0.58 | mg/l | EPA 300/SW846 9056A |
| Solids, Total Dissolved | 1940 | 10 | 2.5 | mg/l | SM2540 C-97 |
| Sulfate | 822 | 50 | 10 | mg/l | EPA 300/SW846 9056A |

C43666-1F LB-MW3-011216

| | | | | | |
|-------------------------|----------|--------|---------|------|-----------|
| Barium ^a | 0.0458 J | 0.20 | 0.00050 | mg/l | EPA 200.7 |
| Boron | 0.290 | 0.10 | 0.0032 | mg/l | EPA 200.7 |
| Calcium | 252 | 5.0 | 0.069 | mg/l | EPA 200.7 |
| Cobalt | 0.0428 | 0.0050 | 0.00040 | mg/l | EPA 200.7 |
| Copper ^a | 0.0023 J | 0.010 | 0.0018 | mg/l | EPA 200.7 |
| Magnesium | 121 | 5.0 | 0.023 | mg/l | EPA 200.7 |
| Manganese | 1.16 | 0.015 | 0.00020 | mg/l | EPA 200.7 |
| Molybdenum ^a | 0.0108 J | 0.020 | 0.00060 | mg/l | EPA 200.7 |
| Nickel | 0.0983 | 0.0050 | 0.00060 | mg/l | EPA 200.7 |
| Potassium | 17.7 | 10 | 0.035 | mg/l | EPA 200.7 |
| Sodium | 148 | 10 | 0.025 | mg/l | EPA 200.7 |
| Strontium | 1.91 | 0.010 | 0.00020 | mg/l | EPA 200.7 |
| Thallium ^a | 0.0053 J | 0.010 | 0.0048 | mg/l | EPA 200.7 |
| Uranium | 0.363 | 0.0010 | 0.00010 | mg/l | EPA 200.8 |

C43666-2 LB-MW3-011216-D

| | | | | | |
|--|------|-----|------|------|---------------------|
| Alkalinity, Bicarbonate | 556 | 5.0 | 5.0 | mg/l | SM2320 B-97 |
| Alkalinity, Total as CaCO ₃ | 556 | 5.0 | 1.5 | mg/l | SM2320 B-97 |
| Chloride | 35.9 | 5.0 | 0.58 | mg/l | EPA 300/SW846 9056A |
| Solids, Total Dissolved | 1970 | 10 | 2.5 | mg/l | SM2540 C-97 |
| Sulfate | 826 | 50 | 10 | mg/l | EPA 300/SW846 9056A |

C43666-2F LB-MW3-011216-D

| | | | | | |
|-------------------------|----------|--------|---------|------|-----------|
| Arsenic ^a | 0.0044 J | 0.010 | 0.0025 | mg/l | EPA 200.7 |
| Barium ^a | 0.0464 J | 0.20 | 0.00050 | mg/l | EPA 200.7 |
| Boron | 0.296 | 0.10 | 0.0032 | mg/l | EPA 200.7 |
| Calcium | 249 | 5.0 | 0.069 | mg/l | EPA 200.7 |
| Cobalt | 0.0400 | 0.0050 | 0.00040 | mg/l | EPA 200.7 |
| Copper ^a | 0.0023 J | 0.010 | 0.0018 | mg/l | EPA 200.7 |
| Magnesium | 121 | 5.0 | 0.023 | mg/l | EPA 200.7 |
| Manganese | 1.23 | 0.015 | 0.00020 | mg/l | EPA 200.7 |
| Molybdenum ^a | 0.0107 J | 0.020 | 0.00060 | mg/l | EPA 200.7 |
| Nickel | 0.0976 | 0.0050 | 0.00060 | mg/l | EPA 200.7 |

Summary of Hits

Job Number: C43666
Account: Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico
Collected: 01/12/16 thru 01/13/16

| Lab Sample ID | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---------------|------------------|-----------------|----|-----|-------|--------|
|---------------|------------------|-----------------|----|-----|-------|--------|

| | | | | | | |
|-------------------|--|----------|--------|---------|------|-----------|
| Potassium | | 17.9 | 10 | 0.035 | mg/l | EPA 200.7 |
| Sodium | | 149 | 10 | 0.025 | mg/l | EPA 200.7 |
| Strontium | | 1.92 | 0.010 | 0.00020 | mg/l | EPA 200.7 |
| Uranium | | 0.352 | 0.0010 | 0.00010 | mg/l | EPA 200.8 |
| Zinc ^a | | 0.0032 J | 0.020 | 0.0031 | mg/l | EPA 200.7 |

C43666-3 LB-MW7-011216

| | | | | | | |
|-----------------------------|--|------|------|-------|------|---------------------|
| Alkalinity, Bicarbonate | | 274 | 5.0 | 5.0 | mg/l | SM2320 B-97 |
| Alkalinity, Total as CaCO3 | | 274 | 5.0 | 1.5 | mg/l | SM2320 B-97 |
| Chloride | | 60.9 | 10 | 1.2 | mg/l | EPA 300/SW846 9056A |
| Nitrogen, Nitrate + Nitrite | | 0.18 | 0.10 | 0.041 | mg/l | SM4500-NO3 E-00 |
| Solids, Total Dissolved | | 514 | 10 | 2.5 | mg/l | SM2540 C-97 |
| Sulfate | | 76.6 | 5.0 | 1.0 | mg/l | EPA 300/SW846 9056A |

C43666-3F LB-MW7-011216

| | | | | | | |
|-------------------------|--|-----------|--------|---------|------|-----------|
| Arsenic ^a | | 0.0069 J | 0.010 | 0.0025 | mg/l | EPA 200.7 |
| Barium ^a | | 0.0459 J | 0.20 | 0.00050 | mg/l | EPA 200.7 |
| Boron | | 0.185 | 0.10 | 0.0032 | mg/l | EPA 200.7 |
| Calcium | | 70.8 | 5.0 | 0.069 | mg/l | EPA 200.7 |
| Cobalt ^a | | 0.0010 J | 0.0050 | 0.00040 | mg/l | EPA 200.7 |
| Copper ^a | | 0.0040 J | 0.010 | 0.0018 | mg/l | EPA 200.7 |
| Magnesium | | 15.8 | 5.0 | 0.023 | mg/l | EPA 200.7 |
| Manganese ^a | | 0.00030 J | 0.015 | 0.00020 | mg/l | EPA 200.7 |
| Molybdenum ^a | | 0.0055 J | 0.020 | 0.00060 | mg/l | EPA 200.7 |
| Nickel ^a | | 0.0045 J | 0.0050 | 0.00060 | mg/l | EPA 200.7 |
| Potassium ^a | | 5.76 J | 10 | 0.035 | mg/l | EPA 200.7 |
| Sodium | | 83.1 | 10 | 0.025 | mg/l | EPA 200.7 |
| Strontium | | 0.541 | 0.010 | 0.00020 | mg/l | EPA 200.7 |
| Uranium | | 0.0165 | 0.0010 | 0.00010 | mg/l | EPA 200.8 |
| Vanadium ^a | | 0.0077 J | 0.010 | 0.00060 | mg/l | EPA 200.7 |

C43666-4F LB-EB1-011316

| | | | | | | |
|------------------------|--|-----------|-------|---------|------|-----------|
| Manganese ^a | | 0.00020 J | 0.015 | 0.00020 | mg/l | EPA 200.7 |
|------------------------|--|-----------|-------|---------|------|-----------|

C43666-5 LB-SW1-011216

| | | | | | | |
|-----------------------------|--|------|-----|------|------|---------------------|
| Alkalinity, Bicarbonate | | 176 | 5.0 | 5.0 | mg/l | SM2320 B-97 |
| Alkalinity, Total as CaCO3 | | 176 | 5.0 | 1.5 | mg/l | SM2320 B-97 |
| Chloride | | 64.7 | 5.0 | 0.58 | mg/l | EPA 300/SW846 9056A |
| Nitrogen, Nitrate + Nitrite | | 1.8 | 1.0 | 0.41 | mg/l | SM4500-NO3 E-00 |
| Solids, Total Dissolved | | 426 | 10 | 2.5 | mg/l | SM2540 C-97 |
| Sulfate | | 57.4 | 2.5 | 0.52 | mg/l | EPA 300/SW846 9056A |

Summary of Hits

Job Number: C43666
Account: Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico
Collected: 01/12/16 thru 01/13/16

| Lab Sample ID | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---------------|------------------|-----------------|----|-----|-------|--------|
|---------------|------------------|-----------------|----|-----|-------|--------|

C43666-5F LB-SW1-011216

| | | | | | |
|-------------------------|----------|--------|---------|------|-----------|
| Barium ^a | 0.0996 J | 0.20 | 0.00050 | mg/l | EPA 200.7 |
| Boron | 0.181 | 0.10 | 0.0032 | mg/l | EPA 200.7 |
| Calcium | 52.6 | 5.0 | 0.069 | mg/l | EPA 200.7 |
| Cobalt ^a | 0.0011 J | 0.0050 | 0.00040 | mg/l | EPA 200.7 |
| Copper ^a | 0.0030 J | 0.010 | 0.0018 | mg/l | EPA 200.7 |
| Magnesium | 8.64 | 5.0 | 0.023 | mg/l | EPA 200.7 |
| Manganese | 0.0611 | 0.015 | 0.00020 | mg/l | EPA 200.7 |
| Molybdenum ^a | 0.0027 J | 0.020 | 0.00060 | mg/l | EPA 200.7 |
| Nickel ^a | 0.0032 J | 0.0050 | 0.00060 | mg/l | EPA 200.7 |
| Potassium | 12.5 | 10 | 0.035 | mg/l | EPA 200.7 |
| Sodium | 68.5 | 10 | 0.025 | mg/l | EPA 200.7 |
| Strontium | 0.332 | 0.010 | 0.00020 | mg/l | EPA 200.7 |
| Uranium | 0.0028 | 0.0010 | 0.00010 | mg/l | EPA 200.8 |
| Vanadium ^a | 0.0017 J | 0.010 | 0.00060 | mg/l | EPA 200.7 |
| Zinc | 0.0592 | 0.020 | 0.0031 | mg/l | EPA 200.7 |

C43666-6 LB-SW2-011216

| | | | | | |
|--|--------|------|------|------|---------------------|
| Alkalinity, Bicarbonate | 186 | 5.0 | 5.0 | mg/l | SM2320 B-97 |
| Alkalinity, Total as CaCO ₃ | 186 | 5.0 | 1.5 | mg/l | SM2320 B-97 |
| Chloride | 64.5 | 5.0 | 0.58 | mg/l | EPA 300/SW846 9056A |
| Nitrogen, Nitrate + Nitrite | 1.5 | 0.50 | 0.21 | mg/l | SM4500-NO3 E-00 |
| Nitrogen, Total Kjeldahl ^b | 0.18 J | 0.50 | 0.18 | mg/l | EPA 351.2 |
| Solids, Total Dissolved | 450 | 10 | 2.5 | mg/l | SM2540 C-97 |
| Sulfate | 59.2 | 2.5 | 0.52 | mg/l | EPA 300/SW846 9056A |

C43666-6F LB-SW2-011216

| | | | | | |
|-------------------------|----------|--------|---------|------|-----------|
| Arsenic ^a | 0.0027 J | 0.010 | 0.0025 | mg/l | EPA 200.7 |
| Barium ^a | 0.102 J | 0.20 | 0.00050 | mg/l | EPA 200.7 |
| Boron | 0.180 | 0.10 | 0.0032 | mg/l | EPA 200.7 |
| Calcium | 55.9 | 5.0 | 0.069 | mg/l | EPA 200.7 |
| Cobalt ^a | 0.0010 J | 0.0050 | 0.00040 | mg/l | EPA 200.7 |
| Copper ^a | 0.0026 J | 0.010 | 0.0018 | mg/l | EPA 200.7 |
| Magnesium | 9.09 | 5.0 | 0.023 | mg/l | EPA 200.7 |
| Manganese | 0.0520 | 0.015 | 0.00020 | mg/l | EPA 200.7 |
| Molybdenum ^a | 0.0031 J | 0.020 | 0.00060 | mg/l | EPA 200.7 |
| Nickel ^a | 0.0033 J | 0.0050 | 0.00060 | mg/l | EPA 200.7 |
| Potassium | 12.0 | 10 | 0.035 | mg/l | EPA 200.7 |
| Sodium | 68.9 | 10 | 0.025 | mg/l | EPA 200.7 |
| Strontium | 0.347 | 0.010 | 0.00020 | mg/l | EPA 200.7 |
| Uranium | 0.0031 | 0.0010 | 0.00010 | mg/l | EPA 200.8 |

Summary of Hits

Job Number: C43666
Account: Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico
Collected: 01/12/16 thru 01/13/16

| Lab Sample ID | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---------------|------------------|-----------------|----|-----|-------|--------|
|---------------|------------------|-----------------|----|-----|-------|--------|

| | | | | | | |
|-----------------------|--|----------|-------|---------|------|-----------|
| Vanadium ^a | | 0.0021 J | 0.010 | 0.00060 | mg/l | EPA 200.7 |
| Zinc | | 0.0489 | 0.020 | 0.0031 | mg/l | EPA 200.7 |

C43666-7 LB-MW1-011216

| | | | | | | |
|--|--|---------|------|-------|------|---------------------|
| Alkalinity, Bicarbonate | | 302 | 5.0 | 5.0 | mg/l | SM2320 B-97 |
| Alkalinity, Total as CaCO ₃ | | 302 | 5.0 | 1.5 | mg/l | SM2320 B-97 |
| Chloride | | 70.6 | 5.0 | 0.58 | mg/l | EPA 300/SW846 9056A |
| Nitrogen, Nitrate + Nitrite ^a | | 0.072 J | 0.10 | 0.041 | mg/l | SM4500-NO3 E-00 |
| Solids, Total Dissolved | | 571 | 10 | 2.5 | mg/l | SM2540 C-97 |
| Sulfate | | 74.7 | 5.0 | 1.0 | mg/l | EPA 300/SW846 9056A |

C43666-7F LB-MW1-011216

| | | | | | | |
|-------------------------|--|-----------|--------|---------|------|-----------|
| Arsenic ^a | | 0.0058 J | 0.010 | 0.0025 | mg/l | EPA 200.7 |
| Barium ^a | | 0.0568 J | 0.20 | 0.00050 | mg/l | EPA 200.7 |
| Boron | | 0.254 | 0.10 | 0.0032 | mg/l | EPA 200.7 |
| Cadmium ^a | | 0.00030 J | 0.0020 | 0.00030 | mg/l | EPA 200.7 |
| Calcium | | 74.1 | 5.0 | 0.069 | mg/l | EPA 200.7 |
| Cobalt ^a | | 0.0020 J | 0.0050 | 0.00040 | mg/l | EPA 200.7 |
| Copper ^a | | 0.0098 J | 0.010 | 0.0018 | mg/l | EPA 200.7 |
| Magnesium | | 14.5 | 5.0 | 0.023 | mg/l | EPA 200.7 |
| Manganese ^a | | 0.0097 J | 0.015 | 0.00020 | mg/l | EPA 200.7 |
| Molybdenum ^a | | 0.0029 J | 0.020 | 0.00060 | mg/l | EPA 200.7 |
| Nickel | | 0.0075 | 0.0050 | 0.00060 | mg/l | EPA 200.7 |
| Potassium ^a | | 6.98 J | 10 | 0.035 | mg/l | EPA 200.7 |
| Sodium | | 99.9 | 10 | 0.025 | mg/l | EPA 200.7 |
| Strontium | | 0.578 | 0.010 | 0.00020 | mg/l | EPA 200.7 |
| Uranium | | 0.0033 | 0.0010 | 0.00010 | mg/l | EPA 200.8 |
| Vanadium ^a | | 0.0062 J | 0.010 | 0.00060 | mg/l | EPA 200.7 |

C43666-8 LB-MW2-011216

| | | | | | | |
|--|--|------|------|-------|------|---------------------|
| Alkalinity, Bicarbonate | | 252 | 5.0 | 5.0 | mg/l | SM2320 B-97 |
| Alkalinity, Total as CaCO ₃ | | 252 | 5.0 | 1.5 | mg/l | SM2320 B-97 |
| Chloride | | 67.9 | 10 | 1.2 | mg/l | EPA 300/SW846 9056A |
| Nitrogen, Nitrate + Nitrite | | 0.20 | 0.10 | 0.041 | mg/l | SM4500-NO3 E-00 |
| Solids, Total Dissolved | | 524 | 10 | 2.5 | mg/l | SM2540 C-97 |
| Sulfate | | 77.7 | 10 | 2.1 | mg/l | EPA 300/SW846 9056A |

C43666-8F LB-MW2-011216

| | | | | | | |
|----------------------|--|----------|-------|---------|------|-----------|
| Arsenic ^a | | 0.0071 J | 0.010 | 0.0025 | mg/l | EPA 200.7 |
| Barium ^a | | 0.104 J | 0.20 | 0.00050 | mg/l | EPA 200.7 |
| Boron | | 0.151 | 0.10 | 0.0032 | mg/l | EPA 200.7 |

Summary of Hits

Job Number: C43666
Account: Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico
Collected: 01/12/16 thru 01/13/16

| Lab Sample ID Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|--------------------------|------------------|-----------------|--------|---------|-------|-----------|
| Calcium | | 74.8 | 5.0 | 0.069 | mg/l | EPA 200.7 |
| Cobalt ^a | | 0.0010 J | 0.0050 | 0.00040 | mg/l | EPA 200.7 |
| Copper ^a | | 0.0037 J | 0.010 | 0.0018 | mg/l | EPA 200.7 |
| Magnesium | | 13.1 | 5.0 | 0.023 | mg/l | EPA 200.7 |
| Manganese ^a | | 0.00020 J | 0.015 | 0.00020 | mg/l | EPA 200.7 |
| Molybdenum ^a | | 0.0039 J | 0.020 | 0.00060 | mg/l | EPA 200.7 |
| Nickel | | 0.0052 | 0.0050 | 0.00060 | mg/l | EPA 200.7 |
| Potassium ^a | | 9.88 J | 10 | 0.035 | mg/l | EPA 200.7 |
| Sodium | | 78.4 | 10 | 0.025 | mg/l | EPA 200.7 |
| Strontium | | 0.626 | 0.010 | 0.00020 | mg/l | EPA 200.7 |
| Uranium | | 0.0060 | 0.0010 | 0.00010 | mg/l | EPA 200.8 |
| Vanadium ^a | | 0.0073 J | 0.010 | 0.00060 | mg/l | EPA 200.7 |
| Zinc ^a | | 0.0102 J | 0.020 | 0.0031 | mg/l | EPA 200.7 |

