



Energy Fuels Resources

August 10, 2010

Mr. Edgar Ethington
Hazardous Materials & Waste Management Division
Colorado Department of Public Health and Environment
HMWM-HWC-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

Re: Groundwater Monitoring Addendum No. 2, Piñon Ridge Mill

Dear Mr. Ethington,

This Groundwater Monitoring Addendum for the Piñon Ridge Project augments the Groundwater Monitoring Summary Report (Golder 2009a) and Groundwater Monitoring Addendum (Golder 2010). These reports were previously submitted to CDPHE with Energy Fuels Resources Corporation's (EFRC's) Radioactive Material License Application dated November 2009 and Response No. 1 to Request for Information No. 1 dated April 2010, respectively. This report includes additional monitoring data collected in the second quarter of 2010. A data CD including this report in pdf format is attached to assist the CDPHE in posting this information to their website.

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

Sincerely,

Zach Rogers, EIT
Environmental Engineer

Attachment

Cc: Phil Egidi (CDPHE), letter only
Roman Popeliak (Golder)
Frank Filas (Energy Fuels)

**GROUNDWATER MONITORING ADDENDUM NO. 2
ENERGY FUELS RESOURCES CORPORATION
URANIUM MILL LICENSING SUPPORT
PIÑON RIDGE MILL
MONTROSE COUNTY, COLORADO**

**August 10, 2010
Rev. 0**

Prepared By:



Energy Fuels Resources Corporation
44 Union Boulevard, Suite 600
Lakewood, Colorado 80228

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1.0 Introduction

Sampling and measurement of the monitoring wells and production wells located on and near the Piñon Ridge Mill site have been conducted on a quarterly basis from the fourth quarter of 2007 through the third quarter 2009. Following the third quarter 2009, the schedule for these wells was modified to an annual sampling schedule with water level measurements remaining on a quarterly schedule. In addition, off-site groundwater monitoring has been conducted from second quarter 2008 to the present. Previously submitted reports included groundwater sampling and measurement events through the first quarter of 2010. This addendum addresses the second quarter 2010 annual sampling and measurement event conducted on May 11-13, June 3, and June 24, 2010.

2.0 Groundwater Level Measurements

Groundwater level measurements of all of the monitoring and production wells were conducted on May 10, 2010 with the exception of monitoring well MW-6, which was measured on May 11 prior to sampling. Monitoring wells MW-1 through MW-4 were reported as dry, although a small amount of water was detected at the base of monitoring wells MW-1 and MW-4. Groundwater level measurements were conducted at the off-site Boren and BLM Wells prior to sampling on May 12 and 13, respectively. The remaining off-site wells were not measured because they are not designed to allow access for water level measurements without permanent alteration of the well.

Field notes from the May 11-13 sampling event were subsequently lost and water levels taken on those dates are not reported as a result. Well sampling field sheets that are available are presented in Attachment A. Refer to Table 1 and Figures 1 and 2 for groundwater level measurements collected in the second quarter of 2010 as well as historical levels included in previous reports. Figures 1 and 2 do not include off-site wells because accurate elevation data is not available for these wells.

Review of Figure 1 indicates that groundwater levels in the Chinle/Moenkopi monitoring and production wells have, with the exception of well MW-5, decreased by 0.70 to 1.84 feet since the last measurement on February 8, 2010. The water level in well MW-5 remained relatively stable with only a 0.01 foot decrease.

Figure 2 shows that water level in monitoring well MW-8B remained relatively stable with only a 0.08 foot increase in elevation. Monitoring well MW-9 was excluded from

the graphical analysis because it is completed in a zone of very low hydraulic conductivity and the intercepted groundwater appears to be from interstitial moisture rather than from groundwater flow.

Although water levels have decreased in the Chinle/Moenkopi Aquifer, the potentiometric surface map shown on Figure 6 of the Hydrogeologic Report (Golder 2009b) still accurately reflects the northeast to northwest flow paths of the local groundwater system.

3.0 Well Purging

Monitoring wells were purged to remove stagnant water and allow fresh formation water to be sampled. As discussed above, all well sampling field sheets from the May 11-13, 2010 sampling event were lost. As a result, limited field data is available for the sampling of monitoring wells MW-5, MW-6 and MW-7, the Hurdle Well, the BLM Well, the Boren Well and Stone Spring. Well sampling field sheets from the June 3 and 24, 2010 sampling events are presented in Attachment A.

