

**FIRST QUARTER 2009 GROUNDWATER  
MONITORING REPORT  
ENERGY FUELS RESOURCES  
CORPORATION  
URANIUM MILL LICENSING SUPPORT  
PIÑON RIDGE MILL  
MONTROSE COUNTY, COLORADO**

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## 1.0 INTRODUCTION

The first quarter 2009 sampling event described in this report was conducted on February 16 through 26, 2009 by Energy Fuels Resources Corporation (EFR) personnel. Nine monitoring wells and three production wells are currently located on and near the mill site and are being monitored to characterize groundwater at the site. Refer to Table 1 for a record of groundwater wells sampled on and near the site.

Monitoring wells MW-1 through MW-6 were installed at the site in the summer and early fall 2007 to evaluate the presence and quality of groundwater throughout the site. Wells MW-1 through MW-4, which were installed in the north and central portions of the Site, did not encounter groundwater. Groundwater was encountered in wells MW-5 and MW-6 installed in the southern portion of the Site, although MW-5 exhibited limited recharge. Interpretation of the seismic reflection and refraction survey completed after the installation of these monitoring wells led to the conclusion that the Site has been block faulted in a roughly stair-step manner from south to north along normal faults that trend approximately N 80° W. This fault pattern is related to the salt dome beneath the Paradox Valley. The faults are believed to primarily explain the absence of groundwater in wells MW-1 through MW-4.

Supplemental groundwater monitoring wells were installed in some of these fault blocks to improve the understanding of groundwater movement and chemistry. Monitoring wells MW-7, MW-8B and MW-9 were installed in July 2008. MW-9 could not be fully developed due to extremely slow recharge. This well was sampled in September 2008, but the analytical data has been qualified based on the well development history and extremely slow recharge rate. MW-9 was not sampled in during the 1<sup>st</sup> Quarter 2009 sampling event due to extremely slow recharge (i.e. 0.20 feet over 9 days).

Production wells PW-1, PW-2, and PW-3 were installed on and near the site to evaluate water supply conditions in the area. The production wells have been added to the quarterly groundwater monitoring schedule to provide supplemental water level and water quality information. These wells were not installed as groundwater monitoring wells for environmental sampling purposes.

The 1<sup>st</sup> Quarter 2009 groundwater sampling event included the following:

- Fluid level gauging: MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8B, MW-9, PW-1, PW-2, and PW-3;
- Hand bailing and sampling of MW-5 using a dedicated Teflon<sup>®</sup> bailer;
- Purging and sampling of MW-6 using a dedicated submersible pump;
- Micro-purging and sampling of MW-7 and MW-8B with dedicated submersible bladder pumps;
- Purging and monitoring of MW-9;
- Micro-purging and sampling of PW-1, PW-2, and PW-3 with a shared submersible bladder pump and dedicated tubing;

- The collection of groundwater field parameters and samples for laboratory analysis of selected metals, selected anions and cations, selected nitrogen constituents, total suspended solids, total dissolved solids, total organic carbon, gross alpha, gross beta, and radium-226;
- The collection of duplicate samples at MW-5, MW-7, and PW-2 for laboratory analysis of dissolved metals and radionuclides;

## **2.0 FIELD ACTIVITIES**

Sampling activities for the groundwater monitoring and production wells were conducted from February 16 through 25, 2009. The sampling activities were conducted in accordance with procedures described in "*Work Plan Groundwater Sampling, Energy Fuels Resources Corporation, Uranium Mill Licensing Support, Pinon Ridge Mill Site, Montrose County, Colorado, Kleinfelder Project No. 83088, Rev. 2*" dated May 21, 2008 (*Work Plan*). Copies of the well sampling field sheets are included in Appendix A.

### **2.1 Fluid Level Gauging**

Fluid level gauging data were collected using a properly decontaminated electronic water depth indicator. The fluid level gauging data are summarized in Table 2. Monitoring wells MW-1, MW-2, MW-3 and MW-4 were dry. Groundwater was detected in wells MW-6, MW-7, MW-8B, PW-1, PW-2 and PW-3 with saturated thickness ranging from 40 feet to nearly 120 feet. Wells MW-5 and MW-9 contained groundwater, but of limited saturated thickness (approximately 10 feet) and recharge rate (see Table 2).

### **2.2 Well Purging**

Monitoring wells were purged to remove stagnant water and allow fresh formation water to be sampled. Well sampling field sheets are presented in Appendix A.

The water level in monitoring well MW-5 was measured at 281.02 feet btoc and was subsequently bailed as close to dry as practical on February 17. Approximately 18 gallons of water (approximately 1.4 casing volumes) were removed from the well by hand using a dedicated bailer. This well was allowed time to recharge and was sampled on February 19. The well had recharged from 300.68 feet btoc (measured immediately following bailing) to 294.12 ft btoc (measured at the time of sampling). This was approximately 13 feet below the static water level measured prior to bailing the well dry. Temperature, pH, specific conductance (SC), oxidation-reduction potential (ORP), and dissolved oxygen (DO) levels were measured using a water quality meter in a grab sample just prior to sample collection.

The water level in monitoring well MW-6 was measured at 407.78 feet btoc on February 16. The well was purged of approximately 59 gallons of water (about 1.1 casing volumes) prior to sampling on February 18 with a dedicated Grundfos pump at a pumping rate of approximately 4.5 gallons per minute (gpm). Field parameters had stabilized prior to sample collection and remained stable during sample collection. Temperature, pH, SC, ORP, and DO levels were measured during purging at regular intervals using a water quality meter equipped with a flow-through cell.

The water level in monitoring well MW-7 was measured at 335.38 feet btoc on February 16. The well was micro-purged for 22 minutes prior to sampling on February 18 with a dedicated bladder pump using low flow methods. Field Parameters had stabilized prior to sampling and remained stable during sampling. Temperature, pH, SC, ORP, and DO concentrations were measured during purging at regular intervals using a water quality meter equipped with a flow-through cell.

The water level in monitoring well MW-8B was measured at 381.61 feet btoc on February 16. The well was micro-purged of approximately 5 gallons of water for 27 minutes prior to sampling on February 18 with a dedicated bladder pump using low flow methods. Field Parameters had stabilized prior to sampling and remained stable during sampling. Temperature, pH, SC, ORP, and DO levels were measured during purging at regular intervals using a water quality meter equipped with a flow-through cell.

The water level in monitoring well MW-9 was measured at 413.23 feet btoc on February 16. The well was bailed as close to dry as practical on February 16 using a dedicated bailer. Approximately 11 gallons of water (approximately 1.9 casing volumes) were removed from the well. The water level in the well recovered from 421.92 feet btoc (measured immediately after bailing on 2/16) to 421.72 ft btoc (measured on 2/25), less than 2.5 inches over a 9 day period. The well did not recharge sufficiently to sample by the conclusion of the sampling event.