C43666-9 LB-MW4-011316

| | | | | | |
|--|------|------|-------|------|---------------------|
| Alkalinity, Bicarbonate | 286 | 5.0 | 5.0 | mg/l | SM2320 B-97 |
| Alkalinity, Total as CaCO ₃ | 286 | 5.0 | 1.5 | mg/l | SM2320 B-97 |
| Chloride | 68.0 | 5.0 | 0.58 | mg/l | EPA 300/SW846 9056A |
| Nitrogen, Nitrate + Nitrite | 0.60 | 0.10 | 0.041 | mg/l | SM4500-NO3 E-00 |
| Solids, Total Dissolved | 721 | 10 | 2.5 | mg/l | SM2540 C-97 |
| Sulfate | 189 | 5.0 | 1.0 | mg/l | EPA 300/SW846 9056A |

C43666-9F LB-MW4-011316

| | | | | | |
|-------------------------|-----------|--------|---------|------|-----------|
| Arsenic ^a | 0.0076 J | 0.010 | 0.0025 | mg/l | EPA 200.7 |
| Barium ^a | 0.0832 J | 0.20 | 0.00050 | mg/l | EPA 200.7 |
| Boron | 0.223 | 0.10 | 0.0032 | mg/l | EPA 200.7 |
| Calcium | 97.8 | 5.0 | 0.069 | mg/l | EPA 200.7 |
| Cobalt ^a | 0.0014 J | 0.0050 | 0.00040 | mg/l | EPA 200.7 |
| Copper ^a | 0.0032 J | 0.010 | 0.0018 | mg/l | EPA 200.7 |
| Magnesium | 31.2 | 5.0 | 0.023 | mg/l | EPA 200.7 |
| Manganese ^a | 0.00080 J | 0.015 | 0.00020 | mg/l | EPA 200.7 |
| Molybdenum ^a | 0.0057 J | 0.020 | 0.00060 | mg/l | EPA 200.7 |
| Nickel | 0.0061 | 0.0050 | 0.00060 | mg/l | EPA 200.7 |
| Potassium ^a | 8.88 J | 10 | 0.035 | mg/l | EPA 200.7 |
| Sodium | 91.6 | 10 | 0.025 | mg/l | EPA 200.7 |
| Strontium | 0.728 | 0.010 | 0.00020 | mg/l | EPA 200.7 |
| Uranium | 0.0765 | 0.0010 | 0.00010 | mg/l | EPA 200.8 |
| Vanadium ^a | 0.0068 J | 0.010 | 0.00060 | mg/l | EPA 200.7 |
| Zinc | 0.0688 | 0.020 | 0.0031 | mg/l | EPA 200.7 |

C43666-10 LB-MW5-011316

| | | | | | |
|-------------------------|-----|-----|-----|------|-------------|
| Alkalinity, Bicarbonate | 250 | 5.0 | 5.0 | mg/l | SM2320 B-97 |
|-------------------------|-----|-----|-----|------|-------------|

Summary of Hits

Job Number: C43666
Account: Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico
Collected: 01/12/16 thru 01/13/16

| Lab Sample ID | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|--|------------------|-----------------|------|-------|-------|---------------------|
| Alkalinity, Total as CaCO ₃ | | 250 | 5.0 | 1.5 | mg/l | SM2320 B-97 |
| Chloride | | 62.9 | 5.0 | 0.58 | mg/l | EPA 300/SW846 9056A |
| Nitrogen, Nitrate + Nitrite | | 0.27 | 0.10 | 0.041 | mg/l | SM4500-NO3 E-00 |
| Solids, Total Dissolved | | 496 | 10 | 2.5 | mg/l | SM2540 C-97 |
| Sulfate | | 71.4 | 5.0 | 1.0 | mg/l | EPA 300/SW846 9056A |

C43666-10F LB-MW5-011316

| | | | | | |
|-------------------------|----------|--------|---------|------|-----------|
| Arsenic ^a | 0.0063 J | 0.010 | 0.0025 | mg/l | EPA 200.7 |
| Barium ^a | 0.0606 J | 0.20 | 0.00050 | mg/l | EPA 200.7 |
| Boron | 0.198 | 0.10 | 0.0032 | mg/l | EPA 200.7 |
| Calcium | 66.4 | 5.0 | 0.069 | mg/l | EPA 200.7 |
| Cobalt ^a | 0.0020 J | 0.0050 | 0.00040 | mg/l | EPA 200.7 |
| Copper ^a | 0.0026 J | 0.010 | 0.0018 | mg/l | EPA 200.7 |
| Magnesium | 15.3 | 5.0 | 0.023 | mg/l | EPA 200.7 |
| Manganese | 0.408 | 0.015 | 0.00020 | mg/l | EPA 200.7 |
| Molybdenum ^a | 0.0084 J | 0.020 | 0.00060 | mg/l | EPA 200.7 |
| Nickel | 0.0060 | 0.0050 | 0.00060 | mg/l | EPA 200.7 |
| Potassium ^a | 8.09 J | 10 | 0.035 | mg/l | EPA 200.7 |
| Sodium | 80.3 | 10 | 0.025 | mg/l | EPA 200.7 |
| Strontium | 0.550 | 0.010 | 0.00020 | mg/l | EPA 200.7 |
| Uranium | 0.0129 | 0.0010 | 0.00010 | mg/l | EPA 200.8 |
| Vanadium ^a | 0.0040 J | 0.010 | 0.00060 | mg/l | EPA 200.7 |

(a) AZ:E4

(b) Analysis performed at Accutest Laboratories, Houston, TX. AZ:E4

Sample Results

Report of Analysis

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW3-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-1 | Date Received: 01/14/16 |
| Matrix: AQ - Ground Water | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

General Chemistry

| Analyte | Result | RL | MDL | Units | DF | Analyzed | By | Method |
|--|---------|------|-------|-------|-----|-------------------|---------------|--------|
| Alkalinity, Bicarbonate | 570 | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Carbonate | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Total as CaCO ₃ | 570 | 5.0 | 1.5 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Chloride | 36.1 | 5.0 | 0.58 | mg/l | 10 | 01/20/16 17:37 PH | EPA 300/SW846 | 9056A |
| Hydroxide Alkalinity | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Nitrogen, Nitrate + Nitrite | 0.041 U | 0.10 | 0.041 | mg/l | 1 | 01/16/16 15:15 EB | SM4500-NO3 | E-00 |
| Nitrogen, Total Kjeldahl ^a | 0.18 U | 0.50 | 0.18 | mg/l | 1 | 01/25/16 | ATXEPA 351.2 | |
| Solids, Total Dissolved | 1940 | 10 | 2.5 | mg/l | 1 | 01/16/16 13:30 DQ | SM2540 | C-97 |
| Sulfate | 822 | 50 | 10 | mg/l | 100 | 01/21/16 10:43 PH | EPA 300/SW846 | 9056A |

(a) Analysis performed at Accutest Laboratories, Houston, TX.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW3-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-1F | Date Received: 01/14/16 |
| Matrix: AQ - Groundwater Filtered | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

Dissolved Metals Analysis

| Analyte | Result | RL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|-------------------------|-----------|--------|---------|-------|----|----------|-------------|------------------------|------------------------|
| Aluminum | 0.027 U | 0.20 | 0.027 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Antimony | 0.0012 U | 0.0060 | 0.0012 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Arsenic | 0.0025 U | 0.010 | 0.0025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Barium ^a | 0.0458 J | 0.20 | 0.00050 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Beryllium | 0.00060 U | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Boron | 0.290 | 0.10 | 0.0032 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cadmium | 0.00030 U | 0.0020 | 0.00030 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Calcium | 252 | 5.0 | 0.069 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Chromium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cobalt | 0.0428 | 0.0050 | 0.00040 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Copper ^a | 0.0023 J | 0.010 | 0.0018 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Magnesium | 121 | 5.0 | 0.023 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Manganese | 1.16 | 0.015 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Molybdenum ^a | 0.0108 J | 0.020 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Nickel | 0.0983 | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Potassium | 17.7 | 10 | 0.035 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Silver | 0.0015 U | 0.0050 | 0.0015 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Sodium | 148 | 10 | 0.025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Strontium | 1.91 | 0.010 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Thallium ^a | 0.0053 J | 0.010 | 0.0048 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Uranium | 0.363 | 0.0010 | 0.00010 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.8 ¹ | EPA 200.8 ⁴ |
| Vanadium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Zinc | 0.0031 U | 0.020 | 0.0031 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |

- (1) Instrument QC Batch: MA5555
- (2) Instrument QC Batch: MA5556
- (3) Prep QC Batch: MP10739
- (4) Prep QC Batch: MP10740

(a) AZ:E4

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW3-011216-D | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-2 | Date Received: 01/14/16 |
| Matrix: AQ - Ground Water | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

General Chemistry

| Analyte | Result | RL | MDL | Units | DF | Analyzed | By | Method |
|--|---------|------|-------|-------|-----|-------------------|---------------|--------|
| Alkalinity, Bicarbonate | 556 | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Carbonate | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Total as CaCO ₃ | 556 | 5.0 | 1.5 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Chloride | 35.9 | 5.0 | 0.58 | mg/l | 10 | 01/20/16 17:54 PH | EPA 300/SW846 | 9056A |
| Hydroxide Alkalinity | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Nitrogen, Nitrate + Nitrite | 0.041 U | 0.10 | 0.041 | mg/l | 1 | 01/16/16 15:15 EB | SM4500-NO3 | E-00 |
| Nitrogen, Total Kjeldahl ^a | 0.18 U | 0.50 | 0.18 | mg/l | 1 | 01/25/16 | ATXEPA 351.2 | |
| Solids, Total Dissolved | 1970 | 10 | 2.5 | mg/l | 1 | 01/16/16 13:30 DQ | SM2540 | C-97 |
| Sulfate | 826 | 50 | 10 | mg/l | 100 | 01/21/16 11:00 PH | EPA 300/SW846 | 9056A |

(a) Analysis performed at Accutest Laboratories, Houston, TX.

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW3-011216-D | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-2F | Date Received: 01/14/16 |
| Matrix: AQ - Groundwater Filtered | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

Dissolved Metals Analysis

| Analyte | Result | RL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|-------------------------|-----------|--------|---------|-------|----|----------|-------------|------------------------|------------------------|
| Aluminum | 0.027 U | 0.20 | 0.027 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Antimony | 0.0012 U | 0.0060 | 0.0012 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Arsenic ^a | 0.0044 J | 0.010 | 0.0025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Barium ^a | 0.0464 J | 0.20 | 0.00050 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Beryllium | 0.00060 U | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Boron | 0.296 | 0.10 | 0.0032 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cadmium | 0.00030 U | 0.0020 | 0.00030 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Calcium | 249 | 5.0 | 0.069 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Chromium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cobalt | 0.0400 | 0.0050 | 0.00040 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Copper ^a | 0.0023 J | 0.010 | 0.0018 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Magnesium | 121 | 5.0 | 0.023 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Manganese | 1.23 | 0.015 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Molybdenum ^a | 0.0107 J | 0.020 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Nickel | 0.0976 | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Potassium | 17.9 | 10 | 0.035 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Silver | 0.0015 U | 0.0050 | 0.0015 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Sodium | 149 | 10 | 0.025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Strontium | 1.92 | 0.010 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Thallium | 0.0048 U | 0.010 | 0.0048 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Uranium | 0.352 | 0.0010 | 0.00010 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.8 ¹ | EPA 200.8 ⁴ |
| Vanadium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Zinc ^a | 0.0032 J | 0.020 | 0.0031 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |

(1) Instrument QC Batch: MA5555

(2) Instrument QC Batch: MA5556

(3) Prep QC Batch: MP10739

(4) Prep QC Batch: MP10740

(a) AZ:E4

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW7-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-3 | Date Received: 01/14/16 |
| Matrix: AQ - Ground Water | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

General Chemistry

| Analyte | Result | RL | MDL | Units | DF | Analyzed | By | Method |
|--|--------|------|-------|-------|----|-------------------|----|---------------------|
| Alkalinity, Bicarbonate | 274 | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | | SM2320 B-97 |
| Alkalinity, Carbonate | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | | SM2320 B-97 |
| Alkalinity, Total as CaCO ₃ | 274 | 5.0 | 1.5 | mg/l | 1 | 01/21/16 13:20 DQ | | SM2320 B-97 |
| Chloride | 60.9 | 10 | 1.2 | mg/l | 20 | 01/21/16 11:35 PH | | EPA 300/SW846 9056A |
| Hydroxide Alkalinity | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | | SM2320 B-97 |
| Nitrogen, Nitrate + Nitrite | 0.18 | 0.10 | 0.041 | mg/l | 1 | 01/16/16 15:15 EB | | SM4500-NO3 E-00 |
| Nitrogen, Total Kjeldahl ^a | 0.18 U | 0.50 | 0.18 | mg/l | 1 | 01/25/16 | | ATXEPA 351.2 |
| Solids, Total Dissolved | 514 | 10 | 2.5 | mg/l | 1 | 01/16/16 13:30 DQ | | SM2540 C-97 |
| Sulfate | 76.6 | 5.0 | 1.0 | mg/l | 10 | 01/20/16 18:29 PH | | EPA 300/SW846 9056A |

(a) Analysis performed at Accutest Laboratories, Houston, TX.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW7-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-3F | Date Received: 01/14/16 |
| Matrix: AQ - Groundwater Filtered | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

Dissolved Metals Analysis

| Analyte | Result | RL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|-------------------------|-----------|--------|---------|-------|----|----------|-------------|------------------------|------------------------|
| Aluminum | 0.027 U | 0.20 | 0.027 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Antimony | 0.0012 U | 0.0060 | 0.0012 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Arsenic ^a | 0.0069 J | 0.010 | 0.0025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Barium ^a | 0.0459 J | 0.20 | 0.00050 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Beryllium | 0.00060 U | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Boron | 0.185 | 0.10 | 0.0032 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cadmium | 0.00030 U | 0.0020 | 0.00030 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Calcium | 70.8 | 5.0 | 0.069 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Chromium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cobalt ^a | 0.0010 J | 0.0050 | 0.00040 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Copper ^a | 0.0040 J | 0.010 | 0.0018 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Magnesium | 15.8 | 5.0 | 0.023 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Manganese ^a | 0.00030 J | 0.015 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Molybdenum ^a | 0.0055 J | 0.020 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Nickel ^a | 0.0045 J | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Potassium ^a | 5.76 J | 10 | 0.035 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Silver | 0.0015 U | 0.0050 | 0.0015 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Sodium | 83.1 | 10 | 0.025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Strontium | 0.541 | 0.010 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Thallium | 0.0048 U | 0.010 | 0.0048 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Uranium | 0.0165 | 0.0010 | 0.00010 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.8 ¹ | EPA 200.8 ⁴ |
| Vanadium ^a | 0.0077 J | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Zinc | 0.0031 U | 0.020 | 0.0031 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |

(1) Instrument QC Batch: MA5555

(2) Instrument QC Batch: MA5556

(3) Prep QC Batch: MP10739

(4) Prep QC Batch: MP10740

(a) AZ:E4

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-EB1-011316 | Date Sampled: 01/13/16 |
| Lab Sample ID: C43666-4F | Date Received: 01/14/16 |
| Matrix: AQ - Equip Blank Filtered | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

Dissolved Metals Analysis

| Analyte | Result | RL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|------------------------|-----------|--------|---------|-------|----|----------|-------------|------------------------|------------------------|
| Aluminum | 0.027 U | 0.20 | 0.027 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Antimony | 0.0012 U | 0.0060 | 0.0012 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Arsenic | 0.0025 U | 0.010 | 0.0025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Barium | 0.00050 U | 0.20 | 0.00050 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Beryllium | 0.00060 U | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Boron | 0.0032 U | 0.10 | 0.0032 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cadmium | 0.00030 U | 0.0020 | 0.00030 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Calcium | 0.069 U | 5.0 | 0.069 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Chromium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cobalt | 0.00040 U | 0.0050 | 0.00040 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Copper | 0.0018 U | 0.010 | 0.0018 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Magnesium | 0.023 U | 5.0 | 0.023 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Manganese ^a | 0.00020 J | 0.015 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Molybdenum | 0.00060 U | 0.020 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Nickel | 0.00060 U | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Potassium | 0.035 U | 10 | 0.035 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Silver | 0.0015 U | 0.0050 | 0.0015 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Sodium | 0.025 U | 10 | 0.025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Strontium | 0.00020 U | 0.010 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Thallium | 0.0048 U | 0.010 | 0.0048 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Uranium | 0.00010 U | 0.0010 | 0.00010 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.8 ¹ | EPA 200.8 ⁴ |
| Vanadium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Zinc | 0.0031 U | 0.020 | 0.0031 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |

- (1) Instrument QC Batch: MA5555
- (2) Instrument QC Batch: MA5556
- (3) Prep QC Batch: MP10739
- (4) Prep QC Batch: MP10740

(a) AZ:E4

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-SW1-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-5 | Date Received: 01/14/16 |
| Matrix: AQ - Ground Water | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

General Chemistry

| Analyte | Result | RL | MDL | Units | DF | Analyzed | By | Method |
|--|--------|------|------|-------|----|-------------------|---------------|--------|
| Alkalinity, Bicarbonate | 176 | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Carbonate | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Total as CaCO ₃ | 176 | 5.0 | 1.5 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Chloride | 64.7 | 5.0 | 0.58 | mg/l | 10 | 01/21/16 12:27 PH | EPA 300/SW846 | 9056A |
| Hydroxide Alkalinity | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Nitrogen, Nitrate + Nitrite | 1.8 | 1.0 | 0.41 | mg/l | 10 | 01/16/16 15:15 EB | SM4500-NO3 | E-00 |
| Nitrogen, Total Kjeldahl ^a | 0.18 U | 0.50 | 0.18 | mg/l | 1 | 01/25/16 | ATXEPA | 351.2 |
| Solids, Total Dissolved | 426 | 10 | 2.5 | mg/l | 1 | 01/16/16 13:30 DQ | SM2540 | C-97 |
| Sulfate | 57.4 | 2.5 | 0.52 | mg/l | 5 | 01/20/16 19:55 PH | EPA 300/SW846 | 9056A |

(a) Analysis performed at Accutest Laboratories, Houston, TX.