The water level in monitoring well MW-5 was measured at 281.17 feet below top of casing (btoc) and was subsequently bailed as close to dry as practical on May 10. Approximately 23 gallons of water were removed from the well by hand using a dedicated bailer. The well was allowed time to recharge and was sampled on May 11. 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 immediately prior to sample collection.

The water level in monitoring well MW-6 was measured and the well was purged with a dedicated Grundfos pump prior to sampling on May 11. 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. At least three casing volumes were purged and field parameters had stabilized prior to sample collection.

The water level in monitoring well MW-7 was measured at 339.52 feet btoc on May 10. The well was micro-purged prior to sampling on May 11 with a dedicated bladder pump using low flow methods. 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 and field parameters had stabilized prior to sampling.

The water level in monitoring well MW-8B was measured at 381.31 feet btoc on May 10. Subsequent attempts to sample the well with a low flow bladder pump were unsuccessful and equipment failure was suspected. The equipment was checked out; a minor defect in the tubing was detected and a repair was made. Attempts to resample the well on June 3 were again unsuccessful with similar problems as experienced before and the dedicated tubing was subsequently replaced with new tubing. Initial attempts to sample the well on June 24 were again unsuccessful with similar problems as noted in earlier attempts. However, when the pump was raised from the sampling level of 400 feet btoc to 388 feet btoc the pump began to produce water. The pump was subsequently lowered to 392 feet btoc for sample collection. The well was micro-purged of approximately 24.5 gallons of water over 87 minutes prior to sampling on June 24 with a dedicated bladder pump using low flow methods. 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 and field parameters had stabilized prior to sampling.

A white cloudiness appearance to the groundwater was observed during the initial pumping at 392 feet btoc on June 24. Similar observations were not noted in any previous sampling events at this well. It is suspected that the monitoring well may be “silting in” to some extent. Energy Fuels will check the depth of monitoring well MW-8B during subsequent water level measurement events to determine if the well is silting in.

The water level in monitoring well MW-9 was measured at 400.84 feet btoc on May 10. The well was bailed as close to dry as practical on May 10 using a dedicated bailer. The water level in the well recovered from 423.93 feet btoc (measured immediately after bailing on 5/10) to 422.77 ft btoc (measured on 5/12), less than 14 inches of recharge over a two 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 284.84 feet btoc on May 10. The well was micro-purged of approximately 3 gallons of water over 18 minutes prior to sampling on June 3 with a bladder pump using low flow methods. 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 and field parameters had stabilized prior to sampling.

The water level in production well PW-2 was measured at 336.27 feet btoc on May 10. The well was micro-purged of 3.5 gallons of water over 19 minutes prior to sampling on June 3 with a bladder pump using low flow methods. 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 and field parameters had stabilized prior to sampling.

The water level in production well PW-3 was measured at 267.84 feet btoc on May 10. The well was micro-purged of 4 gallons of water over 17 minutes prior to sampling on June 3 with a bladder pump using low flow methods. 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 and field parameters had stabilized prior to sampling.

The water level in the Hurdle Well could not be measured due to the well design. The well was purged for at least 20 minutes from an outdoor bibcock in the full open position prior to sampling on May 13 with the installed domestic production pump. 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 and field parameters had stabilized prior to sampling.

The water level in the Davis Well could not be measured due to the well design. The well was purged of approximately 788 gallons of water over 92 minutes from the well house bibcock in the full open position at a pumping rate of 8.6 gallons per minute (gpm) prior to sampling with the installed domestic production pump. Following purging a sample was collected using the installed pump. 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 and field parameters had stabilized prior to sampling.

The water level in the BLM Well was measured prior to sampling on May 13 and purged for at least 20 minutes at full flow from the installed 1.5 inch diameter tubing with the installed production pump prior to sampling. Following purging a sample was collected from the tubing. 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 and field parameters had stabilized prior to sampling.

The water level in the Boren Well was measured prior to sampling on May 13 and was purged for at least 20 minutes from an outdoor bibcock in the full open position with the installed domestic production pump prior to sampling on May 13. Following purging, a sample was collected using the installed pump. 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 and field parameters had stabilized prior to sampling.

Stone Spring was purged for at least 20 minutes from an outdoor bibcock in the full open position prior to sampling on May 13. 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 and field parameters had stabilized prior to sampling.