The water level in production well PW-1 was measured at 280.13 feet btoc on February 16. The well was micro-purged for 20 minutes prior to sampling on February 24 with a bladder pump using low flow methods. Field parameters had stabilized prior to sampling and remained stable during sampling. Temperature, pH, SC, ORP, and DO levels were measured during purging at regular intervals using a water quality meter equipped with a flow-through cell.

The water level in production well PW-2 was measured at 331.98 feet btoc on February 16. The well was micro-purged for 20 minutes prior to sampling on February 24 with a bladder pump using low flow methods. Field parameters had stabilized prior to sampling and remained stable during sampling. Temperature, pH, SC, ORP, and DO levels were measured during purging at regular intervals using a water quality meter equipped with a flow-through cell.

The water level in production well PW-3 was measured at 263.13 feet btoc on February 16. The well was micro-purged for 65 minutes prior to sampling on February 26 with a bladder pump using low flow methods. Field parameters had stabilized prior to sampling and remained stable during sampling with the exception of ORP and DO. Temperature, pH, SC, ORP, and DO levels were measured during purging at regular intervals using a water quality meter equipped with a flow-through cell.

### **2.3 Groundwater Sampling**

Groundwater samples were collected from MW-5 after the well had recharged enough to provide sufficient sample volume. Samples were collected from MW-6, MW-7, MW-8B, PW-1, PW-2, and PW-3 after field parameters had stabilized during purging. Stabilization of field parameters was achieved when measurements taken over three consecutive readings at three to five minute intervals were within the following limits:

- Temperature  $\pm 3\%$
- pH  $\pm 0.01$  s.u.
- Specific Conductivity  $\pm 3\%$
- Dissolved Oxygen  $\pm 10\%$

- Oxidation-Reduction Potential  $\pm 10$  millivolts

These stabilization guidelines are recommended in "US EPA Region I, Low Stress (low flow) Purging and Sampling Procedure for the Collection of Ground Water Samples from monitoring Wells", published July 30, 1996.

Monitoring well samples for dissolved constituents were field-filtered to 0.45 microns. All samples were placed into laboratory-prepared containers with appropriate preservatives. Duplicate samples were also collected from MW-5, MW-7 and PW-2. The containers were placed under ice in coolers and prepared for transport under chain-of-custody via FedEx to ACZ Laboratories, Inc. (ACZ) in Steamboat Springs, Colorado. The samples arrived at the laboratory the day following shipment.

## **2.4 Waste Disposal**

Well development and purged groundwater was discharged onto the ground surface approximately 100 to 200 ft from each well.

### **3.0 DATA SUMMARY**

Groundwater was not detected in monitoring wells MW-1, MW-2, MW-3 or MW-4. MW-9 contained 8.77 feet of water, but did not recharge sufficiently to sample following purging. Groundwater was measured and sampled in MW-5, MW-6, MW-7, MW-8B, PW-1, PW-2 and PW-3. MW-5 has limited recharge and has not been fully developed. In addition, production wells PW-1, PW-2 and PW-3 were installed for the purposes of evaluating groundwater supply in the area and providing water to the future mill. They were not installed for the purpose of collecting environmental data. Accordingly, the data collected from wells MW-5, PW-1, PW-2 and PW-3 must be evaluated within that context.

#### **3.1 Groundwater Quality Field Parameters**

Groundwater quality field parameters were recorded with a WTW 3400i water quality meter on grab samples during bailing of MW-5, and with a flow-through cell during purging of MW-6, MW-7, MW-8B, PW-1, PW-2 and PW-3. The field parameters are listed on Table 3.

#### **3.2 Groundwater Analytical Results**

Groundwater monitoring and production well samples were analyzed for:

- Dissolved metals (aluminum, arsenic, boron, copper, iron, lead, manganese, molybdenum, selenium, uranium, vanadium, and zinc by Methods E200.7 or 200.8);
- Major dissolved ions (alkalinity, carbonate, bicarbonate, calcium, chloride, fluoride, magnesium, ammonia as nitrogen, nitrate/nitrite, potassium, silica, sodium, sulfate, sulfide) by applicable methods;
- Physical properties (total dissolved solids [TDS] by Method A2540C and total suspended solids [TSS] by Method A2540B); and
- Dissolved radionuclides (gross alpha, gross beta by Method E900.0, and radium 226 by Method E903.0).

The duplicate samples from MW-5, MW-7, and PW-2 were analyzed only for the dissolved metals and radionuclides above. A summary of the laboratory analytical results relative to CDPHE and US EPA standards is presented in Table 3. Copies of the laboratory analytical reports for the monitoring wells are provided in Appendix B.

A review of the ACZ Level 3 quality control indicates the instruments appear to be functioning properly because method blanks, spike, and duplicate concentrations were within the acceptable ranges per the specified methods. Where quality control samples were outside of acceptable ranges, the laboratory provided case narratives that indicated or resolved the discrepancies.

## 4.0 DISCUSSION

Following additional quarterly sample collection and analysis events, a detailed hydrogeologic evaluation will be completed for the Site including an analysis of the water quality and establishment of a groundwater classification for the Site. Therefore, only a limited discussion of water quality will take place in this document. Analytical results for this sampling event indicate:

- Groundwater samples from MW-5 and MW-7 continue to exhibit similar chemistry relative to previous sampling events, exhibit characteristics of oxidized water, do not have a hydrogen sulfide (H<sub>2</sub>S) odor, contain sulfate, and do not contain sulfide;
- Groundwater samples from MW-6 and MW-8B exhibit similar chemistry, exhibit characteristics of reduced and oxidized water, and have an H<sub>2</sub>S odor as well as sulfide and sulfate;
- Dissolved iron and manganese in PW-1 and PW-2 samples were elevated relative to the initial sampling events. A strong iron odor was also noted at these wells during the sampling event. It is likely that the steel casing used for the production wells is responsible for the elevated iron content in the groundwater collected from the wells. This was not observed in the initial sampling event because those samples were collected during pump tests when the flow rate from the wells was much higher.
- With the exceptions noted above, dissolved metals, radiochemistry, and major anion/cation concentrations in all of the wells are generally consistent with those measured in previous sampling events;
- Sulfate concentrations (1,450 to 1,490 milligrams per liter [mg/L]) and TDS concentrations (2,560 to 2,760 mg/L) are consistent in monitoring wells MW-6 and MW-8B;
- Sulfate concentrations (370 to 480 mg/L) and TDS concentrations (790 to 940 mg/L) are consistent in monitoring wells MW-5 and MW-7 and production wells PW-1, PW-2 and PW-3.

