



Energy Fuels Resources

January 24, 2011

Mr. Steve White
Montrose County Planning & Development
317 S Second St.
Montrose, CO 81401

Transmittal: 2010 Annual Report of the Piñon Ridge Mill Monitoring and Mitigation
Program for Pumping Production Wells

Dear Steve,

Please see the attached 2010 Annual Report of the Piñon Ridge Mill Monitoring and Mitigation Program for Pumping Production Wells. This report was prepared in accordance with the Monitoring and Mitigation Program for Pumping Production Wells included with the Piñon Ridge Mill Special Use Permit Application. The Special Use Permit was granted to Energy Fuels on September 30, 2009 with Montrose Board of County Commissioners Resolution No. 87-2009.

Please feel free to contact me at (303) 974-2151 if you need any additional information.

Sincerely,

Zach Rogers, P.E.
Environmental Engineer

Attachment

Cc: Mr. William T. Hurdle
Mr. Verl Boren
Ms. Lin Fehlmann/Mr. Robert Davis
Mr. Roy Smith (BLM)
Edgar Ethington (CDPHE)
Dick White, Frank Filas (Energy Fuels)

**PIÑON RIDGE MILL
2010 ANNUAL REPORT OF THE
MONITORING AND MITIGATION PROGRAM
FOR PUMPING PRODUCTION WELLS**



**ENERGY FUELS RESOURCES CORPORATION
31525 Highway 90
Nucla, Colorado 81424**

January 2011

Table of Contents

<u>Section</u>	<u>Page</u>
1.0 Introduction.....	1
2.0 Production Wells and Associated Piezometers.....	1
3.0 Off-Site Wells	1
4.0 Off-Site Spring.....	2

Figures

Figure 1 Monitored Production Wells, Off-Site Wells and Springs

Tables

Table 1 Production and Off-Site Well Water Levels
Table 2A Analytical Data for Production Well Samples
Table 2B Analytical Data for Off-Site Well and Spring Samples
Table 3 Off-Site Well and Spring Productivity Testing

Appendices

Appendix A Field Data Sheets
Appendix B Laboratory Data Reports

1.0 Introduction

The 2010 Annual Report is provided in accordance with the Monitoring and Mitigation Plan prepared by Golder Associates Inc., dated June 29, 2009 as revised July 7, 2009. Energy Fuels is currently in the process of permitting the Piñon Ridge Mill with the Colorado Department of Public Health and Environment (CDPHE). Currently, the mill has not been built and the production wells currently installed (PW-1 through PW-3) are not in operation. Until such a time that they are operating, testing and sampling are being conducted according to the pre-operational monitoring schedule and the data collected for the monitoring and mitigation program will be used to establish baseline conditions.

The monitoring and mitigation plan requires groundwater monitoring at the following locations:

- Production wells and associated piezometers
- Five off-site wells
- One off-site spring

2.0 Production Wells and Associated Piezometers

The Monitoring and Mitigation Plan requires only operational monitoring of the production wells and associated piezometers. However, quarterly water level monitoring and annual water quality testing of the production wells has been and will continue to be performed during the pre-operational phase. Quarterly water level monitoring of piezometers associated with the production wells will also be conducted when they have been installed.

Three production wells identified as PW-1, PW-2 and PW-3 are currently located on and near the Piñon Ridge Mill site (Refer to Figure 1). Two piezometers were initially installed near each production well. The piezometers were temporary and have been abandoned. Permanent piezometers will be installed prior to operation of the production wells. To establish water level baseline measurements, Energy Fuels has been collecting water level measurements at the production wells. Refer to Table 1 for water level measurements taken to date.

One water quality sample was collected from each of the three production wells on June 3, 2010. Seven groundwater samples have been collected from each of the production wells to date. In addition to the water quality samples, field parameters were measured at each of the production wells in November following installation of permanent pumps in the well. Field data sheets for the 2010 samples and measurements are provided in Appendix A. Analytical results of production well samples collected to date are summarized in Table 2 and the associated analytical reports for the samples collected in 2010 are provided in Appendix B.

3.0 Off-Site Wells

The Monitoring and Mitigation Plan requires pre-operational and operational monitoring of the off-site wells. The pre-operational monitoring includes water level measurements

(if accessible) and productivity testing on a quarterly basis and water quality testing on an annual basis. The five off-site wells to be monitored are listed below.