4.0 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 after a minimum of 3 casing volumes had been purged and field parameters had stabilized. Samples were collected from MW-7, MW-8B, PW-1, PW-2, and PW-3 after field parameters had stabilized during micro-purging. Samples were collected from the four off-site wells and Stone Spring after a minimum of 20 minutes of purging and stabilization of field parameters. 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 ± 0.1 s.u.
- Specific Conductivity $\pm 3\%$
- Dissolved Oxygen $\pm 10\%$
- Oxidation-Reduction Potential ± 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-8B, PW-3 and the Boren Well. The containers were placed under ice in coolers and prepared for transport under chain-of-custody to ACZ Laboratories, Inc. (ACZ) in Steamboat Springs, Colorado. The samples collected on May 11-13 were hand-delivered on May 14. Samples collected on June 3 and 24 were delivered via Fed-Ex and arrived at the laboratory the day following shipment.

5.0 Groundwater Analytical Results

Groundwater samples from monitoring and production wells 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 and gross beta by Method E900.0, gross alpha minus uranium and radon by Method E900.1, radium-226 by Method E903.1, radium-228 by Method E904.0, lead-210 by Method EICHRM, and thorium-230 by Method ESM 4506).

Groundwater samples from off-site wells and Stone Spring were analyzed for:

- All parameters listed above;
- Dissolved metals (barium, cadmium, cesium, chromium, mercury, and nickel by Methods E200.7 or 200.8); and
- Total organic carbon (TOC) by method SM5310B.

The analysis for gross alpha minus uranium and radon by method E900.1 was added for this specific sampling event to further characterize the source of the gross alpha in the groundwater. Split samples were taken from each well and were sent to Energy Labs for analysis using method E900.1.

The duplicate samples from MW-8B, PW-3 and the Boren Well were analyzed only for the dissolved metals and radionuclides above, with the exception of gross alpha minus uranium and radon. A summary of the laboratory analytical results relative to CDPHE

and US EPA standards is presented in Tables 2A, 2B and 2C. Copies of the laboratory analytical reports for the monitoring wells are provided in Attachment B.

Data completeness is measured as a percentage of the targeted parameters for which unqualified data are obtained. The overall data completeness target for this project is 90 percent.

The data completeness for the samples is 100 percent from wells MW-8B, PW-1, PW-2, PW-3 and the Davis Well; 89.4 percent from the Hurdle Well, BLM Well, Boren Well and Stone Spring; and 87.5 percent from monitoring wells MW-5, MW-6 and MW-7. The 10.6 to 12.5 percent data loss at some of the wells is due to the loss of field notes containing field parameters measured at those locations. Although the 90 percent data completeness goal has not been met for some of the samples for this period, the overall data completeness for the project ranges from 94.7 to 100 percent for each of the wells, meeting the overall data recovery goal for the project.

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.

6.0 Discussion

Analytical and water level data for the on-site and off-site wells and Stone Spring is generally consistent with previously collected data (Golder 2009a) that was evaluated in the Hydrogeologic Report (Golder 2009b).

Analyses of gross alpha levels in the groundwater were performed for the previously collected groundwater samples (fourth quarter 2007 through fourth quarter 2009) and conclusions relating to those analyses were presented in the Groundwater Monitoring Addendum dated April 9, 2010 (Golder 2010). The report stated

“In summary, the gross alpha levels observed in on-site and off-site wells are primarily attributable to the elevated uranium concentrations found in the groundwater. Well MW-6, which has the lowest gross alpha levels (average of 10 pCi/L) and low uranium concentrations, is the only

exception as its gross alpha is primarily attributable to Ra-226 and its decay chain.”

As discussed previously, split samples were taken from each well during the second quarter 2010 sampling events and were sent to Energy Labs for direct analysis of gross alpha minus uranium and radon (gross α -U/Rn) for comparison with the regulatory standard of 15 pCi/L. Measured gross alpha minus uranium and radon activities were below the minimum detectable activity of 0.5 to 0.8 pCi/L in each of the on-site and off-site well and spring samples with the exception of monitoring well MW-6 sample, which measured 2.9 pCi/L. This data supports the conclusion of the April 9, 2010 addendum.

7.0 References

Golder, 2009a, Groundwater Monitoring Summary Report, Piñon Ridge Project, Montrose County, Colorado, Submitted to Energy Fuels Resources Corporation. October 2009.

Golder, 2009b, Hydrogeologic Report, Piñon Ridge Project, Montrose County, Colorado, Submitted to Energy Fuels Resources Corporation. October 2009.