Following purging, the water in monitoring well MW-9 did not recharge sufficiently during this groundwater monitoring event. Water in this well appears to be connate water or residual pore moisture that has accumulated over time and it is not expected to fully recharge in less than 60 days. The water level will be measured again in this well during the next sampling event and an attempt will be made to purge and sample the well. However, if the well does not recharge sufficiently during the sampling event, water samples will not be collected.

## TABLES

**Table 1  
Groundwater Sampling Record**

| Period  | Groundwater Well ID |      |      |       |      |      |      |      |
|---------|---------------------|------|------|-------|------|------|------|------|
|         | MW-5                | MW-6 | MW-7 | MW-8B | MW-9 | PW-1 | PW-2 | PW-3 |
| 4Q 2007 | NS                  | X    | NI   | NI    | NI   | NI   | NI   | NI   |
| 1Q 2008 | X                   | X    | NI   | NI    | NI   | NI   | NI   | NI   |
| 2Q 2008 | X                   | X    | X    | NI    | NI   | NI   | NI   | NI   |
| 3Q 2008 | X                   | X    | X    | X     | X*   | X    | X    | X    |
| 4Q 2008 | X                   | X    | X    | X     | NS   | X    | X    | X    |
| 1Q 2009 | X                   | X    | X    | X     | NS   | X    | X    | X    |

NI Well not installed

NS Insufficient water or recharge rate to sample

\* Well required 33 days to recharge sufficiently to sample

**Table 2  
Static Groundwater Levels**

| Well ID | Date Measured | Top of Casing Elevation (feet amsl) | Total Depth (feet BTOC) | Water Level (feet BTOC) | Saturated Thickness (feet) | Water Elevation (feet amsl) |
|---------|---------------|-------------------------------------|-------------------------|-------------------------|----------------------------|-----------------------------|
| MW-1    | 02/16/09      | 5423.76                             | 32.49                   | Dry                     | NA                         | NA                          |
| MW-2    | 02/16/09      | 5432.65                             | 27.42                   | Dry                     | NA                         | NA                          |
| MW-3    | 02/16/09      | 5452.29                             | 102.65                  | Dry                     | NA                         | NA                          |
| MW-4    | 02/16/09      | 5475.55                             | 67.67                   | Dry                     | NA                         | NA                          |
| MW-5    | 02/16/09      | 5572.89                             | 301                     | 281.02                  | 19.98                      | 5291.87                     |
| MW-6    | 02/16/09      | 5554.47                             | 484.49                  | 407.78                  | 76.71                      | 5146.69                     |
| MW-7    | 02/16/09      | 5624.93                             | 425                     | 335.38                  | 89.62                      | 5289.55                     |
| MW-8B   | 02/16/09      | 5530.19                             | 421.93                  | 381.61                  | 40.32                      | 5148.58                     |
| MW-9    | 02/16/09      | 5527.72                             | 422                     | 413.23 <sup>(1)</sup>   | 8.77                       | 5114.49                     |
| PW-1    | 02/16/09      | 5570.66                             | 380                     | 280.13                  | 99.87                      | 5290.53                     |
| PW-2    | 02/16/09      | 5622.46                             | 420                     | 331.98                  | 88.02                      | 5290.48                     |
| PW-3    | 02/16/09      | 5557.88                             | 380                     | 263.13                  | 116.87                     | 5294.75                     |