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-SW1-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-5F | Date Received: 01/14/16 |
| Matrix: AQ - Groundwater Filtered | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

Dissolved Metals Analysis

| Analyte | Result | RL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|-------------------------|-----------|--------|---------|-------|----|----------|-------------|------------------------|------------------------|
| Aluminum | 0.027 U | 0.20 | 0.027 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Antimony | 0.0012 U | 0.0060 | 0.0012 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Arsenic | 0.0025 U | 0.010 | 0.0025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Barium ^a | 0.0996 J | 0.20 | 0.00050 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Beryllium | 0.00060 U | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Boron | 0.181 | 0.10 | 0.0032 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cadmium | 0.00030 U | 0.0020 | 0.00030 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Calcium | 52.6 | 5.0 | 0.069 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Chromium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cobalt ^a | 0.0011 J | 0.0050 | 0.00040 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Copper ^a | 0.0030 J | 0.010 | 0.0018 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Magnesium | 8.64 | 5.0 | 0.023 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Manganese | 0.0611 | 0.015 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Molybdenum ^a | 0.0027 J | 0.020 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Nickel ^a | 0.0032 J | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Potassium | 12.5 | 10 | 0.035 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Silver | 0.0015 U | 0.0050 | 0.0015 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Sodium | 68.5 | 10 | 0.025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Strontium | 0.332 | 0.010 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Thallium | 0.0048 U | 0.010 | 0.0048 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Uranium | 0.0028 | 0.0010 | 0.00010 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.8 ¹ | EPA 200.8 ⁴ |
| Vanadium ^a | 0.0017 J | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Zinc | 0.0592 | 0.020 | 0.0031 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |

(1) Instrument QC Batch: MA5555

(2) Instrument QC Batch: MA5556

(3) Prep QC Batch: MP10739

(4) Prep QC Batch: MP10740

(a) AZ:E4

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-SW2-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-6 | Date Received: 01/14/16 |
| Matrix: AQ - Ground Water | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

General Chemistry

| Analyte | Result | RL | MDL | Units | DF | Analyzed | By | Method |
|--|--------|------|------|-------|----|-------------------|------------------------|--------|
| Alkalinity, Bicarbonate | 186 | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Carbonate | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Total as CaCO ₃ | 186 | 5.0 | 1.5 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Chloride | 64.5 | 5.0 | 0.58 | mg/l | 10 | 01/21/16 12:44 PH | EPA 300/SW846 | 9056A |
| Hydroxide Alkalinity | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Nitrogen, Nitrate + Nitrite | 1.5 | 0.50 | 0.21 | mg/l | 5 | 01/16/16 15:15 EB | SM4500-NO ₃ | E-00 |
| Nitrogen, Total Kjeldahl ^a | 0.18 J | 0.50 | 0.18 | mg/l | 1 | 01/25/16 | ATXEPA 351.2 | |
| Solids, Total Dissolved | 450 | 10 | 2.5 | mg/l | 1 | 01/16/16 13:30 DQ | SM2540 | C-97 |
| Sulfate | 59.2 | 2.5 | 0.52 | mg/l | 5 | 01/20/16 20:13 PH | EPA 300/SW846 | 9056A |

(a) Analysis performed at Accutest Laboratories, Houston, TX. AZ:E4

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-SW2-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-6F | Date Received: 01/14/16 |
| Matrix: AQ - Groundwater Filtered | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

Dissolved Metals Analysis

| Analyte | Result | RL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|-------------------------|-----------|--------|---------|-------|----|----------|-------------|------------------------|------------------------|
| Aluminum | 0.027 U | 0.20 | 0.027 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Antimony | 0.0012 U | 0.0060 | 0.0012 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Arsenic ^a | 0.0027 J | 0.010 | 0.0025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Barium ^a | 0.102 J | 0.20 | 0.00050 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Beryllium | 0.00060 U | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Boron | 0.180 | 0.10 | 0.0032 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cadmium | 0.00030 U | 0.0020 | 0.00030 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Calcium | 55.9 | 5.0 | 0.069 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Chromium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Cobalt ^a | 0.0010 J | 0.0050 | 0.00040 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Copper ^a | 0.0026 J | 0.010 | 0.0018 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Magnesium | 9.09 | 5.0 | 0.023 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Manganese | 0.0520 | 0.015 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Molybdenum ^a | 0.0031 J | 0.020 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Nickel ^a | 0.0033 J | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Potassium | 12.0 | 10 | 0.035 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Silver | 0.0015 U | 0.0050 | 0.0015 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Sodium | 68.9 | 10 | 0.025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Strontium | 0.347 | 0.010 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Thallium | 0.0048 U | 0.010 | 0.0048 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Uranium | 0.0031 | 0.0010 | 0.00010 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.8 ¹ | EPA 200.8 ⁴ |
| Vanadium ^a | 0.0021 J | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |
| Zinc | 0.0489 | 0.020 | 0.0031 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ² | EPA 200.7 ³ |

(1) Instrument QC Batch: MA5555

(2) Instrument QC Batch: MA5556

(3) Prep QC Batch: MP10739

(4) Prep QC Batch: MP10740

(a) AZ:E4

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW1-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-7 | Date Received: 01/14/16 |
| Matrix: AQ - Ground Water | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

General Chemistry

| Analyte | Result | RL | MDL | Units | DF | Analyzed | By | Method |
|--|---------|------|-------|-------|----|-------------------|---------------|--------|
| Alkalinity, Bicarbonate | 302 | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Carbonate | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Total as CaCO ₃ | 302 | 5.0 | 1.5 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Chloride | 70.6 | 5.0 | 0.58 | mg/l | 10 | 01/20/16 20:30 PH | EPA 300/SW846 | 9056A |
| Hydroxide Alkalinity | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Nitrogen, Nitrate + Nitrite ^a | 0.072 J | 0.10 | 0.041 | mg/l | 1 | 01/16/16 15:15 EB | SM4500-NO3 | E-00 |
| Nitrogen, Total Kjeldahl ^b | 0.18 U | 0.50 | 0.18 | mg/l | 1 | 01/25/16 | ATXEPA 351.2 | |
| Solids, Total Dissolved | 571 | 10 | 2.5 | mg/l | 1 | 01/16/16 13:30 DQ | SM2540 | C-97 |
| Sulfate | 74.7 | 5.0 | 1.0 | mg/l | 10 | 01/20/16 20:30 PH | EPA 300/SW846 | 9056A |

(a) AZ:E4

(b) Analysis performed at Accutest Laboratories, Houston, TX.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW1-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-7F | Date Received: 01/14/16 |
| Matrix: AQ - Groundwater Filtered | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

Dissolved Metals Analysis

| Analyte | Result | RL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|-------------------------|-----------|--------|---------|-------|----|----------|-------------|------------------------|------------------------|
| Aluminum | 0.027 U | 0.20 | 0.027 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Antimony | 0.0012 U | 0.0060 | 0.0012 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Arsenic ^a | 0.0058 J | 0.010 | 0.0025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Barium ^a | 0.0568 J | 0.20 | 0.00050 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Beryllium | 0.00060 U | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Boron | 0.254 | 0.10 | 0.0032 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Cadmium ^a | 0.00030 J | 0.0020 | 0.00030 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Calcium | 74.1 | 5.0 | 0.069 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Chromium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Cobalt ^a | 0.0020 J | 0.0050 | 0.00040 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Copper ^a | 0.0098 J | 0.010 | 0.0018 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Magnesium | 14.5 | 5.0 | 0.023 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Manganese ^a | 0.0097 J | 0.015 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Molybdenum ^a | 0.0029 J | 0.020 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Nickel | 0.0075 | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Potassium ^a | 6.98 J | 10 | 0.035 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Silver | 0.0015 U | 0.0050 | 0.0015 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Sodium | 99.9 | 10 | 0.025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Strontium | 0.578 | 0.010 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Thallium | 0.0048 U | 0.010 | 0.0048 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Uranium | 0.0033 | 0.0010 | 0.00010 | mg/l | 1 | 01/22/16 | 02/02/16 RS | EPA 200.8 ² | EPA 200.8 ⁴ |
| Vanadium ^a | 0.0062 J | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Zinc | 0.0031 U | 0.020 | 0.0031 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |

(1) Instrument QC Batch: MA5556

(2) Instrument QC Batch: MA5573

(3) Prep QC Batch: MP10739

(4) Prep QC Batch: MP10740

(a) AZ:E4

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW2-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-8 | Date Received: 01/14/16 |
| Matrix: AQ - Ground Water | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

General Chemistry

| Analyte | Result | RL | MDL | Units | DF | Analyzed | By | Method |
|--|--------|------|-------|-------|----|-------------------|------------------------|--------|
| Alkalinity, Bicarbonate | 252 | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Carbonate | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Alkalinity, Total as CaCO ₃ | 252 | 5.0 | 1.5 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Chloride | 67.9 | 10 | 1.2 | mg/l | 20 | 01/21/16 13:01 PH | EPA 300/SW846 | 9056A |
| Hydroxide Alkalinity | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/21/16 13:20 DQ | SM2320 | B-97 |
| Nitrogen, Nitrate + Nitrite | 0.20 | 0.10 | 0.041 | mg/l | 1 | 01/16/16 15:15 EB | SM4500-NO ₃ | E-00 |
| Nitrogen, Total Kjeldahl ^a | 0.18 U | 0.50 | 0.18 | mg/l | 1 | 01/25/16 | ATXEPA 351.2 | |
| Solids, Total Dissolved | 524 | 10 | 2.5 | mg/l | 1 | 01/16/16 13:30 DQ | SM2540 | C-97 |
| Sulfate | 77.7 | 10 | 2.1 | mg/l | 20 | 01/21/16 13:01 PH | EPA 300/SW846 | 9056A |

(a) Analysis performed at Accutest Laboratories, Houston, TX.

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW2-011216 | Date Sampled: 01/12/16 |
| Lab Sample ID: C43666-8F | Date Received: 01/14/16 |
| Matrix: AQ - Groundwater Filtered | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

Dissolved Metals Analysis

| Analyte | Result | RL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|-------------------------|-----------|--------|---------|-------|----|----------|-------------|------------------------|------------------------|
| Aluminum | 0.027 U | 0.20 | 0.027 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Antimony | 0.0012 U | 0.0060 | 0.0012 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Arsenic ^a | 0.0071 J | 0.010 | 0.0025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Barium ^a | 0.104 J | 0.20 | 0.00050 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Beryllium | 0.00060 U | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Boron | 0.151 | 0.10 | 0.0032 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Cadmium | 0.00030 U | 0.0020 | 0.00030 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Calcium | 74.8 | 5.0 | 0.069 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Chromium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Cobalt ^a | 0.0010 J | 0.0050 | 0.00040 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Copper ^a | 0.0037 J | 0.010 | 0.0018 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Magnesium | 13.1 | 5.0 | 0.023 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Manganese ^a | 0.00020 J | 0.015 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Molybdenum ^a | 0.0039 J | 0.020 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Nickel | 0.0052 | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Potassium ^a | 9.88 J | 10 | 0.035 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Silver | 0.0015 U | 0.0050 | 0.0015 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Sodium | 78.4 | 10 | 0.025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Strontium | 0.626 | 0.010 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Thallium | 0.0048 U | 0.010 | 0.0048 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Uranium | 0.0060 | 0.0010 | 0.00010 | mg/l | 1 | 01/22/16 | 02/02/16 RS | EPA 200.8 ² | EPA 200.8 ⁴ |
| Vanadium ^a | 0.0073 J | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Zinc ^a | 0.0102 J | 0.020 | 0.0031 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |

(1) Instrument QC Batch: MA5556

(2) Instrument QC Batch: MA5573

(3) Prep QC Batch: MP10739

(4) Prep QC Batch: MP10740

(a) AZ:E4

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW4-011316 | Date Sampled: 01/13/16 |
| Lab Sample ID: C43666-9 | Date Received: 01/14/16 |
| Matrix: AQ - Ground Water | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

General Chemistry

| Analyte | Result | RL | MDL | Units | DF | Analyzed | By | Method |
|--|--------|------|-------|-------|----|-------------------|------------------------|--------|
| Alkalinity, Bicarbonate | 286 | 5.0 | 5.0 | mg/l | 1 | 01/22/16 12:30 DQ | SM2320 | B-97 |
| Alkalinity, Carbonate | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/22/16 12:30 DQ | SM2320 | B-97 |
| Alkalinity, Total as CaCO ₃ | 286 | 5.0 | 1.5 | mg/l | 1 | 01/22/16 12:30 DQ | SM2320 | B-97 |
| Chloride | 68.0 | 5.0 | 0.58 | mg/l | 10 | 01/20/16 21:05 PH | EPA 300/SW846 | 9056A |
| Hydroxide Alkalinity | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/22/16 12:30 DQ | SM2320 | B-97 |
| Nitrogen, Nitrate + Nitrite | 0.60 | 0.10 | 0.041 | mg/l | 1 | 01/16/16 15:15 EB | SM4500-NO ₃ | E-00 |
| Nitrogen, Total Kjeldahl ^a | 0.18 U | 0.50 | 0.18 | mg/l | 1 | 01/25/16 | ATXEPA 351.2 | |
| Solids, Total Dissolved | 721 | 10 | 2.5 | mg/l | 1 | 01/16/16 13:30 DQ | SM2540 | C-97 |
| Sulfate | 189 | 5.0 | 1.0 | mg/l | 10 | 01/20/16 21:05 PH | EPA 300/SW846 | 9056A |

(a) Analysis performed at Accutest Laboratories, Houston, TX.

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW4-011316 | Date Sampled: 01/13/16 |
| Lab Sample ID: C43666-9F | Date Received: 01/14/16 |
| Matrix: AQ - Groundwater Filtered | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

Dissolved Metals Analysis

| Analyte | Result | RL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|-------------------------|-----------|--------|---------|-------|----|----------|-------------|------------------------|------------------------|
| Aluminum | 0.027 U | 0.20 | 0.027 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Antimony | 0.0012 U | 0.0060 | 0.0012 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Arsenic ^a | 0.0076 J | 0.010 | 0.0025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Barium ^a | 0.0832 J | 0.20 | 0.00050 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Beryllium | 0.00060 U | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Boron | 0.223 | 0.10 | 0.0032 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Cadmium | 0.00030 U | 0.0020 | 0.00030 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Calcium | 97.8 | 5.0 | 0.069 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Chromium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Cobalt ^a | 0.0014 J | 0.0050 | 0.00040 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Copper ^a | 0.0032 J | 0.010 | 0.0018 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Magnesium | 31.2 | 5.0 | 0.023 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Manganese ^a | 0.00080 J | 0.015 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Molybdenum ^a | 0.0057 J | 0.020 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Nickel | 0.0061 | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Potassium ^a | 8.88 J | 10 | 0.035 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Silver | 0.0015 U | 0.0050 | 0.0015 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Sodium | 91.6 | 10 | 0.025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Strontium | 0.728 | 0.010 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Thallium | 0.0048 U | 0.010 | 0.0048 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Uranium | 0.0765 | 0.0010 | 0.00010 | mg/l | 1 | 01/22/16 | 02/02/16 RS | EPA 200.8 ² | EPA 200.8 ⁴ |
| Vanadium ^a | 0.0068 J | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Zinc | 0.0688 | 0.020 | 0.0031 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |

(1) Instrument QC Batch: MA5556

(2) Instrument QC Batch: MA5573

(3) Prep QC Batch: MP10739

(4) Prep QC Batch: MP10740

(a) AZ:E4

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW5-011316 | Date Sampled: 01/13/16 |
| Lab Sample ID: C43666-10 | Date Received: 01/14/16 |
| Matrix: AQ - Ground Water | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

General Chemistry

| Analyte | Result | RL | MDL | Units | DF | Analyzed | By | Method |
|--|--------|------|-------|-------|----|-------------------|------------------------|--------|
| Alkalinity, Bicarbonate | 250 | 5.0 | 5.0 | mg/l | 1 | 01/22/16 12:30 DQ | SM2320 | B-97 |
| Alkalinity, Carbonate | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/22/16 12:30 DQ | SM2320 | B-97 |
| Alkalinity, Total as CaCO ₃ | 250 | 5.0 | 1.5 | mg/l | 1 | 01/22/16 12:30 DQ | SM2320 | B-97 |
| Chloride | 62.9 | 5.0 | 0.58 | mg/l | 10 | 01/20/16 21:22 PH | EPA 300/SW846 | 9056A |
| Hydroxide Alkalinity | 5.0 U | 5.0 | 5.0 | mg/l | 1 | 01/22/16 12:30 DQ | SM2320 | B-97 |
| Nitrogen, Nitrate + Nitrite | 0.27 | 0.10 | 0.041 | mg/l | 1 | 01/16/16 15:15 EB | SM4500-NO ₃ | E-00 |
| Nitrogen, Total Kjeldahl ^a | 0.18 U | 0.50 | 0.18 | mg/l | 1 | 01/25/16 | ATXEPA 351.2 | |
| Solids, Total Dissolved | 496 | 10 | 2.5 | mg/l | 1 | 01/16/16 13:30 DQ | SM2540 | C-97 |
| Sulfate | 71.4 | 5.0 | 1.0 | mg/l | 10 | 01/20/16 21:22 PH | EPA 300/SW846 | 9056A |

(a) Analysis performed at Accutest Laboratories, Houston, TX.

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 J = Indicates a result > = MDL but < RL

Report of Analysis

| | |
|---|--------------------------------|
| Client Sample ID: LB-MW5-011316 | Date Sampled: 01/13/16 |
| Lab Sample ID: C43666-10F | Date Received: 01/14/16 |
| Matrix: AQ - Groundwater Filtered | Percent Solids: n/a |
| Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico | |

Dissolved Metals Analysis

| Analyte | Result | RL | MDL | Units | DF | Prep | Analyzed By | Method | Prep Method |
|-------------------------|-----------|--------|---------|-------|----|----------|-------------|------------------------|------------------------|
| Aluminum | 0.027 U | 0.20 | 0.027 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Antimony | 0.0012 U | 0.0060 | 0.0012 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Arsenic ^a | 0.0063 J | 0.010 | 0.0025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Barium ^a | 0.0606 J | 0.20 | 0.00050 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Beryllium | 0.00060 U | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Boron | 0.198 | 0.10 | 0.0032 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Cadmium | 0.00030 U | 0.0020 | 0.00030 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Calcium | 66.4 | 5.0 | 0.069 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Chromium | 0.00060 U | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Cobalt ^a | 0.0020 J | 0.0050 | 0.00040 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Copper ^a | 0.0026 J | 0.010 | 0.0018 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Magnesium | 15.3 | 5.0 | 0.023 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Manganese | 0.408 | 0.015 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Molybdenum ^a | 0.0084 J | 0.020 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Nickel | 0.0060 | 0.0050 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Potassium ^a | 8.09 J | 10 | 0.035 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Silver | 0.0015 U | 0.0050 | 0.0015 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Sodium | 80.3 | 10 | 0.025 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Strontium | 0.550 | 0.010 | 0.00020 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Thallium | 0.0048 U | 0.010 | 0.0048 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Uranium | 0.0129 | 0.0010 | 0.00010 | mg/l | 1 | 01/22/16 | 02/02/16 RS | EPA 200.8 ² | EPA 200.8 ⁴ |
| Vanadium ^a | 0.0040 J | 0.010 | 0.00060 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |
| Zinc | 0.0031 U | 0.020 | 0.0031 | mg/l | 1 | 01/22/16 | 01/22/16 RS | EPA 200.7 ¹ | EPA 200.7 ³ |

(1) Instrument QC Batch: MA5556

(2) Instrument QC Batch: MA5573

(3) Prep QC Batch: MP10739

(4) Prep QC Batch: MP10740

(a) AZ:E4

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
J = Indicates a result > = MDL but < RL

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



PHOENIX

CHAIN OF CUSTODY

ACCUTEST LABORATORIES

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

1 of 5

FED-EX Tracking # 8016 0436 1190
Accutest Quote #
Bottle Order Control #
Accutest NC Job #: C 043666

Client / Reporting Information, Project Information, Requested Analysis, Matrix Codes, Collection table with sample IDs, dates, and analysis results.