- Hurdle Well, Well Permit No. 226684
- Davis Well, Well Permit No. 269575
- BLM Well, Well Permit No. 258704
- Herron Well, Well Permit No. 234134
- Boren Well, Well Permit No. 253522

Refer to Figure 1 for well locations.

Despite repeated attempts, Energy Fuels has been unable to obtain the owner's consent to monitor the Herron Well. Water level measurement and productivity testing of the remaining four off-site wells was performed during each of the four calendar quarters in 2010. Water level measurements are presented in Table 1 for the BLM Well and the Boren Well. Water levels could not be measured in the Hurdle Well and Davis Well due to well design that restricts the ability to lower a measurement probe into the well. Productivity testing was conducted in the four accessible off-site wells and results are provided in Table 3. Field data sheets for the 2010 productivity tests are provided in Appendix A. Field notes recorded during the productivity testing of Hurdle Well, Davis Well, Boren Well and Stone Spring on May 12 and 13 were lost during subsequent field activities and data from that event is not available. Analytical results for the samples collected from the off-site wells to date is presented in Table 2 and the associated analytical reports for the samples collected in 2010 are provided in Appendix B.

4.0 Off-Site Spring

The Monitoring and Mitigation Plan requires pre-operational and operational monitoring of Stone Spring. The monitoring includes productivity testing and water quality sampling in the late spring and late fall. Stone Spring was tested during each of the four calendar quarters and sampled on May 12 and November 29. The quarterly productivity testing measurements are summarized in Table 3 and the field data sheets for the 2010 productivity testing of Stone Spring is provided in Appendix A. The analytical data collected to date is summarized in Table 2 and the associated analytical reports for the samples collected in 2010 are provided in Appendix B.

Figures

Figure 1 Monitored Production Wells, Off-Site Wells and Springs



LEGEND

- Production Wells
- Off-Site Well
- Stone Spring
- Piñon Ridge Site Boundary
- Highway
- River

0 6,000 12,000
Feet

MONITORED PRODUCTION WELLS, OFF-SITE WELLS AND SPRINGS



**Energy Fuels
Resources Corporation**

PROJECT	Piñon Ridge Mill	FIGURE 1
DRAWN	01/25/10	
DRAWN BY	ZTR	
CHECKED BY		
Fig1_Well AndSpringLocations_012510.mxd		

Tables

Table 1	Production and Off-Site Well Water Levels
Table 2A	Analytical Data for Production Well Samples
Table 2B	Analytical Data for Off-Site Well and Spring Samples
Table 3	Off-Site Well and Spring Productivity Testing

TABLE 1
PRODUCTION AND OFF-SITE WELL
WATER LEVELS

Well ID	Date	Water level below TOC (ft)
PW-1	8/2/08	280.70
	11/12/08	280.07
	2/16/09	280.13
	4/28/09	280.69
	7/27/09	280.21
	11/27/09	283.54
	2/8/10	284.04
	5/10/10	284.84
	8/25/10	285.54
	11/23/10	286.19
	11/30/10	286.27
PW-2	8/2/08	331.22
	11/12/08	332.35
	2/16/09	331.98
	4/28/09	332.43
	7/27/09	332.13
	11/25/09	333.91
	2/8/10	334.43
	5/10/10	336.27
	8/25/10	337.05
	11/23/10	337.59
	11/30/10	337.61

Well ID	Date	Water level below TOC (ft)
PW-3	8/2/08	256.65
	11/12/08	261.76
	2/16/09	263.13
	4/28/09	264.08
	7/27/09	263.93
	11/27/09	266.52
	2/8/10	266.94
	5/10/10	267.84
	8/25/10	268.56
	11/23/10	271.36
	11/30/10	271.37
BLM Well	7/30/09	168.68
	10/22/09	168.69
	2/11/10	168.87
	5/13/10	FL
	8/27/10	169.01
	11/24/10	168.89
Boren Well	8/2/09	28.06
	10/21/09	28.06
	3/18/10	33.72
	5/12/10	FL
	8/26/10	31.45
	11/29/10	32.21

Notes:

FL - No data, Field notes lost during subsequent field activities

TOC - Top of Casing

Hurdle and Davis Wells could not be measured due to well design

TABLE 2A
ANALYTICAL DATA FOR PRODUCTION WELL SAMPLES

Analyte	PW-1							PW-2						
	8/12/08	8/13/08	11/14/08	2/24/09	4/30/09	7/30/09	6/3/10	8/8/08	8/11/08	11/13/08	2/24/09	4/29/09	7/31/09	6/3/10
Dissolved Metals														
Aluminum (mg/L)	<0.03	<0.03	<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)	0.0169	0.0177	0.0009	0.0007	0.0009	0.0007	0.0007	0.0034	0.0024	0.0007	<0.0005	0.0010	<0.0005	<0.0005
Barium (mg/L)	0.013	0.027	NA	NA	NA	NA	NA	0.013	0.009	NA	NA	NA	NA	NA
Boron (mg/L)	0.30	0.30	0.29	0.29	0.31	0.29	0.31	0.47	0.48	0.47	0.47	0.51	0.48	0.41
Cadmium (mg/L)	<0.0001	<0.0001	NA	NA	NA	NA	NA	<0.0001	<0.0001	NA	NA	NA	NA	NA
Calcium (mg/L)	69.1	66.7	68.9	68.4	71.4	66.6	69.6	91.4	90.3	88.4	82.5	91.6	83.5	83.9
Cesium (mg/L)	<0.0002	<0.0002	NA	NA	NA	NA	NA	<0.0002	<0.0002	NA	NA	NA	NA	NA
Chromium (mg/L)	<0.01	<0.01	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA
Copper (mg/L)	<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	<0.01
Iron (mg/L) ⁽³⁾	0.02	0.02	2.88	3.42	4.04	2.39	4.30	0.12	0.12	4.15	21.20	16.30	24.30	27.30
Lead (mg/L)	0.0002	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0020	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003
Magnesium (mg/L)	85.8	88.0	84.3	83.6	84.5	90.0	80.6	65.6	69.9	71.1	65.6	71.8	66.2	67.0
Manganese (mg/L) ⁽³⁾	<0.005	<0.005	0.179	0.182	0.169	0.154	0.140	0.009	0.012	0.101	0.227	0.198	0.284	0.289
Mercury (mg/L)	<0.0002	<0.0002	NA	NA	NA	NA	NA	<0.0002	<0.0002	NA	NA	NA	NA	NA
Molybdenum (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	0.01	<0.01	<0.01	0.02	<0.01	0.01
Nickel (mg/L)	<0.01	0.01	NA	NA	NA	NA	NA	<0.01	<0.01	NA	NA	NA	NA	NA
Potassium (mg/L)	9.80	10.0	10.7	10.7	10.1	10.0	11.5	17.4	18.3	18.1	17.1	18.0	17.0	14.9
Selenium (mg/L)	0.0181	0.0168	0.0089	0.0078	0.0081	0.0079	0.0065	0.0167	0.0171	0.0126	0.0024	0.0053	0.0008	0.0016
Sodium (mg/L)	72.3	72.4	73.9	74.7	73.4	69.9	80.5	102	102	102	102	102	102	89.8
Uranium (mg/L)	0.1070	0.0963	0.0250	0.0198	0.0253	0.0295	0.0236	0.0605	0.0638	0.0452	0.0078	0.0204	0.0033	0.0069
Vanadium (mg/L)	0.035	0.041	<0.005	<0.005	<0.005	<0.005	<0.005	0.010	0.007	<0.005	<0.005	<0.005	<0.005	<0.005
Zinc (mg/L)	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.06	0.02	<0.01	<0.01	<0.1	<0.01	0.03
General Water Quality														
Alkalinity as CaCO ₃ (mg/L)	225	228	225	217	224	234	229	249	241	246	214	222	215	182
Carbonate as CaCO ₃ (mg/L)	<2	5	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bicarbonate as CaCO ₃ (mg/L)	225	223	225	217	224	234	229	249	241	246	214	222	215	182
Chloride (mg/L)	36	36	36	38	36	36	38	38	36	34	38	39	42	32
Fluoride (mg/L)	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.4	0.5	0.4	0.4	0.4
Ammonia as N (mg/L)	<0.05	31.2	0.3	0.16	0.19	0.09	0.33	<0.05	<0.3	0.05	<0.5	<0.05	<0.05	<0.05
Nitrate/Nitrite as N(mg/L)	1.80	1.47	0.36	0.37	0.42	0.51	0.57	0.66	0.66	0.29	0.03	0.15	<0.02	0.08
Silica (mg/L)	19.2	19.4	10.2	11.1	11.5	12.9	12.7	16.7	15.2	12.8	11.2	11.8	9.7	8.4
Sulfate (mg/L)	380	360	380	380	410	380	390	430	430	440	430	450	440	460
Sulfide as S (mg/L)	<0.02	<0.02	<0.02	<0.2	<0.2	<0.2	<0.02	<0.02	0.03	<0.02	0.11	<0.1	<0.2	<0.02
Total Organic Carbon (mg/L)	10	9	NA	NA	NA	NA	NA	8	11	NA	NA	NA	NA	NA
Total Dissolved Solids (mg/L)	810	810	820	810	820	830	840	940	930	920	910	940	940	960
Total Suspended Solids (mg/L)	<5	<5	106	24	18	25	38	38	43	55	66	49	93	61
Dissolved Radionuclides														
Gross Alpha (pCi/L)	46	40	7.8	11	11	16	14	31	27	18	<3	21	2.4	4.9
Gross Alpha - U/Rn (pCi/L)	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	NA	NA	<0.5
Gross Beta (pCi/L)	26	23	15	11	13	16	10	29	25	21	18	21	8	14
Radium 226 (pCi/L)	<0.23	<0.25	<0.27	0.04	<0.25	0.11	<0.2	<0.27	<0.16	<0.3	<0.19	<0.25	0.1	<0.17
Radium 228 (pCi/L)	NA	NA	NA	NA	NA	0.96	<1.4	NA	NA	NA	NA	NA	0.08	<1.3
Lead 210 (pCi/L)	NA	NA	NA	NA	NA	<5	<2.8	NA	NA	NA	NA	NA	<4.2	<3.2
Thorium 230 (pCi/L)	NA	NA	NA	NA	NA	<0.58	<0.56	NA	NA	NA	NA	NA	<0.72	<0.8