1 MW-9 recharges very slowly and has never fully recharged.

NA Not Applicable

**Table 3**  
**Groundwater Analytical Results**

| Well Number                      |       | MW-5      |           |          |            |           | MW-6       |           |           |          |            | MW-7      |          |          |            |           |
|----------------------------------|-------|-----------|-----------|----------|------------|-----------|------------|-----------|-----------|----------|------------|-----------|----------|----------|------------|-----------|
| Sample Date                      |       | 1/31/2008 | 4/30/2008 | 8/7/2008 | 11/14/2008 | 2/19/2009 | 10/16/2007 | 1/29/2008 | 4/29/2008 | 8/7/2008 | 11/14/2008 | 2/18/2009 | 6/7/2008 | 9/9/2008 | 11/13/2008 | 2/18/2009 |
| Field Parameters                 | Unit  |           |           |          |            |           |            |           |           |          |            |           |          |          |            |           |
| Temperature                      | °C    | 12.4      | 17.7      | 16.3     | 15.8       | 14.5      | 17.9       | 18.0      | 18.8      | 19.0     | 18.8       | 17.9      | 18.7     | 15.8     | 15.6       | 14.6      |
| pH                               | s.u.  | 10.25     | 7.54      | 7.50     | 7.87       | 7.96      | 7.69       | 5.27      | 7.01      | 6.86     | 6.95       | 7.07      | 8.02     | 7.84     | 7.58       | 7.58      |
| Conductivity                     | µS/cm | 2,338     | 1,194     | 1,225    | 1,101      | 1,043     | 3,170      | 5,319     | 3,140     | 3,430    | 3,290      | 3,510     | 1,064    | 1,276    | 1,253      | 1,338     |
| Dissolved Oxygen                 | mg/L  | 6.02      | 2.06      | 5.93     | 5.76       | 6.82      | 2.62       | 1.47      | 0.02      | 0.06     | 0.14       | 0.11      | 2.15     | 3.97     | 3.80       | 4.77      |
| ORP                              | mV    | NR        | NR        | 203      | 150        | 86        | NR         | -310      | -373      | -361     | -331       | -330      | 28.8     | 161      | 138        | 88        |
| <b>General Chemistry</b>         |       |           |           |          |            |           |            |           |           |          |            |           |          |          |            |           |
| Alkalinity as CaCO <sub>3</sub>  | mg/L  | 240       | 234       | 203      | 207        | 205       | 392        | 394       | 386       | 387      | 397        | 399       | 154      | 198      | 218        | 223       |
| Carbonate as CaCO <sub>3</sub>   | mg/L  | NA        | <2        | 5        | <2         | 13        | <1         | <2        | <2        | <2       | <2         | <2        | <2       | <2       | <2         | 4         |
| Bicarbonate as CaCO <sub>3</sub> | mg/L  | 240       | 234       | 203      | 207        | 192       | 478        | 394       | 386       | 387      | 397        | 399       | 154      | 198      | 218        | 218       |
| Chloride                         | mg/L  | 21        | 22        | 33       | 24         | 24        | 142        | 170       | 160       | 170      | 160        | 170       | 25       | 28       | 30         | 32        |
| Fluoride                         | mg/L  | 0.4       | 0.5       | 0.6      | 0.6        | 0.5       | 0.3        | 0.3       | 0.4       | 0.4      | 0.4        | 0.3       | 0.7      | 0.6      | 0.6        | 0.5       |
| Ammonia as N                     | mg/L  | 0.08      | 0.23      | 0.06     | 0.10       | <0.05     | 1.01       | 0.8       | 0.95      | 1.05     | 1.06       | 0.91      | <0.05    | <0.05    | <0.05      | <0.05     |
| Nitrate/Nitrite as N             | mg/L  | 1.09      | 1.20      | 2.51     | 2.17       | 1.96      | <0.1       | <0.02     | <0.02     | 0.06     | <0.02      | 0.03      | 0.61     | 0.85     | 0.72       | 0.77      |
| Silica                           | mg/L  | 17.7      | 17.4      | 17.5     | 14.4       | 16.1      | 10.3       | 10.7      | 10.7      | 11.4     | 9.8        | 10.0      | 15.8     | 19.7     | 17.5       | 19.3      |
| Sulfate                          | mg/L  | 390       | 370       | 390      | 370        | 370       | 1330       | 1400      | 1070      | 1490     | 1460       | 1490      | 460      | 460      | 460        | 480       |
| Sulfide as S                     | mg/L  | 0.04      | <0.02     | <0.02    | <0.02      | <0.08     | NA         | 13.4      | 10.3      | 11.9     | 11.5       | 12.4      | <0.02    | <0.02    | <0.02      | <0.02     |
| TOC                              | mg/L  | 12        | 8         | NA       | NA         | NA        | <1         | NA        | 12        | NA       | NA         | NA        | 9        | NA       | NA         | NA        |
| TDS                              | mg/L  | 840       | 820       | 820      | 770        | 790       | 2400       | 2740      | 1140      | 2670     | 2750       | 2760      | 850      | 930      | 970        | 940       |
| TSS                              | mg/L  | 120       | 780       | NA       | 78         | 350       | 13.3       | <5        | <5        | NA       | 13         | <5        | <5       | 5        | 9          | <5        |
| <b>Dissolved Metals</b>          |       |           |           |          |            |           |            |           |           |          |            |           |          |          |            |           |
| Aluminum                         | mg/L  | 0.23      | <0.03     | 0.04     | 0.04       | 0.32      | <0.1       | <0.06     | <0.06     | <0.06    | <0.06      | <0.06     | 0.05     | <0.03    | <0.03      | <0.03     |
| Arsenic                          | mg/L  | 0.0015    | 0.0021    | 0.0025   | 0.0028     | 0.0027    | <0.001     | <0.001    | 0.0006    | 0.001    | <0.01      | 0.002     | 0.0073   | 0.0046   | 0.0059     | 0.0062    |
| Barium                           | mg/L  | 0.034     | 0.021     | NA       | NA         | NA        | <0.1       | NA        | 0.024     | NA       | NA         | NA        | 0.016    | NA       | NA         | NA        |
| Boron                            | mg/L  | 0.59      | 0.53      | 0.47     | 0.46       | 0.45      | 2.20       | 2.30      | 2.27      | 2.5      | 2.36       | 2.39      | 0.21     | 0.31     | 0.31       | 0.36      |
| Cadmium                          | mg/L  | 0.0002    | <0.0001   | NA       | NA         | NA        | <0.005     | NA        | 0.0001    | NA       | NA         | NA        | <0.0001  | NA       | NA         | NA        |
| Calcium                          | mg/L  | 69.8      | 76.6      | 69.1     | 69.5       | 70.2      | 109        | 123       | 121       | 133      | 132        | 137       | 92.6     | 101.0    | 100        | 103       |
| Cesium                           | mg/L  | <0.0002   | <0.0002   | NA       | NA         | NA        | <0.1       | NA        | <0.0002   | NA       | NA         | NA        | <0.0002  | NA       | NA         | NA        |
| Chromium                         | mg/L  | <0.01     | <0.01     | NA       | NA         | NA        | <0.005     | NA        | <0.01     | NA       | NA         | NA        | 0.03     | NA       | NA         | NA        |
| Copper                           | mg/L  | < 0.01    | <0.01     | <0.01    | <0.01      | <0.01     | <0.01      | <0.02     | <0.02     | <0.02    | <0.02      | <0.02     | <0.01    | <0.01    | <0.01      | <0.01     |
| Iron                             | mg/L  | 0.19      | <0.02     | <0.02    | 0.04       | 0.22      | 1.46       | <0.04     | <0.04     | <0.04    | <0.04      | 0.12      | <0.02    | <0.02    | <0.02      | <0.02     |
| Lead                             | mg/L  | 0.0020    | <0.0001   | <0.0001  | <0.0001    | 0.0006    | <0.001     | <0.0004   | <0.0001   | <0.0002  | <0.0002    | <0.0002   | 0.00010  | <0.0001  | <0.0001    | <0.0001   |
| Magnesium                        | mg/L  | 54.5      | 61.2      | 60       | 57.4       | 58.7      | 261        | 284       | 288       | 309      | 295        | 304       | 61.0     | 75.0     | 72.9       | 77.0      |
| Manganese                        | mg/L  | 0.042     | 0.012     | 0.028    | 0.025      | 0.053     | 0.060      | 0.010     | 0.01      | <0.01    | 0.020      | <0.01     | <0.005   | <0.005   | <0.005     | <0.005    |
| Mercury                          | mg/L  | <0.0002   | <0.0002   | NA       | NA         | NA        | <0.001     | NA        | <0.0002   | NA       | NA         | NA        | <0.0002  | NA       | NA         | NA        |
| Molybdenum                       | mg/L  | 0.03      | 0.03      | 0.02     | 0.01       | <0.01     | <0.1       | <0.02     | 0.030     | <0.02    | <0.02      | <0.02     | 0.03     | 0.01     | 0.01       | <0.01     |
| Nickel                           | mg/L  | <0.01     | <0.01     | NA       | NA         | NA        | 0.05       | NA        | <0.01     | NA       | NA         | NA        | <0.01    | NA       | NA         | NA        |
| Potassium                        | mg/L  | 17.6      | 18.1      | 19.0     | 16.9       | 16.9      | 91.0       | 98.4      | 95.4      | 105      | 99.7       | 97.2      | 18.1     | 16.8     | 16.9       | 16.4      |
| Selenium                         | mg/L  | 0.0170    | 0.0358    | 0.0200   | 0.0231     | 0.0206    | 0.003      | 0.027     | 0.1660    | 0.0321   | 0.236      | 0.0478    | 0.0273   | 0.0279   | 0.0309     | 0.0280    |
| Sodium                           | mg/L  | 136       | 127       | 109      | 95.0       | 89.9      | 172        | 205       | 190       | 219      | 208        | 206       | 79.2     | 82.7     | 82.2       | 83.1      |
| Uranium                          | mg/L  | 0.0760    | 0.0896    | 0.106    | 0.1100     | 0.1030    | <0.0003    | <0.0002   | <0.0001   | <0.003   | <0.002     | 0.0003    | 0.0775   | 0.1030   | 0.1080     | 0.0986    |
| Vanadium                         | mg/L  | 0.007     | 0.006     | 0.012    | 0.009      | 0.013     | <0.1       | <0.01     | <0.01     | <0.01    | <0.01      | <0.01     | 0.018    | 0.014    | 0.016      | 0.010     |
| Zinc                             | mg/L  | 0.02      | <0.01     | <0.01    | <0.01      | <0.01     | <0.01      | <0.02     | <0.01     | <0.02    | <0.02      | <0.02     | <0.01    | <0.01    | <0.01      | <0.01     |
| <b>Dissolved Radionuclides</b>   |       |           |           |          |            |           |            |           |           |          |            |           |          |          |            |           |
| Gross Alpha                      | pCi/L | 50        | 65        | 49       | 49         | 41        | 11.1       | 17.0      | 12        | 9.7      | <7.6       | 12        | 36       | 56       | 42         | 45        |
| Gross Beta                       | pCi/L | 32        | 41        | 32       | 30         | 27        | 92.8       | 140.0     | 91        | 110      | 99         | 96        | 34       | 33       | 40         | 29        |
| Radium 226                       | pCi/L | 0.53      | 0.33      | 0.42     | <0.35      | 0.3       | 1.6        | 2.2       | 1.9       | 3.3      | 1.9        | 2.1       | <0.35    | <0.25    | <0.4       | <0.28     |