Turnaround Time (Business days), Data Deliverable Information, Comments / Remarks, Emergency TIA data available VIA Lablink

Sample Custody must be documented below each time samples change possession, including courier delivery. Includes fields for Relinquished by, Received by, Date, Time, and various checkboxes.

4.1
4



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C43666 Client: WESTON SOLUTIONS Project: LA BAJADA MINE SITE
 Date / Time Received: 1/14/2016 9:15:00 AM Delivery Method: _____ Airbill #'s: 807604361190

Cooler Temps (Initial/Adjusted): #1: (3.1/2.2); #2: (4/3.1); #3: (4.1/3.2); #4: (1.7/0.8); #5: (2.3/1.4);

| <u>Cooler Security</u> | <u>Y</u> | <u>or</u> | <u>N</u> | | <u>Y</u> | <u>or</u> | <u>N</u> |
|---------------------------|-------------------------------------|-----------|--------------------------|-----------------------|-------------------------------------|-----------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |

| <u>Cooler Temperature</u> | <u>Y</u> | <u>or</u> | <u>N</u> |
|----------------------------|-------------------------------------|-----------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 2. Therm ID: | <u>IR3;</u> | | |
| 3. Cooler media: | <u>Ice (Bag)</u> | | |
| 4. No. Coolers: | <u>5</u> | | |

| <u>Quality Control Preservation</u> | <u>Y</u> | <u>or</u> | <u>N</u> | <u>N/A</u> |
|-------------------------------------|-------------------------------------|-----------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

| <u>Sample Integrity - Documentation</u> | <u>Y</u> | <u>or</u> | <u>N</u> |
|---|-------------------------------------|-----------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |

| <u>Sample Integrity - Condition</u> | <u>Y</u> | <u>or</u> | <u>N</u> |
|-------------------------------------|-------------------------------------|-----------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> |
| 3. Condition of sample: | <u>Intact</u> | | |

| <u>Sample Integrity - Instructions</u> | <u>Y</u> | <u>or</u> | <u>N</u> | <u>N/A</u> |
|---|-------------------------------------|-----------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

Accutest Laboratories
V:408.588.0200

2105 Lundy Avenue
F: 408.588.0201

San Jose, CA 95131
www.accutest.com

4.1
4

Metals Analysis

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C43666
Account: WESTAZT - Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

QC Batch ID: MP10739
Matrix Type: AQUEOUS

Methods: EPA 200.7
Units: ug/l

Prep Date: 01/22/16

| Metal | RL | IDL | MDL | MB raw | final |
|------------|-------|-----|-----|-----------|--------|
| Aluminum | 200 | 14 | 27 | 5.8 | <200 |
| Antimony | 6.0 | 1.2 | 1.2 | -0.30 | <6.0 |
| Arsenic | 10 | 1.6 | 2.5 | 0.70 | <10 |
| Barium | 200 | .2 | .5 | 0.0 | <200 |
| Beryllium | 5.0 | .2 | .6 | 0.0 | <5.0 |
| Boron | 100 | 1.8 | 3.2 | 2.0 | <100 |
| Cadmium | 2.0 | .2 | .3 | 0.0 | <2.0 |
| Calcium | 5000 | 28 | 69 | 1.6 | <5000 |
| Chromium | 10 | .4 | .6 | -0.30 | <10 |
| Cobalt | 5.0 | .3 | .4 | 0.0 | <5.0 |
| Copper | 10 | 1.2 | 1.8 | 0.60 | <10 |
| Iron | 200 | 5.3 | 11 | | |
| Lead | 10 | 1 | 1.7 | | |
| Lithium | 50 | 1.1 | 2.9 | | |
| Magnesium | 5000 | 16 | 23 | -27 | <5000 |
| Manganese | 15 | .2 | .2 | -0.10 | <15 |
| Molybdenum | 20 | .5 | .6 | 0.30 | <20 |
| Nickel | 5.0 | .4 | .6 | 0.60 | <5.0 |
| Potassium | 10000 | 35 | 35 | 4.3 | <10000 |
| Selenium | 10 | 1.7 | 3.3 | | |
| Silicon | 100 | 2.4 | 2.4 | | |
| Silver | 5.0 | .5 | 1.5 | -0.40 | <5.0 |
| Sodium | 10000 | 11 | 25 | -15 | <10000 |
| Strontium | 10 | .1 | .2 | 0.0 | <10 |
| Thallium | 10 | 1.7 | 4.8 | 1.9 | <10 |
| Tin | 50 | .8 | 1.3 | | |
| Titanium | 10 | .8 | .8 | | |
| Vanadium | 10 | .6 | .6 | 0.0 | <10 |
| Zinc | 20 | .5 | 3.1 | 1.2 | <20 |

Associated samples MP10739: C43666-1F, C43666-2F, C43666-3F, C43666-4F, C43666-5F, C43666-6F, C43666-7F, C43666-8F, C43666-9F, C43666-10F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C43666
 Account: WESTAZT - Weston Solutions, Inc.
 Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

QC Batch ID: MP10739
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 01/22/16

| Metal | C43666-3F Original MS | | Spike lot MPIR5 | % Rec | QC Limits |
|------------|--------------------------|-------|-----------------------|-------|--------------|
| Aluminum | 21.9 | 12300 | 12500 | 98.2 | 70-130 |
| Antimony | 0.0 | 506 | 500 | 101.2 | 70-130 |
| Arsenic | 6.9 | 523 | 500 | 103.2 | 70-130 |
| Barium | 45.9 | 545 | 500 | 99.8 | 70-130 |
| Beryllium | 0.0 | 500 | 500 | 100.0 | 70-130 |
| Boron | 185 | 702 | 500 | 103.4 | 70-130 |
| Cadmium | 0.0 | 517 | 500 | 103.4 | 70-130 |
| Calcium | 70800 | 81800 | 12500 | 88.0 | 70-130 |
| Chromium | 0.40 | 494 | 500 | 98.7 | 70-130 |
| Cobalt | 1.0 | 499 | 500 | 99.6 | 70-130 |
| Copper | 4.0 | 498 | 500 | 98.8 | 70-130 |
| Iron | anr | | | | |
| Lead | anr | | | | |
| Lithium | | | | | |
| Magnesium | 15800 | 27800 | 12500 | 96.0 | 70-130 |
| Manganese | 0.30 | 509 | 500 | 101.7 | 70-130 |
| Molybdenum | 5.5 | 501 | 500 | 99.1 | 70-130 |
| Nickel | 4.5 | 498 | 500 | 98.7 | 70-130 |
| Potassium | 5760 | 10700 | 5000 | 98.5 | 70-130 |
| Selenium | | | | | |
| Silicon | | | | | |
| Silver | 0.0 | 489 | 500 | 97.8 | 70-130 |
| Sodium | 83100 | 94700 | 12500 | 92.8 | 70-130 |
| Strontium | 541 | 1030 | 500 | 97.8 | - |
| Thallium | 1.8 | 516 | 500 | 102.8 | 70-130 |
| Tin | | | | | |
| Titanium | | | | | |
| Vanadium | 7.7 | 489 | 500 | 96.3 | 70-130 |
| Zinc | 1.8 | 505 | 500 | 100.6 | 70-130 |

Associated samples MP10739: C43666-1F, C43666-2F, C43666-3F, C43666-4F, C43666-5F, C43666-6F, C43666-7F, C43666-8F, C43666-9F, C43666-10F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

5.1.2
5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C43666
 Account: WESTAZT - Weston Solutions, Inc.
 Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

QC Batch ID: MP10739
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 01/22/16

| Metal | C43666-3F Original MSD | Spikelot MPIR5 | % Rec | MSD RPD | QC Limit | |
|------------|---------------------------|-------------------|-------|------------|-------------|----|
| Aluminum | 21.9 | 12400 | 12500 | 99.0 | 0.8 | 20 |
| Antimony | 0.0 | 510 | 500 | 102.0 | 0.8 | 20 |
| Arsenic | 6.9 | 525 | 500 | 103.6 | 0.4 | 20 |
| Barium | 45.9 | 550 | 500 | 100.8 | 0.9 | 20 |
| Beryllium | 0.0 | 502 | 500 | 100.4 | 0.4 | 20 |
| Boron | 185 | 708 | 500 | 104.6 | 0.9 | 20 |
| Cadmium | 0.0 | 521 | 500 | 104.2 | 0.8 | 20 |
| Calcium | 70800 | 82800 | 12500 | 96.0 | 1.2 | 20 |
| Chromium | 0.40 | 501 | 500 | 100.1 | 1.4 | 20 |
| Cobalt | 1.0 | 503 | 500 | 100.4 | 0.8 | 20 |
| Copper | 4.0 | 506 | 500 | 100.4 | 1.6 | 20 |
| Iron | anr | | | | | |
| Lead | anr | | | | | |
| Lithium | | | | | | |
| Magnesium | 15800 | 28200 | 12500 | 99.2 | 1.4 | 20 |
| Manganese | 0.30 | 516 | 500 | 103.1 | 1.4 | 20 |
| Molybdenum | 5.5 | 507 | 500 | 100.3 | 1.2 | 20 |
| Nickel | 4.5 | 503 | 500 | 99.7 | 1.0 | 20 |
| Potassium | 5760 | 10800 | 5000 | 100.3 | 0.9 | 20 |
| Selenium | | | | | | |
| Silicon | | | | | | |
| Silver | 0.0 | 496 | 500 | 99.2 | 1.4 | 20 |
| Sodium | 83100 | 96100 | 12500 | 104.0 | 1.5 | 20 |
| Strontium | 541 | 1050 | 500 | 101.8 | 1.9 | 20 |
| Thallium | 1.8 | 523 | 500 | 104.2 | 1.3 | 20 |
| Tin | | | | | | |
| Titanium | | | | | | |
| Vanadium | 7.7 | 496 | 500 | 97.7 | 1.4 | 20 |
| Zinc | 1.8 | 510 | 500 | 101.6 | 1.0 | 20 |

Associated samples MP10739: C43666-1F, C43666-2F, C43666-3F, C43666-4F, C43666-5F, C43666-6F, C43666-7F, C43666-8F, C43666-9F, C43666-10F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

5.1.2
5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C43666
 Account: WESTAZT - Weston Solutions, Inc.
 Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

QC Batch ID: MP10739
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 01/22/16

| Metal | BSP Result | Spikelot MPR5 | % Rec | QC Limits |
|------------|------------|---------------|-------|-----------|
| Aluminum | 12200 | 12500 | 97.6 | 85-115 |
| Antimony | 498 | 500 | 99.6 | 85-115 |
| Arsenic | 505 | 500 | 101.0 | 85-115 |
| Barium | 501 | 500 | 100.2 | 85-115 |
| Beryllium | 502 | 500 | 100.4 | 85-115 |
| Boron | 518 | 500 | 103.6 | 85-115 |
| Cadmium | 515 | 500 | 103.0 | 85-115 |
| Calcium | 12100 | 12500 | 96.8 | 85-115 |
| Chromium | 509 | 500 | 101.8 | 85-115 |
| Cobalt | 514 | 500 | 102.8 | 85-115 |
| Copper | 495 | 500 | 99.0 | 85-115 |
| Iron | anr | | | |
| Lead | anr | | | |
| Lithium | | | | |
| Magnesium | 12100 | 12500 | 96.8 | 85-115 |
| Manganese | 515 | 500 | 103.0 | 85-115 |
| Molybdenum | 502 | 500 | 100.4 | 85-115 |
| Nickel | 490 | 500 | 98.0 | 85-115 |
| Potassium | 4840 | 5000 | 96.8 | 85-115 |
| Selenium | | | | |
| Silicon | | | | |
| Silver | 487 | 500 | 97.4 | 85-115 |
| Sodium | 12000 | 12500 | 96.0 | 85-115 |
| Strontium | 492 | 500 | 98.4 | - |
| Thallium | 526 | 500 | 105.2 | 85-115 |
| Tin | | | | |
| Titanium | | | | |
| Vanadium | 488 | 500 | 97.6 | 85-115 |
| Zinc | 523 | 500 | 104.6 | 85-115 |

Associated samples MP10739: C43666-1F, C43666-2F, C43666-3F, C43666-4F, C43666-5F, C43666-6F, C43666-7F, C43666-8F, C43666-9F, C43666-10F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C43666
 Account: WESTAZT - Weston Solutions, Inc.
 Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

QC Batch ID: MP10739
 Matrix Type: AQUEOUS

Methods: EPA 200.7
 Units: ug/l

Prep Date: 01/22/16

| Metal | C43666-3F Original SDL 1:5 | | %DIF | QC Limits |
|------------|-------------------------------|-------|-----------|--------------|
| Aluminum | 21.9 | 0.00 | 100.0 (a) | 0-10 |
| Antimony | 0.00 | 0.00 | NC | 0-10 |
| Arsenic | 6.90 | 0.00 | 100.0 (a) | 0-10 |
| Barium | 45.9 | 46.9 | 2.2 | 0-10 |
| Beryllium | 0.00 | 0.00 | NC | 0-10 |
| Boron | 185 | 185 | 0.2 | 0-10 |
| Cadmium | 0.00 | 0.00 | NC | 0-10 |
| Calcium | 70800 | 72100 | 1.8 | 0-10 |
| Chromium | 0.400 | 0.00 | 100.0 (a) | 0-10 |
| Cobalt | 1.00 | 0.00 | 100.0 (a) | 0-10 |
| Copper | 4.00 | 0.00 | 100.0 (a) | 0-10 |
| Iron | anr | | | |
| Lead | anr | | | |
| Lithium | | | | |
| Magnesium | 15800 | 15900 | 0.8 | 0-10 |
| Manganese | 0.300 | 0.00 | 100.0 (a) | 0-10 |
| Molybdenum | 5.50 | 6.50 | 18.2 (a) | 0-10 |
| Nickel | 4.50 | 4.90 | 8.9 | 0-10 |
| Potassium | 5760 | 5670 | 1.7 | 0-10 |
| Selenium | | | | |
| Silicon | | | | |
| Silver | 0.00 | 0.00 | NC | 0-10 |
| Sodium | 83100 | 83300 | 0.3 | 0-10 |
| Strontium | 541 | 555 | 2.5 | 0- |
| Thallium | 1.80 | 0.00 | 100.0 (a) | 0-10 |
| Tin | | | | |
| Titanium | | | | |
| Vanadium | 7.70 | 8.80 | 14.3 (a) | 0-10 |
| Zinc | 1.80 | 0.00 | 100.0 (a) | 0-10 |

Associated samples MP10739: C43666-1F, C43666-2F, C43666-3F, C43666-4F, C43666-5F, C43666-6F, C43666-7F, C43666-8F, C43666-9F, C43666-10F

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: C43666
Account: WESTAZT - Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

QC Batch ID: MP10740
Matrix Type: AQUEOUS

Methods: EPA 200.8
Units: ug/l

Prep Date: 01/22/16

| Metal | RL | IDL | MDL | MB raw | final |
|------------|------|-------|------|-----------|-------|
| Aluminum | 50 | 6.7 | 13 | | |
| Antimony | 0.50 | .057 | .11 | | |
| Arsenic | 1.0 | .052 | .081 | | |
| Barium | 1.0 | .041 | .059 | | |
| Beryllium | 0.50 | .044 | .044 | | |
| Boron | 5.0 | .25 | 2 | | |
| Cadmium | 0.50 | .032 | .043 | | |
| Calcium | 500 | 11 | 99 | | |
| Chromium | 4.0 | .028 | .11 | | |
| Cobalt | 0.50 | .045 | .045 | | |
| Copper | 4.0 | .13 | 1.9 | | |
| Iron | 50 | 1.4 | 11 | | |
| Lead | 0.50 | .024 | .048 | | |
| Magnesium | 500 | 1.6 | 28 | | |
| Manganese | 1.0 | .14 | .14 | | |
| Molybdenum | 1.0 | .24 | .24 | | |
| Nickel | 4.0 | .085 | .15 | | |
| Potassium | 500 | 10 | 23 | | |
| Selenium | 1.0 | .15 | .15 | | |
| Silver | 2.0 | .011 | .11 | | |
| Sodium | 500 | 5.7 | 25 | | |
| Strontium | 5.0 | .082 | .21 | | |
| Thallium | 0.50 | .031 | .093 | | |
| Tin | 5.0 | .12 | .87 | | |
| Titanium | 1.0 | .13 | .16 | | |
| Vanadium | 4.0 | .51 | .52 | | |
| Uranium | 1.0 | .0056 | .1 | 0.00027 | <1.0 |
| Zinc | 4.0 | .68 | 1.7 | | |

Associated samples MP10740: C43666-1F, C43666-2F, C43666-3F, C43666-4F, C43666-5F, C43666-6F, C43666-7F, C43666-8F, C43666-9F, C43666-10F

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C43666
 Account: WESTAZT - Weston Solutions, Inc.
 Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