Notes:
Gross Alpha-U/Rn - Gross Alpha minus contributions from Uranium and Radon
NA - Not Analyzed

TABLE 2A
ANALYTICAL DATA FOR PRODUCTION WELL SAMPLES

Analyte	PW-3						
	8/6/08	8/7/08	11/13/08	3/3/09	4/30/09	7/31/09	6/3/10
Dissolved Metals							
Aluminum (mg/L)	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Arsenic (mg/L)	0.0135	0.0138	0.0118	0.0120	0.0118	0.0078	0.0090
Barium (mg/L)	0.032	0.032	NA	NA	NA	NA	NA
Boron (mg/L)	0.39	0.37	0.42	0.43	0.43	0.41	0.44
Cadmium (mg/L)	0.0001	<0.0001	NA	NA	NA	NA	NA
Calcium (mg/L)	67.0	66.9	72.7	73.7	76.3	74	71.9
Cesium (mg/L)	<0.0002	<0.0002	NA	NA	NA	NA	NA
Chromium (mg/L)	<0.01	<0.01	NA	NA	NA	NA	NA
Copper (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Iron (mg/L) ⁽³⁾	0.02	0.02	0.06	<0.02	0.04	0.25	0.04
Lead (mg/L)	0.0002	<0.0001	<0.0001	<0.0001	0.0010	<0.0001	<0.0001
Magnesium (mg/L)	80.6	82.4	70.0	71.7	72.7	72.2	68.5
Manganese (mg/L) ⁽³⁾	<0.005	<0.005	0.008	<0.005	<0.005	0.021	<0.005
Mercury (mg/L)	<0.0002	<0.0002	NA	NA	NA	NA	NA
Molybdenum (mg/L)	<0.01	<0.01	0.01	<0.01	0.02	<0.01	0.03
Nickel (mg/L)	<0.01	<0.01	NA	NA	NA	NA	NA
Potassium (mg/L)	12.7	12.3	14.3	14.3	14.3	14.6	13.9
Selenium (mg/L)	0.0208	0.0203	0.0215	0.0209	0.0196	0.0176	0.0150
Sodium (mg/L)	100	98.9	102	101	101	102	104
Uranium (mg/L)	0.0826	0.0837	0.0797	0.0731	0.0771	0.0665	0.0735
Vanadium (mg/L)	0.014	0.021	0.020	0.024	0.019	0.014	0.017
Zinc (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
General Water Quality							
Alkalinity as CaCO ₃ (mg/L)	243	241	252	242	252	262	263
Carbonate as CaCO ₃ (mg/L)	3	<2	<2	<2	<2	<2	<2
Bicarbonate as CaCO ₃ (mg/L)	240	241	252	242	252	262	263
Chloride (mg/L)	35	35	35	37	36	35	36
Fluoride (mg/L)	0.5	0.4	0.5	0.5	0.5	0.4	0.4
Ammonia as N (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate/Nitrite as N(mg/L)	0.98	1.04	1.14	0.77	0.68	0.67	0.89
Silica (mg/L)	18.7	18.9	15.2	15.6	15.3	15.6	15.2
Sulfate (mg/L)	380	380	380	390	390	380	390
Sulfide as S (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Organic Carbon (mg/L)	7	7	NA	NA	NA	NA	NA
Total Dissolved Solids (mg/L)	830	840	860	850	860	870	870
Total Suspended Solids (mg/L)	<5	<5	10	<5	<5	14	<5
Dissolved Radionuclides							
Gross Alpha (pCi/L)	40	35	32	33	23	25	27
Gross Alpha - U/Rn (pCi/L)	NA	NA	NA	NA	NA	NA	<0.5
Gross Beta (pCi/L)	27	26	29	19	20	27	20
Radium 226 (pCi/L)	0.26	<0.20	<0.35	0.23	0.48	0.25	<0.22
Radium 228 (pCi/L)	NA	NA	NA	NA	NA	1.40	<1.3
Lead 210 (pCi/L)	NA	NA	NA	NA	NA	<4.6	<3
Thorium 230 (pCi/L)	NA	NA	NA	NA	NA	<0.54	<0.58