**Table 3**  
**Groundwater Analytical Results**

| Well Number                      |       | MW-8B     |            |           | MW-9      | PW-1      |           |            |           | PW-2     |           |            |           | PW-3     |          |            |           |
|----------------------------------|-------|-----------|------------|-----------|-----------|-----------|-----------|------------|-----------|----------|-----------|------------|-----------|----------|----------|------------|-----------|
| Sample Date                      |       | 7/21/2008 | 11/13/2008 | 2/18/2009 | 9/10/2008 | 8/12/2008 | 8/13/2008 | 11/14/2008 | 2/24/2009 | 8/8/2008 | 8/11/2008 | 11/13/2008 | 2/24/2009 | 8/6/2008 | 8/7/2008 | 11/13/2008 | 2/26/2009 |
| Field Parameters                 | Unit  |           |            |           |           |           |           |            |           |          |           |            |           |          |          |            |           |
| Temperature                      | °C    | 18.4      | 15.3       | 14.6      | 17.6      | 18.0      | 17.5      | 15.4       | 15.0      | 18.8     | 20.0      | 14.6       | 15.0      | 15.7     | 16.0     | 13.7       | 14.7      |
| pH                               | s.u.  | 6.36      | 6.83       | 6.83      | 8.23      | 7.50      | 7.02      | 7.53       | 7.52      | 7.52     | 7.49      | 7.31       | 7.40      | 7.59     | 7.56     | 7.58       | 7.66      |
| Conductivity                     | µS/cm | 3,060     | 3          | 2,810     | 993       | 1,151     | 1,132     | 1,161      | 1,247     | 1,294    | 1,317     | 1,275      | 1,391     | 1,256    | 1,245    | 1,218      | 1,307     |
| Dissolved Oxygen                 | mg/L  | 6.10      | 0.29       | 0.25      | 2.12      | 7.35      | 7.20      | 0.81       | 0.09      | 6.13     | 5.47      | 1.52       | 0.22      | 7.68     | 7.70     | 7.18       | 7.39      |
| ORP                              | mV    | -122.8    | -154       | -199      | 154       | 31        | 142       | -154       | -144      | 100      | 90        | -124       | -210      | 61       | 105      | 95         | 34        |
| <b>General Chemistry</b>         |       |           |            |           |           |           |           |            |           |          |           |            |           |          |          |            |           |
| Alkalinity as CaCO <sub>3</sub>  | mg/L  | 426       | 436        | 389       | 243       | 225       | 228       | 225        | 217       | 249      | 241       | 246        | 214       | 243      | 241      | 252        | 242       |
| Carbonate as CaCO <sub>3</sub>   | mg/L  | <2        | <2         | <2        | 11        | <2        | 5         | <2         | <2        | <2       | <2        | <2         | <2        | 3        | <2       | <2         | <2        |
| Bicarbonate as CaCO <sub>3</sub> | mg/L  | 426       | 436        | 389       | 232       | 225       | 223       | 225        | 217       | 249      | 241       | 246        | 214       | 240      | 241      | 252        | 242       |
| Chloride                         | mg/L  | 48        | 37         | 40        | 19        | 36        | 36        | 36         | 38        | 38       | 36        | 34         | 38        | 35       | 35       | 35         | 37        |
| Fluoride                         | mg/L  | 0.7       | 0.6        | 0.5       | 1.0       | 0.5       | 0.5       | 0.5        | 0.5       | 0.4      | 0.5       | 0.4        | 0.5       | 0.5      | 0.4      | 0.5        | 0.5       |
| Ammonia as N                     | mg/L  | 0.06      | 0.12       | <0.05     | <0.5      | <0.05     | 31.2      | 0.3        | 0.16      | <0.05    | <0.3      | 0.05       | <0.5      | <0.05    | <0.05    | <0.05      | <0.05     |
| Nitrate/Nitrite as N             | mg/L  | 0.04      | <0.02      | 0.03      | 10.2      | 1.80      | 1.47      | 0.36       | 0.37      | 0.66     | 0.66      | 0.29       | 0.03      | 0.98     | 1.04     | 1.14       | 0.77      |
| Silica                           | mg/L  | 11.7      | 17.3       | 18.5      | 11.8      | 19.2      | 19.4      | 10.2       | 11.1      | 16.7     | 15.2      | 12.8       | 11.2      | 18.7     | 18.9     | 15.2       | 15.6      |
| Sulfate                          | mg/L  | 1810      | 1370       | 1450      | 190       | 380       | 360       | 380        | 380       | 430      | 430       | 440        | 430       | 380      | 380      | 380        | 390       |
| Sulfide as S                     | mg/L  | 1.9       | 0.61       | 0.19      | 0.10      | <0.02     | <0.02     | <0.02      | <0.2      | <0.02    | 0.03      | <0.02      | 0.11      | <0.02    | <0.02    | <0.02      | <0.02     |
| TOC                              | mg/L  | 29        | NA         | NA        | 18        | 10        | 9         | NA         | NA        | 8        | 11        | NA         | NA        | 7        | 7        | NA         | NA        |
| TDS                              | mg/L  | 3040      | 2520       | 2560      | 610       | 810       | 810       | 820        | 810       | 940      | 930       | 920        | 910       | 830      | 840      | 860        | 850       |
| TSS                              | mg/L  | 833       | 18         | <5        | 168       | <5        | <5        | 106        | 24        | 38       | 43        | 55         | 66        | <5       | <5       | 10         | <5        |
| <b>Dissolved Metals</b>          |       |           |            |           |           |           |           |            |           |          |           |            |           |          |          |            |           |
| Aluminum                         | mg/L  | <0.06     | <0.06      | 0.09      | 0.07      | <0.03     | <0.03     | <0.03      | <0.03     | <0.03    | <0.03     | <0.03      | <0.03     | <0.03    | <0.03    | <0.03      | <0.03     |