Golder, 2010, Letter report re: Groundwater Monitoring Addendum, Piñon Ridge Project, Montrose County, Colorado. April 9, 2010.

TABLES

Table 1	Water Level Measurements
Table 2A	On-Site Groundwater Analytical Results
Table 2B	Off-Site Groundwater Analytical Results
Table 2C	Quality Control Analytical Results
Table 2A, 2B and 2C Notes	

**TABLE 1
WATER LEVEL MEASUREMENTS**

Well	Top of Casing Elevation (ft amsl ¹)	Depth of Well ² (ft btoc ³)	Date	Depth to Water (ft btoc ³)	Water Column Height (ft)	Groundwater Elevation (ft amsl ¹)
MW-1	5423.76	32.49	10/16/07	dry	dry	dry
			1/29/08	dry	dry	dry
			4/29/08	dry	dry	dry
			8/3/08	dry	dry	dry
			11/12/08	dry	dry	dry
			2/16/09	dry	dry	dry
			4/28/09	dry	dry	dry
			7/27/09	dry	dry	dry
			11/25/09	dry	dry	dry
			2/8/10	dry	dry	dry
5/10/10	dry	dry	dry			
MW-2	5432.65	27.42	10/16/07	25.12	77.53	5407.53
			1/29/08	dry	dry	dry
			4/29/08	26.55	76.10	5406.10
			8/3/08	dry	dry	dry
			11/12/08	dry	dry	dry
			2/16/09	dry	dry	dry
			4/28/09	dry	dry	dry
			7/27/09	dry	dry	dry
			11/25/09	dry	dry	dry
			2/8/10	dry	dry	dry
5/10/10	dry	dry	dry			
MW-3	5452.29	102.65	10/16/07	99.25	3.40	5353.04
			1/29/08	dry	dry	dry
			4/29/08	dry	dry	dry
			8/3/08	100.21	2.44	5352.08
			11/12/08	100.65	2.00	5351.64
			2/16/09	dry	dry	dry
			4/28/09	dry	dry	dry
			7/27/09	dry	dry	dry
			11/27/09	dry	dry	dry
			2/8/10	dry	dry	dry
5/10/10	dry	dry	dry			
MW-4	5475.55	67.67	10/16/07	dry	dry	dry
			1/29/08	dry	dry	dry
			4/29/08	dry	dry	dry
			8/3/08	dry	dry	dry
			11/12/08	dry	dry	dry
			2/16/09	dry	dry	dry
			4/28/09	dry	dry	dry
			7/27/09	dry	dry	dry
			11/25/09	dry	dry	dry
			2/8/10	dry	dry	dry
5/10/10	dry	dry	dry			

**TABLE 1
WATER LEVEL MEASUREMENTS**

MW-5	5572.89	302	10/16/07	292.72	9	5280.17
			1/31/08	282.50	20	5290.39
			4/29/08	281.94	20	5290.95
			8/3/08	281.94	20	5290.95
			11/12/08	281.66	20	5291.23
			2/19/09	281.02	21	5291.87
			4/30/09	280.73	21	5292.16
			7/31/09	280.97	21	5291.92
			11/25/09	282.32	20	5290.57
			2/8/10	281.16	21	5291.73
			5/10/10	281.17	21	5291.72
MW-6	5554.47	487	10/16/07	407.45	80	5147.02
			1/29/08	408.00	79	5146.47
			4/22/08	407.59	80	5146.88
			4/29/08	407.40	80	5147.07
			8/4/08	406.94	80	5147.53
			11/12/08	406.86	80	5147.61
			2/16/09	407.78	80	5146.69
			4/28/09	407.77	80	5146.70
			7/27/09	407.67	80	5146.80
			11/25/09	407.48	80	5146.99
			2/8/10	407.62	80	5146.85
			5/11/10	notes lost		
MW-7	5624.93	428	8/2/08	337.68	90	5287.25
			11/12/08	335.71	92	5289.22
			2/16/09	335.38	92	5289.55
			4/28/09	335.87	92	5289.06
			7/27/09	335.82	92	5289.11
			11/25/09	338.64	89	5286.29
			2/8/10	338.82	89	5286.11
			5/10/10	339.52	88	5285.41
MW-8B	5530.19	425	8/2/08	381.43	43	5148.76
			11/12/08	381.52	43	5148.67
			2/16/09	381.61	43	5148.58
			4/28/09	381.46	43	5148.73
			7/27/09	381.51	43	5148.68
			11/25/09	381.42	43	5148.77
			2/8/10	381.39	43	5148.80
			5/10/10	381.31	43	5148.88
MW-9	5527.72	424	8/2/08	406.22	18	5121.50
			11/12/08	409.58	15	5118.14
			2/16/09	413.23	11	5114.49
			4/28/09	416.47	8	5111.25
			7/27/09	416.99	7	5110.73
			11/25/09	410.08	14	5117.64
			2/8/10	405.97	18	5121.75
			5/10/10	400.84	23	5126.88