Notes:
Gross Alpha-U/Rn - Gross Alpha minus contributions from Uranium and Radon
NA - Not Analyzed

TABLE 2B
ANALYTICAL DATA FOR OFF-SITE WELL AND SPRING SAMPLES

Analyte	Hurdle Well		Davis Well		BLM Well	
	4/22/08	5/13/10	7/29/09	6/23/10	7/30/09	5/13/10
Dissolved Metals						
Aluminum (mg/L)	<0.03	0.05	<0.03	<0.03	<0.03	0.07
Arsenic (mg/L)	0.0032	0.0074	0.0056	0.0044	0.0029	0.0066
Barium (mg/L)	0.015	0.016	0.032	0.032	0.017	0.016
Boron (mg/L)	0.15	0.19	0.83	0.81	0.22	0.27
Cadmium (mg/L)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium (mg/L)	82.6	79.4	40.0	42.1	112	114
Cesium (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Chromium (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (mg/L)	0.02	0.03	<0.01	<0.01	<0.01	0.02
Iron (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Lead (mg/L)	0.0006	0.0009	0.0002	0.0003	<0.0001	0.0002
Magnesium (mg/L)	85.2	78.2	45.2	45.5	91.1	91.8
Manganese (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (mg/L)	0.01	<0.01	0.03	0.04	<0.01	<0.01
Nickel (mg/L)	<0.01	0.03	<0.01	<0.01	<0.01	0.04
Potassium (mg/L)	11.2	11.0	26.2	24.9	13.8	15.3
Selenium (mg/L)	0.0484	0.0455	0.0474	0.0436	0.0561	0.0605
Sodium (mg/L)	66.9	68.0	58.4	61.9	66.9	77.8
Uranium (mg/L)	0.0256	0.0251	0.0352	0.0326	0.0389	0.0439
Vanadium (mg/L)	<0.005	0.006	0.007	0.007	0.010	0.021
Zinc (mg/L)	0.03	0.21	<0.01	<0.01	<0.01	<0.01
General Water Quality						
Alkalinity as CaCO ₃ (mg/L)	198	209	264	257	235	229
Carbonate as CaCO ₃ (mg/L)	<2	<2	5	9	<2	<2
Bicarbonate as CaCO ₃ (mg/L)	198	209	258	248	235	229
Chloride (mg/L)	35	37	16	17	21	22
Fluoride (mg/L)	0.5	0.5	0.5	0.6	0.5	0.5
Ammonia as N (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate/Nitrite as N(mg/L)	15.4	30.8	18.2	21.5	17.2	19.7
Silica (mg/L)	16.0	13.6	12.0	10.9	15.4	14.9
Sulfate (mg/L)	310	310	90	100	440	500
Sulfide as S (mg/L)	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Total Organic Carbon (mg/L)	3	3	4	7	3	3
Total Dissolved Solids (mg/L)	810	870	530	560	1020	1100
Total Suspended Solids (mg/L)	<5	<5	<5	<5	<5	<5
Dissolved Radionuclides						
Gross Alpha (pCi/L)	17	16	15	22	16	22
Gross Alpha - U/Rn (pCi/L)	NA	<0.5	NA	<0.8	NA	<0.5
Gross Beta (pCi/L)	19	14	30	31	21	15
Radium 226 (pCi/L)	<0.16	<0.3	0.33	0.32	0.47	0.36
Radium 228 (pCi/L)	NA	<1.3	1.6	<1.3	<1.5	<1.3
Lead 210 (pCi/L)	NA	<2.8	<4.8	<2.7	<4.3	3.6
Thorium 230 (pCi/L)	NA	<0.64	<0.64	2.2	<0.64	<0.65