| Arsenic                          | mg/L  | 0.002     | <0.01      | 0.003     | 0.0111    | 0.0169    | 0.0177    | 0.0009     | 0.0007    | 0.0034   | 0.0024    | 0.0007     | <0.0005   | 0.0135   | 0.0138   | 0.0118     | 0.0120    |
| Barium                           | mg/L  | 0.038     | NA         | NA        | 0.044     | 0.013     | 0.027     | NA         | NA        | 0.013    | 0.009     | NA         | NA        | 0.032    | 0.032    | NA         | NA        |
| Boron                            | mg/L  | 0.36      | 0.48       | 0.52      | 2.63      | 0.30      | 0.30      | 0.29       | 0.29      | 0.47     | 0.48      | 0.47       | 0.47      | 0.39     | 0.37     | 0.42       | 0.43      |
| Cadmium                          | mg/L  | <0.0002   | NA         | NA        | <0.0001   | <0.0001   | <0.0001   | NA         | NA        | <0.0001  | <0.0001   | NA         | NA        | 0.0001   | <0.0001  | NA         | NA        |
| Calcium                          | mg/L  | 495       | 368        | 385       | 8.8       | 69.1      | 66.7      | 68.9       | 68.4      | 91.4     | 90.3      | 88.4       | 82.5      | 67.0     | 66.9     | 72.7       | 73.7      |
| Cesium                           | mg/L  | <0.0004   | NA         | NA        | <0.0002   | <0.0002   | <0.0002   | NA         | NA        | <0.0002  | <0.0002   | NA         | NA        | <0.0002  | <0.0002  | NA         | NA        |
| Chromium                         | mg/L  | <0.02     | NA         | NA        | <0.01     | <0.01     | <0.01     | NA         | NA        | <0.01    | <0.01     | NA         | NA        | <0.01    | <0.01    | NA         | NA        |
| Copper                           | mg/L  | <0.02     | <0.02      | <0.02     | <0.01     | <0.01     | <0.01     | <0.01      | <0.01     | <0.01    | <0.01     | <0.01      | <0.01     | <0.01    | <0.01    | <0.01      | <0.01     |
| Iron                             | mg/L  | 0.12      | 0.91       | <0.04     | 0.03      | 0.02      | 0.02      | 2.88       | 3.42      | 0.12     | 0.12      | 4.15       | 21.20     | 0.02     | 0.02     | 0.06       | <0.02     |
| Lead                             | mg/L  | <0.0002   | <0.002     | <0.0002   | <0.0001   | 0.0002    | 0.0001    | <0.0001    | <0.0001   | 0.0020   | 0.0001    | <0.0001    | <0.0001   | 0.0002   | <0.0001  | <0.0001    | <0.0001   |
| Magnesium                        | mg/L  | 230       | 217        | 228       | 4.8       | 85.8      | 88.0      | 84.3       | 83.6      | 65.6     | 69.9      | 71.1       | 65.6      | 80.6     | 82.4     | 70.0       | 71.7      |
| Manganese                        | mg/L  | 0.33      | 1.43       | 0.81      | 0.019     | <0.005    | <0.005    | 0.179      | 0.182     | 0.009    | 0.012     | 0.101      | 0.227     | <0.005   | <0.005   | 0.008      | <0.005    |
| Mercury                          | mg/L  | <0.0002   | NA         | NA        | <0.0002   | <0.0002   | <0.0002   | NA         | NA        | <0.0002  | <0.0002   | NA         | NA        | <0.0002  | <0.0002  | NA         | NA        |
| Molybdenum                       | mg/L  | 0.04      | <0.02      | <0.02     | 0.06      | <0.01     | <0.01     | <0.01      | <0.01     | 0.02     | 0.01      | <0.01      | <0.01     | <0.01    | <0.01    | 0.01       | <0.01     |
| Nickel                           | mg/L  | <0.02     | NA         | NA        | <0.01     | <0.01     | 0.01      | NA         | NA        | <0.01    | <0.01     | NA         | NA        | <0.01    | <0.01    | NA         | NA        |
| Potassium                        | mg/L  | 16.7      | 20.8       | 19.7      | 12.0      | 9.80      | 10.0      | 10.7       | 10.7      | 17.4     | 18.3      | 18.1       | 17.1      | 12.7     | 12.3     | 14.3       | 14.3      |
| Selenium                         | mg/L  | 0.079     | 0.010      | 0.0007    | 0.0017    | 0.0181    | 0.0168    | 0.0089     | 0.0078    | 0.0167   | 0.0171    | 0.0126     | 0.0024    | 0.0208   | 0.0203   | 0.0215     | 0.0209    |
| Sodium                           | mg/L  | 34.1      | 29.7       | 29.4      | 202       | 72.3      | 72.4      | 73.9       | 74.7      | 102      | 102       | 102        | 102       | 100      | 98.9     | 102        | 101       |
| Uranium                          | mg/L  | 0.0578    | 0.033      | 0.0861    | 0.0245    | 0.1070    | 0.0963    | 0.0250     | 0.0198    | 0.0605   | 0.0638    | 0.0452     | 0.0078    | 0.0826   | 0.0837   | 0.0797     | 0.0731    |
| Vanadium                         | mg/L  | <0.01     | <0.01      | <0.01     | 0.025     | 0.035     | 0.041     | <0.005     | <0.005    | 0.010    | 0.007     | <0.005     | <0.005    | 0.014    | 0.021    | 0.020      | 0.024     |
| Zinc                             | mg/L  | <0.02     | <0.02      | <0.02     | <0.01     | <0.01     | <0.01     | <0.01      | <0.01     | 0.06     | 0.02      | <0.01      | <0.01     | <0.01    | <0.01    | <0.01      | <0.01     |
| <b>Dissolved Radionuclides</b>   |       |           |            |           |           |           |           |            |           |          |           |            |           |          |          |            |           |
| Gross Alpha                      | pCi/L | 42        | 23         | 7         | 26        | 46        | 40        | 7.8        | 11        | 31       | 27        | 18         | <3        | 40       | 35       | 32         | 33        |
| Gross Beta                       | pCi/L | 23.0      | 24.0       | 23        | 20        | 26        | 23        | 15         | 11        | 29       | 25        | 21         | 18        | 27       | 26       | 29         | 19        |
| Radium 226                       | pCi/L | 12.0      | 0.54       | 0.49      | <0.45     | <0.23     | <0.25     | <0.27      | 0.04      | <0.27    | <0.16     | <0.3       | <0.19     | 0.26     | <0.20    | <0.35      | 0.23      |