**TABLE 1
WATER LEVEL MEASUREMENTS**

PW-1	5570.66	382	8/2/08	280.70	101	5289.96
			11/12/08	280.07	102	5290.59
			2/16/09	280.13	102	5290.53
			4/28/09	280.69	101	5289.97
			7/27/09	280.21	102	5290.45
			11/27/09	283.54	98	5287.12
			2/8/10	284.04	98	5286.62
			5/10/10	284.84	97	5285.82
PW-2	5622.46	422	8/2/08	331.22	90	5291.24
			11/12/08	332.35	89	5290.11
			2/16/09	331.98	90	5290.48
			4/28/09	332.43	89	5290.03
			7/27/09	332.13	90	5290.33
			11/25/09	333.91	88	5288.55
			2/8/10	334.43	87	5288.03
			5/10/10	336.27	85	5286.19
PW-3	5557.88	382	8/2/08	256.65	125	5301.23
			11/12/08	261.76	120	5296.12
			2/16/09	263.13	119	5294.75
			4/28/09	264.08	118	5293.80
			7/27/09	263.93	118	5293.95
			11/27/09	266.52	115	5291.36
			2/8/10	266.94	115	5290.94
			5/10/10	267.84	114	5290.04
BLM Well	NM	NM	7/30/09	168.68	NM	NM
			10/22/09	168.69	NM	NM
			2/11/10	168.87	NM	NM
			5/13/10	notes lost		
Boren Well	NM	NM	8/2/09	28.06	NM	NM
			10/21/09	28.06	NM	NM
			3/18/10	33.72	NM	NM
			5/12/10	notes lost		

NOTES:

The depth-to-water reading for MW-5 in October 2007 is suspect.

NM - Not Measured

1) ft amsl: feet above mean sea level

2) For MW-1 through MW-4, well depths were measured with a weighted tape. For remaining wells, well depths are approximate and were estimated from well completion information and the measured height of the PVC casing above ground surface.