Notes:

Gross Alpha-U/Rn - Gross Alpha minus contributions from Uranium and Radon

NA - Not Analyzed

TABLE 2B
ANALYTICAL DATA FOR OFF-SITE WELL AND SPRING SAMPLES

Analyte	Boren Well		Stone Spring			
	7/31/09	5/12/10	8/2/09	10/21/09	5/12/10	11/29/10
Dissolved Metals						
Aluminum (mg/L)	<0.03	<0.03	<0.03	<0.03	0.04	<0.03
Arsenic (mg/L)	0.0112	0.0149	0.0089	0.0083	0.0112	0.0099
Barium (mg/L)	0.059	0.060	0.028	0.027	0.024	0.021
Boron (mg/L)	0.39	0.41	0.37	0.33	0.35	0.35
Cadmium (mg/L)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium (mg/L)	64.1	59.9	52.8	51.4	50.8	51.3
Cesium (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Chromium (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Copper (mg/L)	<0.01	0.02	<0.01	<0.01	0.01	<0.01
Iron (mg/L)	<0.02	<0.02	<0.02	0.04	<0.02	0.04
Lead (mg/L)	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Magnesium (mg/L)	112	101	58.5	56.3	49.6	49.7
Manganese (mg/L)	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury (mg/L)	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum (mg/L)	<0.01	0.01	0.02	0.02	0.03	0.02
Nickel (mg/L)	<0.01	0.05	<0.01	<0.01	0.05	<0.01
Potassium (mg/L)	18.0	17.2	16.1	15.7	16.3	17.1
Selenium (mg/L)	0.0181	0.0160	0.0218	0.0223	0.0214	0.0223
Sodium (mg/L)	72.4	74.4	79.7	75.1	85.0	85.4
Uranium (mg/L)	0.0416	0.0447	0.0510	0.0527	0.0577	0.0567
Vanadium (mg/L)	0.020	0.030	0.018	<0.005	0.024	0.010
Zinc (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
General Water Quality						
Alkalinity as CaCO ₃ (mg/L)	422	409	271	274	246	231
Carbonate as CaCO ₃ (mg/L)	<2	10	<2	<2	8	6
Bicarbonate as CaCO ₃ (mg/L)	422	399	271	274	238	225
Chloride (mg/L)	87	80	59	62	59	57
Fluoride (mg/L)	0.4	0.4	0.4	0.4	0.4	0.5
Ammonia as N (mg/L)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrate/Nitrite as N(mg/L)	7.58	8.08	1.71	2.22	0.83	0.82
Silica (mg/L)	16.1	15.9	14.3	15.2	14.1	13.8
Sulfate (mg/L)	220	200	200	210	200	200
Sulfide as S (mg/L)	<0.02	<0.02	<0.02	0.05	<0.02	<0.2
Total Organic Carbon (mg/L)	6	7	4	17	4	3
Total Dissolved Solids (mg/L)	910	820	630	640	610	590
Total Suspended Solids (mg/L)	<5	<5	<5	<5	<5	<5
Dissolved Radionuclides						
Gross Alpha (pCi/L)	16	21	17	18	27	35
Gross Alpha - U/Rn (pCi/L)	NA	<0.5	NA	NA	<0.5	NA
Gross Beta (pCi/L)	25	25	25	26	20	30
Radium 226 (pCi/L)	<0.24	<0.22	<0.3	0.2	<0.27	<0.25
Radium 228 (pCi/L)	2	<1.3	<1.4	1.6	<1.3	<0.94
Lead 210 (pCi/L)	<4.9	<3.1	<3.5	<4	<3.2	<5.5
Thorium 230 (pCi/L)	<0.55	<0.63	<0.59	<0.78	<0.58	<0.63