**Table 3**  
**Groundwater Analytical Results**

| Well Number                      |       | CDPHE Domestic Water Supply Standards | CDPHE Agricultural Standards | EPA Drinking Water Standards             |
|----------------------------------|-------|---------------------------------------|------------------------------|--|
| Sample Date                      |       |                                       |                              |  |
| Field Parameters                 | Unit  |                                       |                              |  |
| Temperature                      | °C    | None                                  | None                         | None                                     |
| pH                               | s.u.  | 6.5-8.5                               | 6.5-8.5                      | 6.5-8.5                                  |
| Conductivity                     | µS/cm | None                                  | None                         | None                                     |
| Dissolved Oxygen                 | mg/L  | None                                  | None                         | None                                     |
| ORP                              | mV    | None                                  | None                         | None                                     |
| <b>General Chemistry</b>         |       |                                       |                              |  |
| Alkalinity as CaCO <sub>3</sub>  | mg/L  | None                                  | None                         | None                                     |
| Carbonate as CaCO <sub>3</sub>   | mg/L  | None                                  | None                         | None                                     |
| Bicarbonate as CaCO <sub>3</sub> | mg/L  | None                                  | None                         | None                                     |
| Chloride                         | mg/L  | 250                                   | None                         | 250 <sup>(1)</sup>                       |
| Fluoride                         | mg/L  | 4.0                                   | 2                            | 4.0(2.0 <sup>(1)</sup> )                 |
| Ammonia as N                     | mg/L  | None                                  | None                         | None                                     |
| Nitrate/Nitrite as N             | mg/L  | 10.0                                  | 100                          | 10                                       |
| Silica                           | mg/L  | None                                  | None                         | None                                     |
| Sulfate                          | mg/L  | 250                                   | None                         | 250 <sup>(1)</sup> (500 <sup>(2)</sup> ) |
| Sulfide as S                     | mg/L  | None                                  | None                         | None                                     |
| TOC                              | mg/L  | None                                  | None                         | None                                     |
| TDS                              | mg/L  | None                                  | None                         | 500 <sup>(1)</sup>                       |
| TSS                              | mg/L  | None                                  | None                         | None                                     |
| <b>Dissolved Metals</b>          |       |                                       |                              |  |
| Aluminum                         | mg/L  | None                                  | 5                            | 0.05 <sup>(1)</sup>                      |
| Arsenic                          | mg/L  | 0.01                                  | 0.1                          | 0.01                                     |
| Barium                           | mg/L  | 2.0                                   | None                         | 2  |
| Boron                            | mg/L  | None                                  | 0.75                         | None                                     |
| Cadmium                          | mg/L  | 0.005                                 | 0.01                         | 0.005                                    |
| Calcium                          | mg/L  | None                                  | None                         | None                                     |
| Cesium                           | mg/L  | None                                  | None                         | None                                     |
| Chromium                         | mg/L  | 0.1                                   | 0.1                          | 0.1 (total)                              |
| Copper                           | mg/L  | 1                                     | 0.2                          | 1.3 (1.0 <sup>(1)</sup> )                |
| Iron                             | mg/L  | 0.3                                   | 5                            | 0.3 <sup>(1)</sup>                       |
| Lead                             | mg/L  | 0.05                                  | 0.1                          | 0.015                                    |
| Magnesium                        | mg/L  | None                                  | None                         | None                                     |
| Manganese                        | mg/L  | 0.05                                  | 0.2                          | 0.05 <sup>(1)</sup>                      |
| Mercury                          | mg/L  | 0.002                                 | 0.01                         | 0.002                                    |
| Molybdenum                       | mg/L  | 0.035                                 | None                         | None                                     |
| Nickel                           | mg/L  | 0.1                                   | 0.2                          | None                                     |
| Potassium                        | mg/L  | None                                  | None                         | None                                     |
| Selenium                         | mg/L  | 0.05                                  | 0.02                         | 0.05                                     |
| Sodium                           | mg/L  | None                                  | None                         | 20 <sup>(2)</sup>                        |
| Uranium                          | mg/L  | 0.03                                  | None                         | 0.030 <sup>(1)</sup>                     |
| Vanadium                         | mg/L  | None                                  | 0.1                          | None                                     |
| Zinc                             | mg/L  | 5                                     | 2                            | 5 <sup>(1)</sup>                         |
| <b>Dissolved Radionuclides</b>   |       |                                       |                              |  |
| Gross Alpha                      | µCi/L | 15 <sup>(3)</sup>                     | None                         | 15 <sup>(3)</sup>                        |
| Gross Beta                       | µCi/L | 4 mrem/yr                             | None                         | 4 mrem/yr                                |
| Radium 226                       | µCi/L | 5 (total)                             | 5 (total)                    | 5 (total)                                |