QC Batch ID: MP10740
 Matrix Type: AQUEOUS

Methods: EPA 200.8
 Units: ug/l

Prep Date: 01/22/16

| Metal | C43666-3F Original MS | SpikeLot MPIR5 | % Rec | QC Limits |
|------------|--------------------------|-------------------|-------|--------------|
| Aluminum | | | | |
| Antimony | | | | |
| Arsenic | | | | |
| Barium | | | | |
| Beryllium | | | | |
| Boron | | | | |
| Cadmium | | | | |
| Calcium | | | | |
| Chromium | | | | |
| Cobalt | | | | |
| Copper | | | | |
| Iron | | | | |
| Lead | | | | |
| Magnesium | | | | |
| Manganese | | | | |
| Molybdenum | | | | |
| Nickel | | | | |
| Potassium | | | | |
| Selenium | | | | |
| Silver | | | | |
| Sodium | | | | |
| Strontium | | | | |
| Thallium | | | | |
| Tin | | | | |
| Titanium | | | | |
| Vanadium | | | | |
| Uranium | 16.5 | 520 | 500 | 100.7 70-130 |
| Zinc | | | | |

Associated samples MP10740: C43666-1F, C43666-2F, C43666-3F, C43666-4F, C43666-5F, C43666-6F, C43666-7F, C43666-8F, C43666-9F, C43666-10F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

5.2.2
 5

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: C43666
 Account: WESTAZT - Weston Solutions, Inc.
 Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

QC Batch ID: MP10740
 Matrix Type: AQUEOUS

Methods: EPA 200.8
 Units: ug/l

Prep Date: 01/22/16

| Metal | C43666-3F Original MSD | SpikeLot MPIR5 | % Rec | MSD RPD | QC Limit | |
|------------|---------------------------|-------------------|-------|------------|-------------|----|
| Aluminum | | | | | | |
| Antimony | | | | | | |
| Arsenic | | | | | | |
| Barium | | | | | | |
| Beryllium | | | | | | |
| Boron | | | | | | |
| Cadmium | | | | | | |
| Calcium | | | | | | |
| Chromium | | | | | | |
| Cobalt | | | | | | |
| Copper | | | | | | |
| Iron | | | | | | |
| Lead | | | | | | |
| Magnesium | | | | | | |
| Manganese | | | | | | |
| Molybdenum | | | | | | |
| Nickel | | | | | | |
| Potassium | | | | | | |
| Selenium | | | | | | |
| Silver | | | | | | |
| Sodium | | | | | | |
| Strontium | | | | | | |
| Thallium | | | | | | |
| Tin | | | | | | |
| Titanium | | | | | | |
| Vanadium | | | | | | |
| Uranium | 16.5 | 514 | 500 | 99.5 | 1.2 | 20 |
| Zinc | | | | | | |

Associated samples MP10740: C43666-1F, C43666-2F, C43666-3F, C43666-4F, C43666-5F, C43666-6F, C43666-7F, C43666-8F, C43666-9F, C43666-10F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

5.2.2
 5

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: C43666
 Account: WESTAZT - Weston Solutions, Inc.
 Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

QC Batch ID: MP10740
 Matrix Type: AQUEOUS

Methods: EPA 200.8
 Units: ug/l

Prep Date: 01/22/16

| Metal | BSP Result | Spikelot MPIR5 | % Rec | QC Limits |
|------------|---------------|-------------------|-------|--------------|
| Aluminum | | | | |
| Antimony | | | | |
| Arsenic | | | | |
| Barium | | | | |
| Beryllium | | | | |
| Boron | | | | |
| Cadmium | | | | |
| Calcium | | | | |
| Chromium | | | | |
| Cobalt | | | | |
| Copper | | | | |
| Iron | | | | |
| Lead | | | | |
| Magnesium | | | | |
| Manganese | | | | |
| Molybdenum | | | | |
| Nickel | | | | |
| Potassium | | | | |
| Selenium | | | | |
| Silver | | | | |
| Sodium | | | | |
| Strontium | | | | |
| Thallium | | | | |
| Tin | | | | |
| Titanium | | | | |
| Vanadium | | | | |
| Uranium | 492 | 500 | 98.4 | 85-115 |
| Zinc | | | | |

Associated samples MP10740: C43666-1F, C43666-2F, C43666-3F, C43666-4F, C43666-5F, C43666-6F, C43666-7F, C43666-8F, C43666-9F, C43666-10F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: C43666
 Account: WESTAZT - Weston Solutions, Inc.
 Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

QC Batch ID: MP10740
 Matrix Type: AQUEOUS

Methods: EPA 200.8
 Units: ug/l

Prep Date: 01/22/16

| Metal | C43666-3F Original SDL 1:5 | %DIF | QC Limits |
|------------|-------------------------------|------|--------------|
| Aluminum | | | |
| Antimony | | | |
| Arsenic | | | |
| Barium | | | |
| Beryllium | | | |
| Boron | | | |
| Cadmium | | | |
| Calcium | | | |
| Chromium | | | |
| Cobalt | | | |
| Copper | | | |
| Iron | | | |
| Lead | | | |
| Magnesium | | | |
| Manganese | | | |
| Molybdenum | | | |
| Nickel | | | |
| Potassium | | | |
| Selenium | | | |
| Silver | | | |
| Sodium | | | |
| Strontium | | | |
| Thallium | | | |
| Tin | | | |
| Titanium | | | |
| Vanadium | | | |
| Uranium | 16.5 | 16.3 | 1.6 0-10 |
| Zinc | | | |

Associated samples MP10740: C43666-1F, C43666-2F, C43666-3F, C43666-4F, C43666-5F, C43666-6F, C43666-7F, C43666-8F, C43666-9F, C43666-10F

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43666
Account: WESTAZT - Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

| Analyte | Batch ID | RL | MB Result | Units | Spike Amount | BSP Result | BSP %Recov | QC Limits |
|-----------------------------|----------------|------|-----------|-------|--------------|------------|------------|-----------|
| Alkalinity, Total as CaCO3 | GN18305 | 5.0 | 0.0 | mg/l | 250 | 246 | 98.4 | 75-125% |
| Alkalinity, Total as CaCO3 | GN18308 | 5.0 | 0.0 | mg/l | 250 | 244 | 97.6 | 75-125% |
| Chloride | GP8933/GN18300 | 0.50 | 0.0 | mg/l | 5 | 4.80 | 96.0 | 90-110% |
| Fluoride | GP8933/GN18300 | 0.10 | 0.0 | mg/l | 5 | 4.93 | 98.6 | 90-110% |
| Nitrogen, Nitrate | GP8933/GN18300 | 0.10 | 0.0 | mg/l | 5 | 4.79 | 95.8 | 90-110% |
| Nitrogen, Nitrate + Nitrite | GN18270 | 0.10 | 0.0 | mg/l | 0.2 | 0.22 | 108.2 | 85-115% |
| Solids, Total Dissolved | GN18269 | 10 | 5.0 | mg/l | 1000 | 980 | 98.0 | 80-120% |
| Sulfate | GP8933/GN18300 | 0.50 | 0.0 | mg/l | 5 | 4.75 | 95.0 | 90-110% |

Associated Samples:

Batch GP8933: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10
 Batch GN18269: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10
 Batch GN18270: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10
 Batch GN18305: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8
 Batch GN18308: C43666-9, C43666-10
 (*) Outside of QC limits

6.1
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BLANK SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43666
Account: WESTAZT - Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

| Analyte | Batch ID | Units | Spike Amount | BSD Result | RPD | QC Limit |
|-----------------------------|----------------|-------|--------------|------------|-----|----------|
| Alkalinity, Total as CaCO3 | GN18305 | mg/l | 250 | 256 | 4.0 | |
| Alkalinity, Total as CaCO3 | GN18308 | mg/l | 250 | 242 | 0.8 | |
| Chloride | GP8933/GN18300 | mg/l | 5 | 4.80 | 0.0 | 25% |
| Fluoride | GP8933/GN18300 | mg/l | 5 | 4.90 | 0.6 | |
| Nitrogen, Nitrate | GP8933/GN18300 | mg/l | 5 | 4.79 | 0.0 | 25% |
| Nitrogen, Nitrate + Nitrite | GN18270 | mg/l | 0.2 | 0.21 | 1.5 | |
| Sulfate | GP8933/GN18300 | mg/l | 5 | 4.75 | 0.0 | 25% |

Associated Samples:

Batch GP8933: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10
Batch GN18270: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10
Batch GN18305: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8
Batch GN18308: C43666-9, C43666-10
(*) Outside of QC limits

6.2
6

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43666
Account: WESTAZT - Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

| Analyte | Batch ID | QC Sample | Units | Original Result | DUP Result | RPD | QC Limits |
|----------------------------|----------|-----------|-------|-----------------|------------|-----|-----------|
| Alkalinity, Total as CaCO3 | GN18305 | C43666-3 | mg/l | 274 | 280 | 2.2 | 0-25% |
| Alkalinity, Total as CaCO3 | GN18308 | C43769-1 | mg/l | 96.0 | 94.0 | 2.1 | 0-25% |
| Solids, Total Dissolved | GN18269 | C43666-3 | mg/l | 514 | 513 | 0.2 | 0-5% |

Associated Samples:

Batch GN18269: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10

Batch GN18305: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8

Batch GN18308: C43666-9, C43666-10

(*) Outside of QC limits

6.3

6

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43666
Account: WESTAZT - Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

| Analyte | Batch ID | QC Sample | Units | Original Result | Spike Amount | MS Result | %Rec | QC Limits |
|-----------------------------|----------------|-----------|-------|-----------------|--------------|-----------|-------|-----------|
| Chloride | GP8933/GN18300 | C43666-3 | mg/l | 60.9 | 100 | 165 | 104.1 | 80-120% |
| Fluoride | GP8933/GN18300 | C43666-3 | mg/l | 0.79 | 100 | 94.8 | 93.5 | 80-120% |
| Fluoride | GP8933/GN18300 | C43666-3 | mg/l | 1.3 | 100 | 94.8 | 93.5 | 80-120% |
| Nitrogen, Nitrate + Nitrite | GN18270 | C43666-3 | mg/l | 0.18 | 0.2 | 0.41 | 118.0 | 75-125% |
| Sulfate | GP8933/GN18300 | C43666-3 | mg/l | 76.6 | 100 | 173 | 96.4 | 80-120% |

Associated Samples:

Batch GP8933: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10
Batch GN18270: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

6.4
6

MATRIX SPIKE DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43666
Account: WESTAZT - Weston Solutions, Inc.
Project: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

| Analyte | Batch ID | QC Sample | Units | Original Result | Spike Amount | MSD Result | RPD | QC Limit |
|-----------------------------|----------------|-----------|-------|-----------------|--------------|------------|-----|----------|
| Chloride | GP8933/GN18300 | C43666-3 | mg/l | 60.9 | 100 | 165 | 0.0 | |
| Fluoride | GP8933/GN18300 | C43666-3 | mg/l | 0.79 | 100 | 94.9 | 0.1 | |
| Fluoride | GP8933/GN18300 | C43666-3 | mg/l | 1.3 | 100 | 94.9 | 0.1 | |
| Nitrogen, Nitrate + Nitrite | GN18270 | C43666-3 | mg/l | 0.18 | 0.2 | 0.42 | 1.6 | |
| Sulfate | GP8933/GN18300 | C43666-3 | mg/l | 76.6 | 100 | 173 | 0.0 | |

Associated Samples:

Batch GP8933: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10
Batch GN18270: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

6.5

6

Misc. Forms

Custody Documents and Other Forms

(Accutest Laboratories Gulf Coast, Inc.)

Includes the following where applicable:

- Chain of Custody

Subcontract Chain of Custody

Subcontract Lab: SGS Accutest – Gulf Coast/SPL-Houston
 Date Sent: 1/20/16
 Date Due: 1/28/16

Project Name: WESTAZT8135 (C43666)
 Project Location:

| SGS Accutest Lab Number | Customer Sample Name/Field Point ID | Matrix | Method | Collect Date | Collect Time |
|-------------------------|-------------------------------------|--------|----------------|--------------|--------------|
| C43666-1 | | GW | TKN | 1/12/16 | |
| C43666-2 | | GW | TKN | 1/12/16 | |
| C43666-3 | | GW | TKN | 1/12/16 | |
| C43666-5 | (MS/MSD) | | **RUN MS/MSD** | 1/12/16 | |
| C43666-6 | | GW | TKN | 1/12/16 | |
| C43666-7 | | GW | TKN | 1/12/16 | |
| C43666-8 | | GW | TKN | 1/12/16 | |
| C43666-9 | | GW | TKN | 1/12/16 | |
| C43666-10 | | GW | TKN | 1/13/16 | |

Comments: C43666-3 requires MS/MSD

| | | | |
|---|----------------------------------|----------------------|-------------------|
| Relinquished By: <u>Maureen Coleman</u> | Received By: FEDEX | Date: 1/20/16 | Time: 1500 |
| Relinquished By: <u>Fed Ex</u> | Received By: <u>Blanka Henry</u> | Date: <u>1/21/16</u> | Time: <u>0920</u> |
| Relinquished By: | Received By: | Date: | Time: |

TAGGED BY: BH

VERIFIED BY: BZ

Send Report to: MaureenC@accutest.com

Accutest Job Number: C43666 **Client:** SGS ACCUTEST **Project:** WESTAZT8135
Date / Time Received: 1/21/2016 **Delivery Method:** _____ **Airbill #'s:** _____
No. Coolers: 1 **Therm ID:** IR-4; **Temp Adjustment Factor:** 0;
Cooler Temps (Initial/Adjusted): #1: (1/1);

Cooler Security **Y or N** **Y or N**
 1. Custody Seals Present: 3. COC Present:
 2. Custody Seals Intact: 4. Smpl Dates/Time OK

Cooler Temperature **Y or N**
 1. Temp criteria achieved:
 2. Cooler temp verification: _____
 3. Cooler media: Ice (Bag)

Quality Control Preservation **Y or N** **N/A** **WTB** **STB**
 1. Trip Blank present / cooler:
 2. Trip Blank listed on COC:
 3. Samples preserved properly:
 4. VOCs headspace free:

Sample Integrity - Documentation **Y or N**
 1. Sample labels present on bottles:
 2. Container labeling complete:
 3. Sample container label / COC agree:

Sample Integrity - Condition **Y or N**
 1. Sample recvd within HT:
 2. All containers accounted for:
 3. Condition of sample: Intact

Sample Integrity - Instructions **Y or N** **N/A**
 1. Analysis requested is clear:
 2. Bottles received for unspecified tests:
 3. Sufficient volume recvd for analysis:
 4. Compositing instructions clear:
 5. Filtering instructions clear:

Comments collection time not listed on COC

 c4366-1 1250
 c4366-2 1440
 C4366-3 0900
 -5 0800
 -6 1020
 -7 1140
 -8 1125
 -9 0940
 -10 1057

 7.1
 7

Job #: C43666 _____

Date / Time Received: 1/21/2016 9:20:00 AM _____

Initials: BH _____

Client: SGS ACCUTEST _____

| Cooler # | Sample ID: | Vol | Bot # | Location | Pres | pH | Therm ID | Initial Temp | Therm CF | Corrected Temp |
|----------|------------|-------|-------|----------|-------|--------|----------|--------------|----------|----------------|
| 1 | C43666-1 | 250ml | 1 | 1-I | H2SO4 | pH < 2 | IR-4 | 1 | 0 | 1 |
| 1 | C43666-2 | 250ml | 1 | 1-I | H2SO4 | pH < 2 | IR-4 | 1 | 0 | 1 |
| 1 | C43666-3 | 250ml | 1 | 1-I | H2SO4 | pH < 2 | IR-4 | 1 | 0 | 1 |
| 1 | C43666-3 | 250ml | 2 | 1-I | H2SO4 | pH < 2 | IR-4 | 1 | 0 | 1 |
| 1 | C43666-5 | 250ml | 1 | 1-I | H2SO4 | pH < 2 | IR-4 | 1 | 0 | 1 |
| 1 | C43666-6 | 250ml | 1 | 1-I | H2SO4 | pH < 2 | IR-4 | 1 | 0 | 1 |
| 1 | C43666-7 | 250ml | 1 | 1-I | H2SO4 | pH < 2 | IR-4 | 1 | 0 | 1 |
| 1 | C43666-8 | 250ml | 1 | 1-I | H2SO4 | pH < 2 | IR-4 | 1 | 0 | 1 |
| 1 | C43666-9 | 250ml | 1 | 1-I | H2SO4 | pH < 2 | IR-4 | 1 | 0 | 1 |
| 1 | C43666-10 | 250ml | 1 | 1-I | H2SO4 | pH < 2 | IR-4 | 1 | 0 | 1 |

7.1
7

C43666: Chain of Custody

Page 3 of 3

General Chemistry

QC Data Summaries

(Accutest Laboratories Gulf Coast, Inc.)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43666
Account: ALNCA - Accutest Northern California, Inc.
Project: WESTAZT: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

| Analyte | Batch ID | RL | MB Result | Units | Spike Amount | BSP Result | BSP %Recov | QC Limits |
|--------------------------|-----------------|------|-----------|-------|--------------|------------|------------|-----------|
| Nitrogen, Total Kjeldahl | GP34974/GN70744 | 0.50 | 0.0 | mg/l | 2 | 1.97 | 98.5 | 90-110% |

Associated Samples:

Batch GP34974: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10

(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43666
Account: ALNCA - Accutest Northern California, Inc.
Project: WESTAZT: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

| Analyte | Batch ID | QC Sample | Units | Original Result | DUP Result | RPD | QC Limits |
|--------------------------|-----------------|-----------|-------|-----------------|------------|-----|-----------|
| Nitrogen, Total Kjeldahl | GP34974/GN70744 | C43666-3 | mg/l | 0.18 U | 0.0 | 0.0 | 0-20% |

Associated Samples:

Batch GP34974: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10
(*) Outside of QC limits

8.2
8

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: C43666
Account: ALNCA - Accutest Northern California, Inc.
Project: WESTAZT: La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

| Analyte | Batch ID | QC Sample | Units | Original Result | Spike Amount | MS Result | %Rec | QC Limits |
|--------------------------|-----------------|-----------|-------|-----------------|--------------|-----------|-------|-----------|
| Nitrogen, Total Kjeldahl | GP34974/GN70744 | C43666-3 | mg/l | 0.18 U | 2 | 2.1 | 105.0 | 90-110% |

Associated Samples:

Batch GP34974: C43666-1, C43666-2, C43666-3, C43666-5, C43666-6, C43666-7, C43666-8, C43666-9, C43666-10

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits



Effective January 1, 2016, SGS has acquired all of the assets of Accutest Laboratories and will continue to operate as SGS-Accutest. SGS-Accutest is part of SGS, the world's leading inspection, verification, testing and certification company.

Technical Report for

Weston Solutions, Inc.