Notes:

Gross Alpha-U/Rn - Gross Alpha minus contributions from Uranium and Radon

NA - Not Analyzed

TABLE 3
OFF-SITE WELL AND SPRING PRODUCTIVITY TESTING

Well/Spring ID	Date	Sampled (Yes/No)	Maintained Flow Rate (gpm)	Duration of Flow (min)	Field Parameters				
					Temperature (deg. C)	pH (s.u.)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)
Hurdle Well	4/22/09 ⁽¹⁾	Yes	~8	10	21	7.9	1240	6.90	108
	12/23/09 ⁽²⁾	No	15.8	42	16.4	7.64	1217	7.23	NM
	3/17/10	No	15.0	35	16.3	7.71	1311	2.78	92
	5/13/10	Yes		No Data Available - Field notes lost during subsequent field activities					
	8/24/10	No	8.8	30	16.8	7.64	1265	2.96	118
Davis Well	11/24/10	No	8.8	56	16.2	7.68	1249	5.26	97
	7/29/09 ⁽¹⁾	Yes	6.5	60	16.3	7.65	885	0.72	76
	11/4/09	No	8.6	93	16.2	7.48	832	2.07	114
	3/17/10	No	8.6	40	16.2	7.51	843	0.73	60
	6/23/10	Yes	8.6	92	16.4	7.57	859	0.69	21
	9/2/10	No	8.8	75	16.5	7.68	851	0.93	149
	11/24/10	No	9.1	37	16.4	7.42	842	1.01	88
BLM Well	7/30/09 ⁽¹⁾	Yes	7.5	20	17.2	7.36	1444	2.54	-68
	10/22/09	No	10.3	39	16.7	7.32	1343	2.60	-39
	2/11/10	No	10.7	31	14.3	7.39	1328	2.71	-41
	5/13/11	Yes		No Data Available - Field notes lost during subsequent field activities					
	8/27/10	No	17.6	20 ⁽³⁾	17.1	7.45	1381	3.47	132
	11/24/10	No	17.7	25 ⁽³⁾	16.3	7.39	1334	2.62	-42
Boren Well	8/2/09 ⁽¹⁾	Yes	12.0	253	18.9	7.44	1441	4.82	152
	10/21/09	No	11.5	57	19.4	7.37	1441	3.80	139
	3/18/10	No	10.9	41	10.9	7.40	1166	2.67	77
	5/12/11	Yes		No Data Available - Field notes lost during subsequent field activities					
	8/26/10	No	10.3	63	17.8	7.92	1092	2.83	91
	11/29/10	No	10.3	40	16.2	7.67	1145	3.05	107

TABLE 3
OFF-SITE WELL AND SPRING PRODUCTIVITY TESTING

Well/Spring ID	Date	Sampled (Yes/No)	Maintained Flow Rate (gpm)	Duration of Flow (min)	Field Parameters				
					Temperature (deg. C)	pH (s.u.)	Specific Conductance (µS/cm)	Dissolved Oxygen (mg/L)	Oxidation- Reduction Potential (mV)
Stone Spring	8/2/09 ⁽¹⁾	Yes	4.7	240	21.1	7.59	1093	4.52	146
	10/21/09	Yes	5.3	160	18.7	7.44	1082	3.92	136
	3/18/10	No	5.6	56	5.2	7.61	1034	4.85	57
	5/12/11	Yes	No Data Available - Field notes lost during subsequent field activities						
	8/26/10	No	5.4	~300	17.7	7.77	991	3.90	152
	11/29/10	Yes	5.4	62	14.6	7.48	964	4.62	157

Notes:

- (1) Sample events conducted prior to October 2009 were not performed as productivity tests and may not reflect full flow of the well/spring
- (2) Oxidation-reduction potential was out of order during 12/23/09 sampling event
- (3) Pump was run at full flow rate shown with no restrictions, then at a reduced rate (9-10 gpm) while taking measurements for 20-25 min.

deg. C - degrees Celsius
gpm - gallons per minute
NM - Not Measured
min - minutes
mg/L - milligrams per Liter
mV - millivolt
s.u. - standard unit
µS/cm - microSiemens per centimeter