3) ft btoc: feet below top of casing

**TABLE 2A
ON-SITE GROUNDWATER ANALYTICAL RESULTS**

Well Number		MW-5								MW-6								
Sample Date		1/31/2008	4/30/2008	8/7/2008	11/14/2008	2/19/2009	4/30/2009	7/31/2009	5/11/2010	10/16/2007	1/29/2008	4/29/2008	8/7/2008	11/14/2008	2/18/2009	4/28/2009	7/28/2009	5/11/2010
Field Parameters	Unit																	
Temperature	°C	12.4	17.7	16.3	15.8	14.5	18.8	16.9	FL	17.9	18.0	18.8	19.0	18.8	17.9	18.7	19.6	FL
pH	s.u.	10.25	7.54	7.50	7.87	7.96	7.82	7.84	FL	7.69	5.27	7.01	6.86	6.95	7.07	6.85	7.08	FL
Conductivity	µS/cm	2,338	1,194	1,225	1,101	1,043	1,093	1,157	FL	3,170	5,319	3,140	3,430	3,290	3,510	3,290	3,270	FL
Dissolved Oxygen	mg/L	6.02	2.06	5.93	5.76	6.82	12.18	7.35	FL	2.62	1.47	0.02	0.06	0.14	0.11	0.24	0.11	FL
ORP	mV	NR	NR	203	150	86	72	106	FL	NR	-310	-373	-361	-331	-330	-355	-354	FL
General Chemistry																		
Alkalinity as CaCO ₃	mg/L	240	234	203	207	205	203	211	224	392	394	386	387	397	399	388	406	404
Carbonate as CaCO ₃	mg/L	NA	<2	5	<2	13	<2	<2	7	<1	<2	<2	<2	<2	<2	<2	<2	<2
Bicarbonate as CaCO ₃	mg/L	240	234	203	207	192	203	211	217	478	394	386	387	397	399	388	406	404
Chloride	mg/L	21	22	33	24	24	21	21	23	142	170	160	170	160	170	160	170	170
Fluoride	mg/L	0.4	0.5	0.6	0.6	0.5	0.7	0.5	0.5	0.3	0.3	0.4	0.4	0.4	0.3	0.4	0.3	0.4
Ammonia as N	mg/L	0.08	0.23	0.06	0.10	<0.05	<0.05	<0.05	0.06	1.01	0.8	0.95	1.05	1.06	0.91	1.01	0.98	0.97
Nitrate/Nitrite as N	mg/L	1.09	1.20	2.51	2.17	1.96	2.26	2.31	2.40	<0.1	<0.02	<0.02	0.06	<0.02	0.03	0.02	0.05	0.05
Silica	mg/L	17.7	17.4	17.5	14.4	16.1	14.2	15.4	15.3	10.3	10.7	10.7	11.4	9.8	10.0	9.5	10.7	10.0
Sulfate	mg/L	390	370	390	370	370	360	360	390	1330	1400	1070	1490	1460	1490	1460	1560	1490
Sulfide as S	mg/L	0.04	<0.02	<0.02	<0.02	<0.08	<3	<0.2	<0.02	NA	13.4	10.3	11.9	11.5	12.4	13.2	11.6	15.9
TOC	mg/L	12	8	NA	NA	NA	NA	NA	NA	<1	NA	12	NA	NA	NA	NA	NA	NA
TDS	mg/L	840	820	820	770	790	770	770	850	2400	2740	1140	2670	2750	2760	2800	2770	2800
TSS	mg/L	120	780	NA	78	350	337	237	54	13.3	<5	<5	NA	13	<5	<5	<5	<5
Dissolved Metals																		
Aluminum	mg/L	0.23	<0.03	0.04	0.04	0.32	0.05	0.05	0.13	<0.1	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	0.09
Arsenic	mg/L	0.0015	0.0021	0.0025	0.0028	0.0027	0.0032	0.0017	0.0034	<0.001	<0.001	0.0006	0.001	<0.01	0.002	<0.03	0.006	0.003
Barium	mg/L	0.034	0.021	NA	NA	NA	NA	NA	NA	<0.1	NA	0.024	NA	NA	NA	NA	NA	NA
Boron	mg/L	0.59	0.53	0.47	0.46	0.45	0.42	0.41	0.50	2.20	2.30	2.27	2.5	2.36	2.39	2.36	2.35	2.45
Cadmium	mg/L	0.0002	<0.0001	NA	NA	NA	NA	NA	NA	<0.005	NA	0.0001	NA	NA	NA	NA	NA	NA
Calcium	mg/L	69.8	76.6	69.1	69.5	70.2	72.0	69.5	75.8	109	123	121	133	132	137	131	131	136
Cesium	mg/L	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.1	NA	<0.0002	NA	NA	NA	NA	NA	NA
Chromium	mg/L	<0.01	<0.01	NA	NA	NA	NA	NA	NA	<0.005	NA	<0.01	NA	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	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02
Iron	mg/L	0.19	<0.02	<0.02	0.04	0.22	<0.02	0.06	0.05	1.46	<0.04	<0.04	<0.04	<0.04	0.12	<0.04	<0.02	<0.04
Lead	mg/L	0.0020	<0.0001	<0.0001	<0.0001	0.0006	<0.0001	0.0001	<0.0001	<0.001	<0.0004	<.0001	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	<0.0002
Magnesium	mg/L	54.5	61.2	60	57.4	58.7	59.3	58.4	54.9	261	284	288	309	295	304	299	312	298
Manganese	mg/L	0.042	0.012	0.028	0.025	0.053	0.015	0.021	0.090	0.060	0.010	0.01	<0.01	0.020	<0.01	<0.01	0.015	0.02
Mercury	mg/L	<0.0002	<0.0002	NA	NA	NA	NA	NA	NA	<0.001	NA	<0.0002	NA	NA	NA	NA	NA	NA
Molybdenum	mg/L	0.03	0.03	0.02	0.01	<0.01	0.02	<0.01	0.02	<0.1	<0.02	0.030	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nickel	mg/L	<0.01	<0.01	NA	NA	NA	NA	NA	NA	0.05	NA	<0.01	NA	NA	NA	NA	NA	NA
Potassium	mg/L	17.6	18.1	19.0	16.9	16.9	16.3	16.8	17.8	91.0	98.4	95.4	105	99.7	97.2	93.0	102	97.4
Selenium	mg/L	0.0170	0.0358	0.0200	0.0231	0.0206	0.0231	0.0207	0.0169	0.003	0.027	0.1660	0.0321	0.236	0.0478	0.0413	0.217	0.1690
Sodium	mg/L	136	127	109	95.0	89.9	88.2	88.8	118	172	205	190	219	208	206	190	200	212
Uranium	mg/L	0.0760	0.0896	0.106	0.1100	0.1030	0.1070	0.0911	0.0975	<0.0003	<0.0002	<0.0001	<0.003	<0.002	0.0003	<0.0002	<0.0002	<0.0002
Vanadium	mg/L	0.007	0.006	0.012	0.009	0.013	0.008	0.007	0.013	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03
Zinc	mg/L	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.02	<0.02	<0.02	<0.02	<0.01	<0.02
Dissolved Radionuclides																		
Gross Alpha	pCi/L	50	65	49	49	41	44	56	58	11.1	17.0	12	9.7	<7.3	12	<6.8	11	<8.2
Gross Alpha - U/Rn	pCi/L	NA	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	2.9
Gross Beta	pCi/L	32	41	32	30	27	24	31	31	92.8	140.0	91	110	99	96	81	93	100
Radium 226	pCi/L	0.53	0.33	0.42	<0.35	0.3	0.37	0.34	0.3	1.6	2.2	1.9	3.3	1.9	2.1	2	1.6	1.8
Radium 228	pCi/L	NA	NA	NA	NA	NA	NA	1.9	<1.2	NA	NA	NA	NA	NA	NA	NA	4.4	3.4
Lead 210	pCi/L	NA	NA	NA	NA	NA	NA	<4.1	<3.1	NA	NA	NA	NA	NA	NA	NA	13	<3.5
Thorium 230	pCi/L	NA	NA	NA	NA	NA	NA	<0.61	<0.62	NA	NA	NA	NA	NA	NA	NA	<0.59	<0.61