La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico

12767.201.001.0020

Accutest Job Number: C43666X

Sampling Dates: 01/12/16 - 01/13/16

Report to:

Weston Solutions, Inc.
960 West Elliot Road Suite 101
Tempe, AZ 85284
b.wethington@westonsolutions.com

ATTN: Barbara Wethington

Total number of pages in report: **30**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.



James J. Rhudy
Lab Director

Client Service contact: Maureen Coloma 408-588-0200

Certifications: CA (ELAP 2910) AK (UST-092) AZ (AZ0762) NV (CA00150) OR (CA300006) WA (C925)
DoD ELAP (L-A-B L2242)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.
Test results relate only to samples analyzed.

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Sample Summary

Weston Solutions, Inc.

Job No: C43666X

La Bajada Mine GW Sampling - Santo Domingo Pueblo, New Mexico
 Project No: 12767.201.001.0020

| Sample Number | Collected | | Matrix Received | Code | Type | Client Sample ID |
|---------------|-----------|----------|-----------------|------|--------------------|------------------|
| | Date | Time By | | | | |
| C43666-1X | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-MW3-011216 |
| C43666-2X | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-MW3-011216-D |
| C43666-3DX | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Water Dup/MSD | LB-MW7-011216 |
| C43666-3SX | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Water Matrix Spike | LB-MW7-011216 |
| C43666-3X | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-MW7-011216 |
| C43666-4X | 01/13/16 | 00:00 GR | 01/14/16 | AQ | Equipment Blank | LB-EB1-011316 |
| C43666-5X | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-SW1-011216 |
| C43666-6X | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-SW2-011216 |
| C43666-7X | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-MW1-011216 |
| C43666-8X | 01/12/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-MW2-011216 |
| C43666-9X | 01/13/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-MW4-011316 |
| C43666-10X | 01/13/16 | 00:00 GR | 01/14/16 | AQ | Ground Water | LB-MW5-011316 |

Subcontract Lab Data

Report of Analysis



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

January 26, 2016

Maureen C.
Accutest Laboratories
2105 Lundy Avenue
San Jose, CA 95131
TEL: (408) 588-0200
FAX: (408) 588-0201

RE: WESTAZTt8135 (C43666)

Dear Maureen C.:

Order No.: 16010848

Summit Environmental Technologies, Inc. received 12 sample(s) on 1/15/2016 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in the Case Narrative.

Quality control data is within laboratory defined or method specified acceptance limits except where noted.

If you have any questions regarding these tests results, please feel free to call the laboratory.

Sincerely,

Bachar Najm
Project Manager
3310 Win St.
Cuyahoga Falls, Ohio 44223

A2LA 0724.01, Alabama 41600, Arizona AZ0788, Arkansas 88-0735, California 07256CA, Colorado, Connecticut PH-0105, Delaware, Florida NELAC E87688, Georgia E87688 and 943, Idaho OH00923, Illinois 200061 and Reg.5, Indiana C-OH-13, Kansas E-10347, Kentucky (Underground Storage Tank) 3, Kentucky 90146, Louisiana 04061 and LA12004, Maine 2012015, Maryland 339, Massachusetts M-OPH923, Minnesota 409711, Montana CERT0099, New Hampshire 2996, New Jersey OH006, New York 11777, North Carolina 39705 and 631, Ohio Drinking Water 4170, Ohio VAP CL0052, Oklahoma 9940, Oregon OH200001, Rhode Island LA000317, South Carolina 92016001, Tennessee TN04018, Texas T104704466-11-5, Region 8 8TMS-L, USDA/APHIS P330-11-00244, Utah OH009232011-1, Vermont VT-87688, Virginia 00440 and 1581, Washington C891, West Virginia 248 and 9957C and E87688, Wisconsin 399013010



Summit Environmental Technologies, Inc.
3310 Win St.
Cuyahoga Falls, Ohio 44223
TEL: (330) 253-8211 FAX: (330) 253-4489
Website: <http://www.settek.com>

Case Narrative

WO#: 16010848
Date: 1/26/2016

CLIENT: Accutest Laboratories
Project: WESTAZTt8135 (C43666)

This report in its entirety consists of the documents listed below. All documents contain the Summit Environmental Technologies, Inc., Work Order Number assigned to this report.

Paginated Report including Cover Letter, Case Narrative, Analytical Results, Applicable Quality Control Summary Reports, and copies of the Chain of Custody Documents are supplied with this sample set.

Concentrations reported with a J-Flag in the Qualifier Field are values below the Limit of Quantitation (LOQ) but greater than the established Method Detection Limit (MDL).

Method numbers, unless specified as SM (Standard Methods) or ASTM, are EPA methods.

Estimated uncertainty values are available upon request.

Analysis performed by DBM, VRM, or SFG were performed at Summit Labs 2704 Eatonton Highway Haddock, GA 31033

All results for Solid Samples are reported on an "as received" or "wet weight" basis unless indicated as "dry weight" using the "-dry" designation on the reporting units.

Summit Environmental Technologies, Inc., holds the accreditations/certifications listed at the bottom of the cover letter that may or may not pertain to this report.

The information contained in this analytical report is the sole property of Summit Environmental Technologies, Inc. and that of the customer. It cannot be reproduced in any form without the consent of Summit Environmental Technologies, Inc. or the customer for which this report was issued. The results contained in this report are only representative of the samples received. Conditions can vary at different times and at different sampling conditions. Summit Environmental Technologies, Inc. is not responsible for use or interpretation of the data included herein.

This report is believed to meet all of the requirements of NELAC or the accrediting / certifying agency. Any comments or problems with the analytical events associated with this report are noted below.

Original
Page 2 of 16

These commonly used Qualifiers and Acronyms may or may not be present in this report.

Qualifiers

| | |
|--------------|---|
| U | The compound was analyzed for but was not detected. |
| J | The reported value is greater than the Method Detection Limit but less than the Reporting Limit. |
| H | The hold time for sample preparation and/or analysis was exceeded. |
| D | The result is reported from a dilution. |
| E | The result exceeded the linear range of the calibration or is estimated due to interference. |
| MC | The result is below the Minimum Compound Limit. |
| * | The result exceeds the Regulatory Limit or Maximum Contamination Limit. |
| m | Manual integration was used to determine the area response. |
| N | The result is presumptive based on a Mass Spectral library search assuming a 1:1 response. |
| P | The second column confirmation exceeded 25% difference. |
| C | The result has been confirmed by GC/MS. |
| X | The result was not confirmed when GC/MS Analysis was performed. |
| B/MB+ | The analyte was detected in the associated blank. |
| G | The ICB or CCB contained reportable amounts of analyte. |
| QC-/+ | The CCV recovery failed low (-) or high (+). |
| R/QDR | The RPD was outside of accepted recovery limits. |
| QL-/+ | The LCS or LCSD recovery failed low (-) or high (+). |
| QLR | The LCS/LCSD RPD was outside of accepted recovery limits. |
| QM-/+ | The MS or MSD recovery failed low (-) or high (+). |
| QMR | The MS/MSD RPD was outside of accepted recovery limits. |
| QV-/+ | The ICV recovery failed low (-) or high (+). |
| S | The spike result was outside of accepted recovery limits. |
| Z | Deviation; A deviation from the method was performed; Please refer to the Case Narrative for additional information |

Acronyms

| | | | |
|-------------|-------------------------------------|---------------|--------------------------------------|
| ND | Not Detected | RL | Reporting Limit |
| QC | Quality Control | MDL | Method Detection Limit |
| MB | Method Blank | LOD | Level of Detection |
| LCS | Laboratory Control Sample | LOQ | Level of Quantitation |
| LCSD | Laboratory Control Sample Duplicate | PQL | Practical Quantitation Limit |
| QCS | Quality Control Sample | CRQL | Contract Required Quantitation Limit |
| DUP | Duplicate | PL | Permit Limit |
| MS | Matrix Spike | RegLvl | Regulatory Limit |
| MSD | Matrix Spike Duplicate | MCL | Maximum Contamination Limit |
| RPD | Relative Percent Different | MinCL | Minimum Compound Limit |
| ICV | Initial Calibration Verification | RA | Reanalysis |
| ICB | Initial Calibration Blank | RE | Reextraction |
| CCV | Continuing Calibration Verification | TIC | Tentatively Identified Compound |
| CCB | Continuing Calibration Blank | RT | Retention Time |
| RLC | Reporting Limit Check | CF | Calibration Factor |
| DF | Dilution Factor | RF | Response Factor |

This list of Qualifiers and Acronyms reflects the most commonly utilized Qualifiers and Acronyms for reporting. Please refer to the Analytical Notes in the Case Narrative for any Qualifiers or Acronyms that do not appear in this list or for additional information regarding the use of these Qualifiers on reported data.



Summit Environmental Technologies, Inc.
 3310 Win St.
 Cuyahoga Falls, Ohio 44223
 TEL: (330) 253-8211 FAX: (330) 253-4489
 Website: <http://www.settek.com>

Workorder Sample Summary

WO#: **16010848**
26-Jan-16

CLIENT: Accutest Laboratories
Project: WESTAZTt8135 (C43666)

| Lab SampleID | Client Sample ID | Tag No | Date Collected | Date Received | Matrix |
|--------------|------------------|--------|-----------------------|-----------------------|-------------------|
| 16010848-001 | C43666-1 | | 1/12/2016 12:50:00 PM | 1/15/2016 10:15:00 AM | Non-Potable Water |
| 16010848-002 | C43666-2 | | 1/12/2016 | 1/15/2016 10:15:00 AM | Non-Potable Water |
| 16010848-003 | C43666-3 | | 1/12/2016 2:40:00 PM | 1/15/2016 10:15:00 AM | Non-Potable Water |
| 16010848-004 | C43666-3MS | | 1/12/2016 2:40:00 PM | 1/15/2016 10:15:00 AM | Non-Potable Water |
| 16010848-005 | C43666-3MSD | | 1/12/2016 2:40:00 PM | 1/15/2016 10:15:00 AM | Non-Potable Water |
| 16010848-006 | C43666-4 | | 1/13/2016 | 1/15/2016 10:15:00 AM | Non-Potable Water |
| 16010848-007 | C43666-5 | | 1/12/2016 9:00:00 AM | 1/15/2016 10:15:00 AM | Non-Potable Water |
| 16010848-008 | C43666-6 | | 1/12/2016 8:00:00 AM | 1/15/2016 10:15:00 AM | Non-Potable Water |
| 16010848-009 | C43666-7 | | 1/12/2016 11:20:00 AM | 1/15/2016 10:15:00 AM | Non-Potable Water |
| 16010848-010 | C43666-8 | | 1/12/2016 11:40:00 AM | 1/15/2016 10:15:00 AM | Non-Potable Water |
| 16010848-011 | C43666-9 | | 1/13/2016 11:15:00 AM | 1/15/2016 10:15:00 AM | Non-Potable Water |
| 16010848-012 | C43666-10 | | 1/13/2016 9:40:00 AM | 1/15/2016 10:15:00 AM | Non-Potable Water |



Summit Environmental Technologies, Inc.
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 TEL: (330) 253-8211 FAX: (330) 253-4489
 Website: <http://www.settek.com>

Analytical Report

(consolidated)
 WO#: **16010848**
 Date Reported: **1/26/2016**

CLIENT: Accutest Laboratories **Collection Date:** 1/12/2016 12:50:00 PM
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-001 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-1

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|------------------------------|-------------|---------------------|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | MBDRA226RA22 E903-904 | | Analyst: BRD | |
| Radium-226/Radium-228 Combined | ND | 2.00 | | pCi/L | ± 0.71 | 1 | 1/26/2016 3:16:30 PM |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | E903.0 E903-904 | | Analyst: BRD | |
| Radium-226 | ND | 1.00 | | pCi/L | ± 0.09 | 1 | 1/26/2016 7:34:00 AM |
| Yield | 1.00 | | | | | 1 | 1/26/2016 7:34:00 AM |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | E904.0 E903-904 | | Analyst: BRD | |
| Radium-228 | ND | 1.00 | | pCi/L | ± 0.62 | 1 | 1/25/2016 1:40:00 PM |
| Yield | 1.00 | | | | | 1 | 1/25/2016 1:40:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



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Analytical Report

(consolidated)
 WO#: **16010848**
 Date Reported: **1/26/2016**

CLIENT: Accutest Laboratories **Collection Date:** 1/12/2016
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-002 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-2

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|-------|---------------|-----------------|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | | | | Analyst: BRD |
| Radium-226/Radium-228 Combined | ND | 2.00 | | pCi/L | ± 0.61 | 1 | 1/26/2016 3:16:30 PM |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | | E903.0 | E903-904 | Analyst: BRD |
| Radium-226 | ND | 1.00 | | pCi/L | ± 0.06 | 1 | 1/26/2016 7:34:00 AM |
| Yield | 0.910 | | | | | 1 | 1/26/2016 7:34:00 AM |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | | E904.0 | E903-904 | Analyst: BRD |
| Radium-228 | ND | 1.00 | | pCi/L | ± 0.55 | 1 | 1/25/2016 1:41:00 PM |
| Yield | 0.780 | | | | | 1 | 1/25/2016 1:41:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



Summit Environmental Technologies, Inc.
 3310 Win St.
 Cuyahoga Falls, Ohio 44223
 TEL: (330) 253-8211 FAX: (330) 253-4489
 Website: <http://www.settek.com>

Analytical Report

(consolidated)
 WO#: **16010848**
 Date Reported: **1/26/2016**

CLIENT: Accutest Laboratories **Collection Date:** 1/12/2016 2:40:00 PM
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-003 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-3

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|-------|---------------|-----------------|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | | | | |
| Radium-226/Radium-228 Combined | ND | 2.00 | | pCi/L | ± 0.69 | 1 | 1/26/2016 3:16:30 PM |
| | | | | | E903.0 | E903-904 | Analyst: BRD |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | | | | |
| Radium-226 | ND | 1.00 | | pCi/L | ± 0.05 | 1 | 1/26/2016 7:34:00 AM |
| Yield | 0.910 | | | | | 1 | 1/26/2016 7:34:00 AM |
| | | | | | E904.0 | E903-904 | Analyst: BRD |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | | | | |
| Radium-228 | ND | 1.00 | | pCi/L | ± 0.64 | 1 | 1/25/2016 1:41:00 PM |
| Yield | 0.800 | | | | | 1 | 1/25/2016 1:41:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



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Analytical Report

(consolidated)
 WO#: 16010848
 Date Reported: 1/26/2016

CLIENT: Accutest Laboratories **Collection Date:** 1/12/2016 2:40:00 PM
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-004 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-3MS

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|-------|---------------|-----------------|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | | | | Analyst: BRD |
| Radium-226/Radium-228 Combined | 9.08 | 2.00 | | pCi/L | ± 1.42 | 1 | 1/26/2016 3:16:30 PM |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | | E903.0 | E903-904 | Analyst: BRD |
| Radium-226 | 4.44 | 1.00 | | pCi/L | ± 0.33 | 1 | 1/26/2016 7:33:00 AM |
| Yield | 1.00 | | | | | 1 | 1/26/2016 7:33:00 AM |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | | E904.0 | E903-904 | Analyst: BRD |
| Radium-228 | 4.64 | 1.00 | | pCi/L | ± 1.09 | 1 | 1/25/2016 1:40:00 PM |
| Yield | 0.920 | | | | | 1 | 1/25/2016 1:40:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



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Analytical Report

(consolidated)
 WO#: **16010848**
 Date Reported: **1/26/2016**

CLIENT: Accutest Laboratories **Collection Date:** 1/12/2016 2:40:00 PM
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-005 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-3MSD

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|-------|-------------|----|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | | | | Analyst: BRD |
| Radium-226/Radium-228 Combined | 8.13 | 2.00 | | pCi/L | ± 1.49 | 1 | 1/26/2016 3:16:30 PM |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | | | | Analyst: BRD |
| Radium-226 | 4.22 | 1.00 | | pCi/L | ± 0.33 | 1 | 1/26/2016 7:34:00 AM |
| Yield | 1.00 | | | | | 1 | 1/26/2016 7:34:00 AM |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | | | | Analyst: BRD |
| Radium-228 | 3.91 | 1.00 | | pCi/L | ± 1.16 | 1 | 1/25/2016 1:40:00 PM |
| Yield | 0.780 | | | | | 1 | 1/25/2016 1:40:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



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Analytical Report

(consolidated)
 WO#: **16010848**
 Date Reported: **1/26/2016**

CLIENT: Accutest Laboratories **Collection Date:** 1/13/2016
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-006 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-4

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|------------------------------|-------------|---------------------|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | MBDRA226RA22 E903-904 | | Analyst: BRD | |
| Radium-226/Radium-228 Combined | ND | 2.00 | | pCi/L | ± 0.43 | 1 | 1/26/2016 3:16:30 PM |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | E903.0 E903-904 | | Analyst: BRD | |
| Radium-226 | ND | 1.00 | | pCi/L | ± 0.05 | 1 | 1/26/2016 7:34:00 AM |
| Yield | 1.00 | | | | | 1 | 1/26/2016 7:34:00 AM |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | E904.0 E903-904 | | Analyst: BRD | |
| Radium-228 | ND | 1.00 | | pCi/L | ± 0.38 | 1 | 1/25/2016 1:41:00 PM |
| Yield | 1.00 | | | | | 1 | 1/25/2016 1:41:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



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Analytical Report

(consolidated)
 WO#: **16010848**
 Date Reported: **1/26/2016**

CLIENT: Accutest Laboratories **Collection Date:** 1/12/2016 9:00:00 AM
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-007 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-5

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|-------|-------------|----|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | | | | |
| Radium-226/Radium-228 Combined | ND | 2.00 | | pCi/L | ± 0.71 | 1 | 1/26/2016 3:16:30 PM |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | | | | |
| Radium-226 | ND | 1.00 | | pCi/L | ± 0.05 | 1 | 1/26/2016 7:34:00 AM |
| Yield | 0.990 | | | | | 1 | 1/26/2016 7:34:00 AM |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | | | | |
| Radium-228 | ND | 1.00 | | pCi/L | ± 0.66 | 1 | 1/25/2016 1:41:00 PM |
| Yield | 0.820 | | | | | 1 | 1/25/2016 1:41:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



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Analytical Report

(consolidated)
 WO#: **16010848**
 Date Reported: **1/26/2016**

CLIENT: Accutest Laboratories **Collection Date:** 1/12/2016 8:00:00 AM
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-008 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-6