**Table 3**  
**Groundwater Analytical Results - QA/QC Samples**

| Well Number                      |       | DUP-1<br>(MW-6) | DUP1-72108<br>(MW-8B) | DUP091008<br>(MW-9) | DUP-111408<br>(PW-1) | MW-7 DUP<br>(MW-7) | MW-5 DUP<br>(MW-5) | DUP022409<br>(PW-2) | Equipment<br>Rinsate -<br>Sample Pump | Equipment<br>Rinsate -<br>Sample Pump |
|----------------------------------|-------|-----------------|-----------------------|---------------------|----------------------|--------------------|--------------------|---------------------|---------------------------------------|---------------------------------------|
| Sample Date                      |       | 4/29/2008       | 7/21/2008             | 9/10/2008           | 11/14/2008           | 2/18/2009          | 2/19/2009          | 2/24/2009           | 10/16/2007                            | 7/22/2008                             |
| Field Parameters                 | Unit  |                 |                       |                     |                      |                    |                    |                     |                                       |                                       |
| Temperature                      | °C    | 18.8            | 18.4                  | 17.6                | 15.4                 | 14.6               | 14.5               | 15.0                | NA                                    | NA                                    |
| pH                               | s.u.  | 7.01            | 6.36                  | 8.23                | 7.53                 | 7.58               | 7.96               | 7.40                | NA                                    | NA                                    |
| Conductivity                     | µS/cm | 3,140           | 3,060                 | 993                 | 1,161                | 1,338              | 1,043              | 1,391               | NA                                    | NA                                    |
| Dissolved Oxygen                 | mg/L  | 0.02            | 6.10                  | 2.12                | 0.81                 | 4.78               | 6.82               | 0.22                | NA                                    | NA                                    |
| ORP                              | mV    | -373            | -122.8                | 154                 | -154                 | 88                 | 86                 | -210                | NA                                    | NA                                    |
| <b>General Chemistry</b>         |       |                 |                       |                     |                      |                    |                    |                     |                                       |                                       |
| Alkalinity as CaCO <sub>3</sub>  | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| Carbonate as CaCO <sub>3</sub>   | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| Bicarbonate as CaCO <sub>3</sub> | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| Chloride                         | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| Fluoride                         | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| Ammonia as N                     | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| Nitrate/Nitrite as N             | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| Silica                           | mg/L  | 11.5            | 11.6                  | 12.0                | 10.4                 | 19.2               | 18.6               | 11.3                | NA                                    | 0.5                                   |
| Sulfate                          | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| Sulfide as S                     | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| TOC                              | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| TDS                              | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| TSS                              | mg/L  | NA              | NA                    | NA                  | NA                   | NA                 | NA                 | NA                  | NA                                    | NA                                    |
| <b>Dissolved Metals</b>          |       |                 |                       |                     |                      |                    |                    |                     |                                       |                                       |
| Aluminum                         | mg/L  | <0.03           | <0.03                 | 0.08                | <0.03                | 0.03               | 0.95               | <0.03               | NA                                    | <0.03                                 |
| Arsenic                          | mg/L  | <0.0005         | 0.002                 | 0.0110              | 0.0008               | 0.0062             | 0.0028             | <0.0005             | NA                                    | <0.0005                               |
| Barium                           | mg/L  | 0.025           | 0.040                 | 0.046               | 0.006                | 0.013              | 0.065              | 0.006               | NA                                    | <0.03                                 |
| Boron                            | mg/L  | 2.39            | 0.37                  | 2.65                | 0.30                 | 0.36               | 0.44               | 0.47                | NA                                    | <0.01                                 |
| Cadmium                          | mg/L  | <0.0001         | <0.0001               | <0.0001             | <0.0001              | <0.0001            | 0.0004             | <0.0001             | NA                                    | <0.0001                               |
| Calcium                          | mg/L  | 129             | 515                   | 8.9                 | 68.3                 | 103.0              | 70.3               | 83.3                | NA                                    | 0.7                                   |
| Cesium                           | mg/L  | <0.0002         | <0.0002               | <0.0002             | <0.0002              | <0.0002            | <0.0002            | <0.0002             | NA                                    | <0.0002                               |
| Chromium                         | mg/L  | <0.01           | <0.01                 | <0.01               | <0.01                | <0.01              | <0.01              | <0.01               | NA                                    | <0.01                                 |
| Copper                           | mg/L  | <0.01           | <0.01                 | <0.01               | <0.01                | <0.01              | <0.01              | <0.01               | NA                                    | <0.01                                 |
| Iron                             | mg/L  | <0.02           | 0.13                  | 0.03                | 2.09                 | <0.02              | 0.80               | 21.40               | NA                                    | 0.03                                  |
| Lead                             | mg/L  | <0.0001         | <0.0001               | <0.0001             | <0.0001              | <0.0001            | 0.0020             | <0.0002             | NA                                    | <0.0005                               |
| Magnesium                        | mg/L  | 314             | 237                   | 4.8                 | 83.5                 | 76.7               | 58.4               | 65.9                | NA                                    | <0.2                                  |
| Manganese                        | mg/L  | 0.012           | 0.34                  | 0.042               | 0.160                | <0.005             | 0.172              | 0.227               | NA                                    | <0.005                                |
| Mercury                          | mg/L  | <0.0002         | <0.0002               | <0.0002             | <0.0002              | <0.0002            | <0.0002            | <0.0002             | NA                                    | <0.0002                               |
| Molybdenum                       | mg/L  | 0.02            | 0.01                  | 0.06                | <0.01                | <0.01              | <0.01              | <0.01               | NA                                    | <0.01                                 |
| Nickel                           | mg/L  | <0.01           | <0.01                 | <0.01               | <0.01                | <0.01              | <0.01              | <0.01               | NA                                    | <0.01                                 |
| Potassium                        | mg/L  | 107             | 17.0                  | 12.2                | 10.4                 | 16.5               | 16.8               | 17.1                | NA                                    | <0.03                                 |
| Selenium                         | mg/L  | 0.1440          | 0.081                 | 0.0018              | 0.0097               | 0.0256             | 0.0207             | 0.0025              | NA                                    | <0.001                                |
| Sodium                           | mg/L  | 209             | 34.7                  | 202                 | 73.2                 | 83.5               | 89.5               | 103                 | NA                                    | <0.3                                  |
| Uranium                          | mg/L  | <0.0001         | 0.0589                | 0.0249              | 0.0286               | 0.0987             | 0.1020             | 0.0078              | NA                                    | <0.0001                               |
| Vanadium                         | mg/L  | <0.005          | <0.005                | 0.027               | <0.005               | <0.005             | 0.015              | <0.005              | NA                                    | <0.005                                |
| Zinc                             | mg/L  | <0.01           | <0.01                 | <0.01               | <0.01                | <0.01              | 0.02               | <0.01               | NA                                    | <0.01                                 |
| <b>Dissolved Radionuclides</b>   |       |                 |                       |                     |                      |                    |                    |                     |                                       |                                       |
| Gross Alpha                      | µCi/L | NA              | 54                    | 20                  | 7.2                  | 40                 | 42                 | 5.4                 | 1                                     | NA                                    |
| Gross Beta                       | µCi/L | NA              | 8.5                   | 31                  | 11                   | 31                 | 36                 | 15                  | <2.0                                  | NA                                    |
| Radium 226                       | µCi/L | NA              | 7.8                   | 0.18                | -0.07                | 6.3                | 0.25               | <0.22               | <0.2                                  | NA                                    |

### **Table 3**

## **Groundwater Analytical Results - Abbreviations and Notes**

#### **Abbreviations:**

|       |                              |
|-------|------------------------------|
| °C    | degrees Celsius              |
| s.u.  | standard units               |
| µS/cm | microsiemens per centimeter  |
| mg/L  | milligrams per liter         |
| mV    | millivolt                    |
| pCi/L | picoCuries per liter         |
| NA    | Not Analyzed, see note below |

#### **Notes:**

- (1) Secondary Drinking Water standards
- (2) US EPA Drinking Water Advisory Level
- (3) Gross alpha standards exclude uranium and radon, the analytical results include uranium and radon

The initial sample from each well was analyzed for an extended list of parameters per the Groundwater Sampling Work Plan, rev 2, date May 21, 2008.

#### **References:**

CDPHE Domestic Water Supply and Agricultural Standards are published in CDPHE Water Quality Control Commission 5 CCR 1002-41, Regulation no. 41, The Basic Standards for Ground Water, as amended January 14, 2008

U.S. EPA Standards are published in 2006 Edition of the Drinking Water Standards and Health Advisories, EPA 822-R-06-013, as updated August 2006