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|-------|-------------|----|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | | | | |
| Radium-226/Radium-228 Combined | ND | 2.00 | | pCi/L | ± 0.54 | 1 | 1/26/2016 3:16:30 PM |
| | | | | | | | |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | | | | |
| Radium-226 | ND | 1.00 | | pCi/L | ± 0.06 | 1 | 1/26/2016 7:35:00 AM |
| Yield | 0.970 | | | | | 1 | 1/26/2016 7:35:00 AM |
| | | | | | | | |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | | | | |
| Radium-228 | ND | 1.00 | | pCi/L | ± 0.48 | 1 | 1/25/2016 1:41:00 PM |
| Yield | 0.870 | | | | | 1 | 1/25/2016 1:41:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



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Analytical Report

(consolidated)
 WO#: **16010848**
 Date Reported: **1/26/2016**

CLIENT: Accutest Laboratories **Collection Date:** 1/12/2016 11:20:00 AM
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-009 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-7

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|------------------------------|-------------|---------------------|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | MBDRA226RA22 E903-904 | | Analyst: BRD | |
| Radium-226/Radium-228 Combined | ND | 2.00 | | pCi/L | ± 0.45 | 1 | 1/26/2016 3:16:30 PM |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | E903.0 E903-904 | | Analyst: BRD | |
| Radium-226 | ND | 1.00 | | pCi/L | ± 0.06 | 1 | 1/26/2016 7:35:00 AM |
| Yield | 1.00 | | | | | 1 | 1/26/2016 7:35:00 AM |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | E904.0 E903-904 | | Analyst: BRD | |
| Radium-228 | ND | 1.00 | | pCi/L | ± 0.39 | 1 | 1/25/2016 1:41:00 PM |
| Yield | 1.00 | | | | | 1 | 1/25/2016 1:41:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



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Analytical Report

(consolidated)
 WO#: **16010848**
 Date Reported: **1/26/2016**

CLIENT: Accutest Laboratories **Collection Date:** 1/12/2016 11:40:00 AM
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-010 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-8

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|------------------------------|-------------|---------------------|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | MBDRA226RA22 E903-904 | | Analyst: BRD | |
| Radium-226/Radium-228 Combined | ND | 2.00 | | pCi/L | ± 0.43 | 1 | 1/26/2016 3:16:30 PM |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | E903.0 E903-904 | | Analyst: BRD | |
| Radium-226 | ND | 1.00 | | pCi/L | ± 0.07 | 1 | 1/26/2016 9:03:00 AM |
| Yield | 1.00 | | | | | 1 | 1/26/2016 9:03:00 AM |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | E904.0 E903-904 | | Analyst: BRD | |
| Radium-228 | ND | 1.00 | | pCi/L | ± 0.36 | 1 | 1/25/2016 1:41:00 PM |
| Yield | 1.00 | | | | | 1 | 1/25/2016 1:41:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



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Analytical Report

(consolidated)
 WO#: **16010848**
 Date Reported: **1/26/2016**

CLIENT: Accutest Laboratories **Collection Date:** 1/13/2016 11:15:00 AM
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-011 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-9

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|-------|-------------|----|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | | | | |
| Radium-226/Radium-228 Combined | ND | 2.00 | | pCi/L | ± 0.7 | 1 | 1/26/2016 3:16:30 PM |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | | | | |
| Radium-226 | ND | 1.00 | | pCi/L | ± 0.07 | 1 | 1/26/2016 9:03:00 AM |
| Yield | 1.00 | | | | | 1 | 1/26/2016 9:03:00 AM |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | | | | |
| Radium-228 | ND | 1.00 | | pCi/L | ± 0.63 | 1 | 1/25/2016 1:41:00 PM |
| Yield | 0.840 | | | | | 1 | 1/25/2016 1:41:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



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Analytical Report

(consolidated)
 WO#: 16010848
 Date Reported: 1/26/2016

CLIENT: Accutest Laboratories **Collection Date:** 1/13/2016 9:40:00 AM
Project: WESTAZTt8135 (C43666)
Lab ID: 16010848-012 **Matrix:** NON-POTABLE WATER
Client Sample ID C43666-10

| Analyses | Result | RL | Qual | Units | Uncertainty | DF | Date Analyzed |
|---|--------|------|------|------------------------------|-------------|--------------|----------------------|
| COMBINEDRADIUM226/228-NPW COMBINED RADIUM-226/228 ANALYSIS (903.0/904.0) | | | | MBDRA226RA22 E903-904 | | Analyst: BRD | |
| Radium-226/Radium-228 Combined | ND | 2.00 | | pCi/L | ± 0.48 | 1 | 1/26/2016 3:16:30 PM |
| COMBINEDRADIUM226/228-NPW RADIUM-226 ANALYSIS (903.0) | | | | E903.0 E903-904 | | Analyst: BRD | |
| Radium-226 | ND | 1.00 | | pCi/L | ± 0.05 | 1 | 1/26/2016 9:03:00 AM |
| Yield | 1.00 | | | | | 1 | 1/26/2016 9:03:00 AM |
| COMBINEDRADIUM226/228-NPW RADIUM-228 ANALYSIS (904.0) | | | | E904.0 E903-904 | | Analyst: BRD | |
| Radium-228 | ND | 1.00 | | pCi/L | ± 0.43 | 1 | 1/25/2016 2:14:00 PM |
| Yield | 1.00 | | | | | 1 | 1/25/2016 2:14:00 PM |

Qualifiers:

| | | | |
|----|--|----|--|
| * | Value exceeds Maximum Contaminant Level. | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | M | Manual Integration used to determine area response |
| MC | Value is below Minimum Compound Limit. | N | Tentatively identified compounds |
| ND | Not Detected at the Reporting Limit | O | RSD is greater than RSDlimit |
| P | Second column confirmation exceeds | PL | Permit Limit |



Accutest ID and PO#: C43666
 2105 Lundy Avenue, San Jose, CA 95131 Phone : (408)588-0200 Fax: (408)588-0201

Subcontract Chain of Custody

Subcontract Lab: Summit Environmental Technologies, Inc.
 Date Sent: 01/14/16
 Date Due: Standard Turnaround

16010848-001012
 LSC

Project Name: WESTAZT8135 (C43666)
 Project Location:

| Accutest Lab Number | Customer Sample Name/Field Point ID | Matrix | Method | Collect Date | Collect Time |
|----------------------|-------------------------------------|--------|--|--------------|--------------|
| C43666-1 | LB-MW3-011216 | GW | Combined RA-226 & RA-228 *EPA 900 Series* | 01/12/16 | 1250 |
| C43666-2 | LB-MW3-011216-D | GW | Combined RA-226 & RA-228 *EPA 900 Series* | 01/12/16 | -- |
| C43666-3 *MS/MSD* | LB-MW7-011216 **MS/MSD** | GW | Combined RA-226 & RA-228 *EPA 900 Series* (RUN MS/MSD) | 01/12/16 | 1440 |
| C43666-4 | LB-EB1-011316 | WEB | Combined RA-226 & RA-228 *EPA 900 Series* | 01/13/16 | -- |
| C43666-5 | LB-SW1-011216 | GW | Combined RA-226 & RA-228 *EPA 900 Series* | 01/12/16 | 0900 |
| C43666-6 | LB-SW2-011216 | GW | Combined RA-226 & RA-228 *EPA 900 Series* | 01/12/16 | 0800 |
| C43666-7 | LB-MW1-011216 | GW | Combined RA-226 & RA-228 *EPA 900 Series* | 01/12/16 | 1120 |
| C43666-8 | LB-MW2-011216 | GW | Combined RA-226 & RA-228 *EPA 900 Series* | 01/12/16 | 1140 |
| C43666-9 | LB-MW4-011316 | GW | Combined RA-226 & RA-228 *EPA 900 Series* | 01/13/16 | 1115 |
| C43666-10 | LB-MW5-011316 | GW | Combined RA-226 & RA-228 *EPA 900 Series* | 01/13/16 | 0940 |

*Run MS/MSD for sample C43666-3 (LB-MW7-011216), Extra Volume provided for MS/MSD
 **1-Gallon Container provided with Nitric Acid preservative

Comments: Samples are from "New Mexico" (Ground water Samples)

| | | | |
|--|-------------------------------|------------------|---------------|
| Relinquished By: <i>Maureen Adams</i> | Received By: FedEx | Date: 01/14/16 | Time: 15:00 |
| Relinquished By: FedEx | Received By: <i>Cheryl</i> | Date: 1-15-16 | Time: 1015 |
| Relinquished By: | Received By: | Date: | Time: |

Send Report to: MaureenC@accutest.com

Summit Environmental Technologies, Inc. Cooler Receipt Form

Client: Acute Initials of person inspecting cooler and samples: CSL
 Date Received: 1-15-16 Time Received: 1015 Order Number: 16010848
 Number of Coolers/Boxes: _____ Date cooler(s) opened and samples inspected: 1-15-16

Shipper: FED EX UPS DHL Airborne US Postal Walk-in Pickup Other: _____
 Packaging: Peanuts Bubble Wrap Paper Foam None Other: _____

Tape on cooler/box: _____
 Custody Seals intact: _____
 C-O-C in plastic: _____
 Ice: _____ Blue ice: _____

present / absent / melted: N/A
 Sample Temperature IR Gun #16020459 CF 0.0 °C 10.8 °C

Radiological Testing Instrument serial #35127
 (see page 2 for scan results)
 **Use 1 sheet per sample for Radiological Testing. If sample is HOT, the Radiological Safety Officer must be notified immediately.

C-O-C filled out properly: Y N N/A
 Samples in separate bags: Y N N/A
 Sample containers intact*: Y N N/A
 *If no, list broken sample(s): _____

Sample label(s) complete (ID, date, etc.): Y N N/A
 Label(s) agree with C-O-C: Y N N/A
 Correct containers used: Y N N/A
 Sufficient sample received: Y N N/A
 Samples received within holding time: Y N N/A
 Bubbles absent from 40 mL vials**: Y N N/A

** Samples with bubbles <6mm are acceptable. Indicate bubble size if >6mm.
 Was client contacted about samples: Y N
 Will client send new samples: Y N

Client contact: _____
 Date/Time: _____
 Logged in by: _____
 Comments: _____

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



PHOENIX

CHAIN OF CUSTODY

ACCUTEST LABORATORIES

2105 Lundy Ave, San Jose, CA 95131
(408) 588-0200 FAX: (408) 588-0201

1 of 5

FED-EX Tracking # 8016 0436 1190
Accutest Quote #
Bottle Order Control #
Accutest NC Job #: C 043666

Form containing Client/Reporting Information, Project Information, Collection table, Turnaround Time, Data Deliverable Information, and Sample Custody tracking.

31
3

C43666X: Chain of Custody

Page 1 of 6

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: C43666 **Client:** WESTON SOLUTIONS **Project:** LA BAJADA MINE SITE
Date / Time Received: 1/14/2016 9:15:00 AM **Delivery Method:** _____ **Airbill #'s:** 807604361190
Cooler Temps (Initial/Adjusted): #1: (3.1/2.2); #2: (4/3.1); #3: (4.1/3.2); #4: (1.7/0.8); #5: (2.3/1.4);

Cooler Security Y or N Y or N
 1. Custody Seals Present: 3. COC Present:
 2. Custody Seals Intact: 4. SmpI Dates/Time OK

Cooler Temperature Y or N
 1. Temp criteria achieved:
 2. Therm ID: _____ IR3;
 3. Cooler media: _____ Ice (Bag)
 4. No. Coolers: _____ 5

Quality Control Preservation Y or N N/A
 1. Trip Blank present / cooler:
 2. Trip Blank listed on COC:
 3. Samples preserved properly:
 4. VOCs headspace free:

Sample Integrity - Documentation Y or N
 1. Sample labels present on bottles:
 2. Container labeling complete:
 3. Sample container label / COC agree:

Sample Integrity - Condition Y or N
 1. Sample recvd within HT:
 2. All containers accounted for:
 3. Condition of sample: _____ Intact

Sample Integrity - Instructions Y or N N/A
 1. Analysis requested is clear:
 2. Bottles received for unspecified tests
 3. Sufficient volume recvd for analysis:
 4. Compositing instructions clear:
 5. Filtering instructions clear:

Comments

APPENDIX C

Field Notes

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Project - La Bajada GW Monitoring

Client - United States Forest Service

Date - Monday, September 21, 2015

Personnel - Debbie Kenyon & Greg Poussos

Weather - Clear, Warm, ~88°F

Scope of work - Mobilize to the La Bajada Site and begin work.

0545 - Meet up at office. Grab backpacks, paperwork, and tools to pack into the suitcase.

0600 - Depart office and travel by airplane to Albuquerque (ABQ)

0950 - Arrive in Albuquerque and get rental vehicle. Vehicle received was 4x4 Jeep Cherokee

1030 - Depart airport and head to the Weston ABQ office.

1050 - Arrive at Weston ABQ office. Load vehicle w/ equipment and bottles sent here by the lab and equipment store.

1120 - Depart office. Head to Home Depot on exit 242 to buy decon supplies, buckets, battery, and other various equipment.

9/21/15

1215- Lunch Break

1240- Head to the site to meet up with Jesse from the Pueblo.

1312- Arrive at meeting location and see Jesse from the Pueblo. We will follow him back to the gate and then to the site as a refresher to find the road.

1400- Get to the third river crossing. We are unable to cross due to the soft sands on the east side of the river. Jesse barely got across in his high clearance truck and we don't want to risk getting stuck.

1410- Pack-up to go and collect the surface samples up and downstream

1420- Calibrate YSI.

pH calibrates to 3.97, 6.99, 10.02

ORP calibrates to 238.6 mV

cond calibrates to $1,322 \mu\text{S}/\text{cm}^3$

DO calibrates to 100% (good)

1445- Depart vehicle and cross the river to get into Jesse's truck.
* Will stop along the way and fix road as needed.

Scale: 1 square = _____

9/21/15

1510- Arrive at downstream location.

GPS point - #12 (0389403/3934385)

Stream width - 8.0 feet

collect 500 mL at 2, 4, 6 feet in each pass. Make 5 passes

Water Quality Parameters:

DO - 11.11 mg/L

ORP - 175.2 mV

pH - 8.46

temp - 19.24°C cond. - $464 \mu\text{S}/\text{cm}^3$

* Samples filtered at truck.

Photo's collected:

| # | Direction | Description |
|-----|-----------|-------------------|
| 815 | W | collecting sample |
| 816 | W | collecting sample |
| 817 | E | upstream |
| 818 | W | downstream |
| 819 | S | surrounding area |
| 820 | N | surrounding area |

1528- Head to next location.

1540- Arrive at upstream location

GPS point - #13 (0391029/3934745)

Stream width - 8.5 feet

collect 500 mL @ 2, 4, 6 feet in each pass. Make 5 passes.

Scale: 1 square = _____

9/21/15

Water Quality Parameters:

DO - 11.48 mg/L

ORP - 152.6 mV

pH - 8.52

temp - 18.77°C

cond. - 449 $\mu\text{S}/\text{cm}^3$

* Samples filtered at truck

Photos collected:

| # | Direction | Description |
|-----|-----------|------------------|
| 821 | W | Downstream |
| 822 | E | upstream |
| 823 | S | surrounding area |

1604 - Depart Site w/ Jesse and head back to truck. We are going to head to Santa Fe and see if we can get 4x4 truck so we can drive to wells.

1640 - Depart Site. Head to Santa Fe.

1720 - Call Barb to check in and discuss site conditions. Explain we need a 4x4 high clearance truck to get back to the site. Road is too rocky and ~~area~~ river surroundings are soft. However, no trucks available in Santa Fe or ABQ due to a

Scale: 1 square = _____

9/21/15

recall of trucks by Chevy. We will have to keep vehicle.

It is agreed that we will try and sample using the peristaltic pump so we don't have to carry as much ~~vehicle~~ equipment back. We will try again on Tuesday.

1745 - Arrive at hotel. Unload the equipment.

1800 - Done for today.

~~Dobson Kenyon
09/21/2015~~

Scale: 1 square = _____

Project - La Bajada GW Monitoring

Client - United States Forest Service

Date - Tuesday, September 22, 2015

Personnel - Debbie Kenyon & Greg Rousseau

Weather - Cloudy to Partly Cloudy ~ 80°F

Scope of Work - Collect depth to water from each well and begin purge and sample activities.

0630 - Depart hotel and head to site.

0700 - Arrive at gate to site and meet w/ Jesse from the Pueblo. He

cannot go back with us today.

Gives cell phone and says to call if we get stuck.

0715 - Head back to the third crossing and stop/park.

0730 - Health & Safety briefing. Discuss weather, PPE, hydrations, lifting, slips/trips/falls, biological critters

0745 - Calibrate YSI and turbidity meter
*Pack-up and prepare to depart vehicle for the day.

0803 - Depart vehicle and head to the site wells. We will stop and gauge depth to water in

Scale: 1 square = _____

9/22/15

each of the site wells as we head east.

0815 - Arrive at MW-7.

Depth to water measurements are:

| Time | Well | DTW | DTB |
|------|------|-------|-------|
| 0818 | MW-7 | 13.43 | 53.30 |
| 0852 | MW-6 | Dry | 27.72 |
| 0905 | MW-5 | 25.92 | 27.35 |
| 0910 | MW-4 | 35.87 | 54.63 |
| 0919 | MW-3 | 21.23 | 51.04 |
| 0932 | MW-2 | 20.03 | 50.13 |
| 0937 | MW-1 | 19.17 | 34.71 |
| 0943 | MW-0 | Dry | 4.82 |

*Well MW-0 appears to be broken at 1.5 feet down.

*Depth to water for MW-7 is very different. Will recheck before sampling.

photos collected:

| # | Direction | Description |
|-----|-----------|--------------------|
| 824 | NE | Gauging well MW-0 |
| 825 | NE | Gauging well MW-0. |

0946 - Head to well MW-1 to set-up and start well purge/sampling.

0954 - Begin purging well MW-1.

*Details and water parameters.

Scale: 1 square = _____

9/22/15

logged onto sampling sheet.

1030- Begin collecting sample. water parameters stabilized.

1110- All sample bottles full. Turn off pump and pull tubing.

photo's collecting

| # | Direction | Description |
|-----|-----------|--------------------|
| 826 | N | sampling equipment |
| 827 | N | sampling equipment |
| 828 | Down | sampling equipment |

1123- Head to monitoring well MW-2.

1127- Arrive at well MW-2. Begin setting up to purge using the peristaltic pump.

1134- Begin purging well MW-1.
*Details and water parameters logged onto sampling sheet.

1205- Begin collecting sample. Water parameters stabilized.

1250- All sample bottles full. Turn off pump and pull tubing. Pack up to head to well MW-3.
photo's collected

| # | Direction | Description |
|-----|-----------|-------------------|
| 829 | NW | collecting sample |
| 830 | NE | well & equipment |

Scale: 1 square = _____

9/22/15

| # | Direction | Description |
|-----|-----------|-------------------------|
| 831 | N | well & surrounding area |
| 832 | E | well & surrounding area |
| 833 | S | well & surrounding area |
| 834 | W | well & surrounding area |

~~1250~~ Head to well MW-3.

1305- Arrive at well MW-3. Begin setting up to purge using the peristaltic pump

1312- Begin purging well MW-3.

*Details and water parameters logged onto sampling sheet
- Flow is very slow

1348- Begin collecting water sample and duplicate sample. Water parameters stabilized.

1555- Done with filling water bottles. (including duplicate).

Turn off pump and pull tubing. Pack-up and prepare to head back to vehicle.

photo's collected

| # | Direction | Description |
|-----|-----------|-------------------------|
| 835 | N | well & surrounding area |
| 836 | E | well & surrounding area |
| 837 | S | well & surrounding |
| 838 | W | well & surrounding |

Scale: 1 square = _____

9/22/15

1620- Begin hiking back to truck.
Dark clouds overhead and starting
to rain. Wind picking up.

1650- Arrive back at vehicle. Unload
and pack vehicle. Prepare to
depart the site.

1715- Depart site. Lock gate on way
out. Call Barb and let her
know that MW-0 \approx MW-6 Dry.
Fill her in on the day's activities.

1800- Arrive back at hotel. Unload
equipment to rooms.

1810- Done for today.

Debbie
09/22/15

Scale: 1 square = _____

Project- La Bajada GW Monitoring
Client- United States Forest Service

Date- Wednesday, September 23, 2015

Personnel- Debbie Kenyon \approx Greg Roussos

Weather- Partly Cloudy, Breezy \sim 80°F

Scope of work- Finish purging wells
and collecting samples.

0630- Depart hotel and head to site.

0707- Arrive at gate on-site and meet
up with Jesse from the Pueblo.

He will not be coming out with us
today as he is busy on other projects.

0715- Head back and park in same
area as previous 2 days.

0730- Health and Safety briefing. Discuss
slips/trips, falls, lifting/carrying
weight, biological hazards, PPE,

0745- Calibrate YSI and turbidity meter
*Pack up and prepare to depart
the vehicle for day.

0805- Depart vehicle and head to
MW-4. Will start furthest out
and work our way back.

0823- Arrive at MW-4. Set-up on well
to purge and sample using

Scale: 1 square = _____

9/23/15

the peristaltic pump.

0834- Begin trying to purge well. Well will not purge though. Small drops of water and lots of air in line. Try to troubleshoot by checking depth of tubing, pump in right direction for flow, and all is connected correctly. Water level is deeper than the wells from day before so it appears the pump cannot get enough pressure to pump the well. We will pull out and go try MW-5. Will need to come back with the bladder pump to do purge.

0945- Try well MW-5. Well will not purge with the peristaltic pump. We will purge MW-7 on way back to vehicle to get bladder pump.

1005- Arrive at well MW-7. Set-up on well to purge using peristaltic pump

1021- Begin purging well MW-7. Purge details logged onto the sampling form
* While purging, Greg will hike back to vehicle and get bladder pump to the wells so we save time.

9/23/15

1055- Begin collecting sample. Water parameters stabilized.

1155- All sample bottles full. Turn off pump and pull tubing, photo's collected

| # | Direction | Description |
|-----|-----------|-------------------------|
| 841 | N | equipment |
| 842 | NE | set-up to purge |
| 843 | SE | set-up to purge |
| 844 | N | well & surround area |
| 845 | E | well & surrounding area |
| 846 | S | well & surrounding area |
| 847 | W | well & surrounding area |

* Will leave peristaltic pump and sample under tree by road and hike it out at end of day.

1203- Head to monitoring well MW-5.

Well already set-up to purge. Connect battery and tubing.

1209- Begin purging well MW-5 using the bladder pump. Only 1.5 feet of water so will watch water column & drawdown.

* Details and water parameters logged onto sampling sheets.

9/23/15

1245 - Begin collecting sample. Although turbidity above 10 NTUs, water quality parameters have stabilized.

1345 - All sample bottles full. Turn off pump and pull tubing.
Photo's collected

| # | Direction | Description |
|-----|-----------|-------------------------------|
| 848 | E | purging well / collect sample |
| 849 | NW | purging well |
| 850 | SE | purging well |
| 851 | N | well & surrounding area |
| 852 | E | well & surrounding |
| 853 | S | well & surrounding |
| 854 | W | well & surrounding |

1400 - Head to well MW-4. Set-up equipment to purge.

1423 - Begin purging well MW-4.
*Greg is going to hike all materials no longer needed back to vehicle.
Debbie work on purge.

1433 - Battery is dead. Well no longer pumping. Greg had returned for something. Decide we will both hike back all we can and then get the car battery to finish purging the well.

9/23/15

1440 - Hike back to vehicle. Pick up peristaltic pump & MW-7 samples.

1450 - Arrive back at vehicle. Greg is getting ~~back~~ battery out of car.

1545 - Battery out. Begin hike back to well MW-4 to get sample.

1600 - Begin purging well MW-4 again.

1620 - Begin collecting sample. Water parameters stabilized.

1655 - All sample bottles full. Turn-off pump and pull tubing.

*MS/MSD was collected earlier at Well MW-7.

Photo's collected

| # | Direction | Description |
|-----|-----------|----------------------|
| 855 | N | well & surrounding |
| 856 | E | well & surrounding |
| 857 | S | well & surrounding |
| 858 | W | well and surrounding |

1712 - Begin final hike back to vehicle. All remaining equipment & samples coming back.

1735 - Arrive back at vehicle. Decon equipment and pack-up vehicle.

1800 - Collect equipment blank sample using bladder pump.

Scale: 1 square = _____

Scale: 1 square = _____

9/23/2015

1/12/16

LA BAJADA

G. ROUSSOS

- 1825- Depart Site. Head to gas station to thoroughly ice down samples.
 1900- Arrive at Gas Station. Buy ice and ice down samples
 1920- Depart gas station. Head to AEO.
 1950- Arrive at hotel. Finish packing equipment and complete COCs.
 2020- Done for today.

Debbore 45
 09/23/2015

Scale: 1 square = _____

0700 G. Roussos and R. Waters on site & will wait for Jesse (tribe) to open locked gate. Weather is clear, 10°F, high of 40°F today. Recently weather has been cold & very wet. Several inches of snow has fallen in the past weeks. Meet Jesse, he will be on site with us all day today and tomorrow. Plan to do all surface water sampling first then gauging. ———— ML

0730 onsite, H's meeting held, driving onsite & cold are the biggest issues today. ———— ML

0735 begin calibrating YSI S/N 21F10201
 cond. 1421 → 1000 μ S/cm
 pH 3.52 → 4.00
 6.52 → 7.00
 6.9.63 → 10.00 ———— ML

0800 begin to collect water for down stream SW sample. River measures 8' across. 500 mL aliquots taken from 2', 4', & 6' from shore. Total of 3 gallons collected. ———— ML

Scale: 1 square = _____

1/12/16 La BAJADA G. ROUSSOS

Water quality from down stream

SW sample:

temp -0.72°C

cond 773 μ S/cm

%O₂ 68.5%

DO 10.11 mg/L

pH 7.95

~~ORP 40.9 mV~~

ORP 28.5

812 start gauging all wells

MW-7 13.12'

MW-6 dry

MW-5 25.56

MW-4 35.09

MW-3 20.62

MW-2 18.15

MW-1 18.59

MW-0 dry, DTR 4.80

dry mud on probe tip

900 begin to collect water for

upstream SW sample

stream is 9' wide, 2 logs

collected at 2', 4', 6' from

bank, 3 gallons collected

Scale: 1 square =

1/12/16 LA BAJADA G. ROUSSOS

photos collected:

005 down stream sampling

006 up stream sampling

007 across stream ice

Water quality:

temp -0.58°C

cond 759 μ S/cm

%O₂ 29.7%

DO 4.19 mg/L

pH 9.31

ORP -27.7

0915 containerized SW-1 + SW-2

filtering bottles for dissolved metals. All samples stored on ice.

0946 begin to purge MW-1,

details recorded on purge

log

1020 LB-MW1-011216 collected

metals was filtered

1050 photos collected

008 west overview of

009 north MW-1

010 east conditions

011 south

012 close up

Scale: 1 square =

1/12/16 LA BAJADA G. ROUSSO

1052 collected photos of MW-0

013 looking N

014 looking E

015 looking S

016 looking W

017 close up / down

1108 Arrive begin to purge

- MW2, details on log

1140 collected sample LB-MW2-011216

dissolved metals was filtered.

1201 finished filling all bottles

1203 photos collected

018 looking N

019 looking E

020 looking S

021 looking W

022 close up

1250 begin collecting samples

LB-MW3-011216 + LB-MW3-011216

1322 photo 023 / west / sampling wt.

1352 photos collected of MW-3

023 looking N

024 looking E

025 looking S

026 looking W

027 close up looking S

1/12/16 LA BAJADA G. ROUSSO

1345 completed filling all bottles

dissolved metals bottles was filtered

1400 collected photos at MW-6

028 looking N

029 looking E

030 looking S

031 looking W

032 close up W

1412 Arrive @ MW7 & begin to

purge, details on purge log

begin to collect sample

LB-MW7-011216. dissolved

metals was filtered

ms/msO volume collected

1521 All sample bottles filled

begin to pack up all equipment

1535 All personnel off site, plan

to meet @ Bam tomorrow

1630 phone call w/ PM B. W. Livingston

to update on field activities

from today.

G. ROUSSO
1/12/16

11/13/16

LA BAJADA

G. ROUSSOS

0800 G. ROUSSOS, R. WATERS, + KELSE onsite

@ locked gate. Plan for the day
to sample remaining wells +
ship samples. H+S meeting:

cold, driving, + slips / trips / falls

0810 ~~begin~~ begin to call back:

cond: 1847 → 1413

pH: 11.05 → 10

6.14 → 7

4.08 → 4

0852 begin to purge MWS w/ bladder
pump. unable to produce water,
had to place pump on bottom
of well, water column is small.

0907 begin to purge MWS

0922 photo #39, N, bladder pump

setup on MW-5

0940 collect sample LB-MWS-011316

1020 finish filling bottles, metals

sample was filtered.

1035 collect sample LB-EB1-011316

1044 collected photos of MW-4

0040 view looking N

041 looking E

042 looking S

043 looking W

11/13/16

LA BAJADA

G. ROUSSOS

0044 close up view W

0051 set up on MW-5 MW-4,

begin to purge.

details on purge log

1125 collect sample LB-MW4-011316

metals bottle is filtered

1152 all bottles are filled, begin

to pack up

1200 photos collected at MW-4

045 view N

046 view E

047 view S

048 view W

049 close up view W

1210 all packed up begin drive

off site.

1230 All personnel off site, called

Pm B. Wettington for status

update

11515 All samples / equipment packed

+ dropped off at FedEx.

11/13/16

Scale: 1 square =

Scale: 1 square =

APPENDIX D

Photograph Log

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PHOTOGRAPH LOG

Project Name:

La Bajada Groundwater Sampling
September 2015

Site Location:

Santa Fe National Forest, New Mexico

Project No.

12767.201.001

Photo No.

1

Date:

9/21/2015

Direction Photo Taken:

East

Description:

Location of Sample SW-1
looking upstream

**Photo No.**

2

Date:

9/21/2015

Direction Photo Taken:

East

Description:

Location of Sample SW-2
looking upstream





PHOTOGRAPH LOG

Project Name:

La Bajada Groundwater Sampling
September 2015

Site Location:

Santa Fe National Forest, New Mexico

Project No.

12767.201.001

Photo No.

3

Date:

9/21/2015

Direction Photo Taken:

West

Description:

Collecting Sample SW-2

**Photo No.**

4

Date:

9/22/2015

Direction Photo Taken:

Northeast

Description:

Measuring depth to bottom of
dry well, MW-0.





PHOTOGRAPH LOG

Project Name:

La Bajada Groundwater Sampling
September 2015

Site Location:

Santa Fe National Forest, New Mexico

Project No.

12767.201.001

Photo No.

5

Date:

9/22/2015

Direction Photo Taken:

North

Description:

Monitoring well MW-1 with
sampling equipment

**Photo No.**

6

Date:

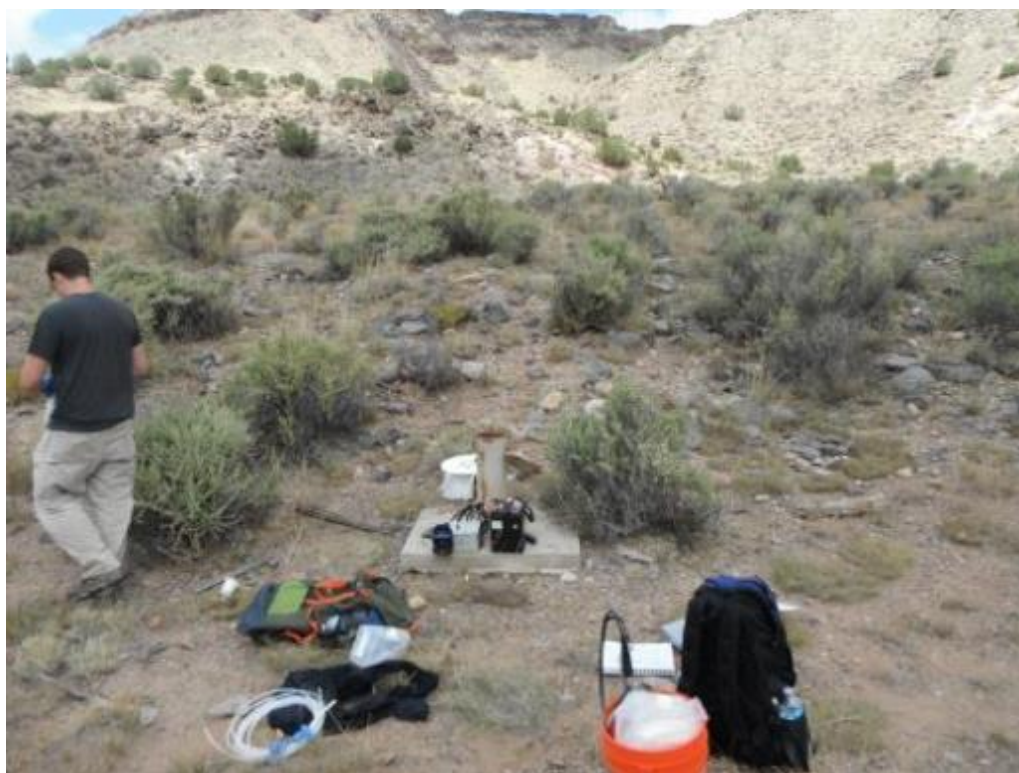
9/22/2015

Direction Photo Taken:

Northeast

Description:

Monitoring well MW-2 with
sampling equipment





PHOTOGRAPH LOG

Project Name:
La Bajada Groundwater Sampling
September 2015

Site Location:
Santa Fe National Forest, New Mexico

Project No.
12767.201.001

Photo No.
7

Date:
9/22/2015

Direction Photo Taken:

East

Description:

Monitoring well MW-3 and surrounding area.



Photo No.
8

Date:
9/23/2015

Direction Photo Taken:

North

Description:

Monitoring well MW-4 and surrounding area





PHOTOGRAPH LOG

Project Name:

La Bajada Groundwater Sampling
September 2015

Site Location:

Santa Fe National Forest, New Mexico

Project No.

12767.201.001

Photo No.
9

Date:
9/23/2015

Direction Photo Taken:

Southeast

Description:

Monitoring well MW-5, purging with bladder pump



Photo No.
10

Date:
9/23/2015

Direction Photo Taken:

Northeast

Description:

Monitoring well MW-7 with
sampling equipment.





PHOTOGRAPH LOG

Project Name:

La Bajada Groundwater Sampling
January 2016

Site Location:

Santa Fe National Forest, New Mexico

Project No.

12767.201.001

Photo No.
11

Date:
1/12/2016

Direction Photo Taken:

East

Description:

Collecting Sample SW-1 looking upstream



Photo No.
12

Date:
1/12/2016

Direction Photo Taken:

East

Description:

Collecting Sample SW-2 looking upstream





PHOTOGRAPH LOG

Project Name:
La Bajada Groundwater Sampling
January 2016

Site Location:
Santa Fe National Forest, New Mexico

Project No.
12767.201.001

Photo No.
13

Date:
1/12/2016

Direction Photo Taken:
East

Description:
Monitoring well 0 and
surrounding area



Photo No.
14

Date:
1/12/2016

Direction Photo Taken:
Northeast

Description:
Monitoring well 1 and
surrounding area





PHOTOGRAPH LOG

Project Name:
La Bajada Groundwater Sampling
January 2016

Site Location:
Santa Fe National Forest, New Mexico

Project No.
12767.201.001

Photo No.
15

Date:
1/12/2016

Direction Photo Taken:
North

Description:
Monitoring well 2 and
surrounding area



Photo No.
16

Date:
1/12/2016

Direction Photo Taken:
East

Description:
Monitoring well 3 and
surrounding area





PHOTOGRAPH LOG

Project Name:
La Bajada Groundwater Sampling
January 2016

Site Location:
Santa Fe National Forest, New Mexico

Project No.
12767.201.001

Photo No.
17

Date:
1/13/2016

Direction Photo Taken:
North

Description:
Monitoring well 4 and
surrounding area



Photo No.
18

Date:
1/13/2016

Direction Photo Taken:
West

Description:
Monitoring well 5 and
surrounding area





PHOTOGRAPH LOG

Project Name:

La Bajada Groundwater Sampling
January 2016

Site Location:

Santa Fe National Forest, New Mexico

Project No.

12767.201.001

Photo No.

19

Date:

1/12/2016

Direction Photo Taken:

East

Description:

Monitoring well 6 and
surrounding area



Photo No.

20

Date:

1/12/2016

Direction Photo Taken:

North

Description:

Monitoring well 7 and
surrounding area





PHOTOGRAPH LOG

Project Name:
La Bajada Groundwater Sampling
January 2016

Site Location:
Santa Fe National Forest, New Mexico

Project No.
12767.201.001

Photo No.
21

Date:
1/12/2016

Direction Photo Taken:
East

Description:
Peristaltic pump sampling MW-3
along with sampling equipment



Photo No.
22

Date:
1/13/2016

Direction Photo Taken:
East

Description:
Bladder pump purging MW-5
along with sampling equipment