**TABLE 2A
ON-SITE GROUNDWATER ANALYTICAL RESULTS**

Well Number		MW-7							MW-8B						MW-9
Sample Date		6/7/2008	9/9/2008	11/13/2008	2/18/2009	4/29/2009	7/31/2009	5/11/2010	7/21/2008	11/13/2008	2/18/2009	4/29/2009	7/29/2009	6/24/2010	9/10/2008
Field Parameters	Unit														
Temperature	°C	18.7	15.8	15.6	14.6	15.7	19.9	FL	18.4	15.3	14.6	16.0	17.4	14.8	17.6
pH	s.u.	8.02	7.84	7.58	7.58	7.43	7.56	FL	6.36	6.83	6.83	6.70	6.83	6.82	8.23
Conductivity	µS/cm	1,064	1,276	1,253	1,338	1,289	1,290	FL	3,060	3,000	2,810	2,940	3,020	2,890	993
Dissolved Oxygen	mg/L	2.15	3.97	3.80	4.77	5.59	3.42	FL	6.10	0.29	0.25	0.70	0.11	0.18	2.12
ORP	mV	28.8	161	138	88	62	169	FL	-122.8	-154	-199	-203	-189	-203	154
General Chemistry															
Alkalinity as CaCO ₃	mg/L	154	198	218	223	222	228	211	426	436	389	449	474	469	243
Carbonate as CaCO ₃	mg/L	<2	<2	<2	4	4	<2	3	<2	<2	<2	<2	<2	<2	11
Bicarbonate as CaCO ₃	mg/L	154	198	218	218	218	228	208	426	436	389	449	474	469	232
Chloride	mg/L	25	28	30	32	31	30	24	48	37	40	42	41	39	19
Fluoride	mg/L	0.7	0.6	0.6	0.5	0.5	0.5	0.3	0.7	0.6	0.5	0.6	0.5	0.7	1.0
Ammonia as N	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	0.12	<0.05	0.09	0.05	0.18	<0.5
Nitrate/Nitrite as N	mg/L	0.61	0.85	0.72	0.77	0.75	0.69	1.18	0.04	<0.02	0.03	0.04	<0.02	3.22	10.2
Silica	mg/L	15.8	19.7	17.5	19.3	17.4	18.3	21.0	11.7	17.3	18.5	20.2	16.9	16.6	11.8
Sulfate	mg/L	460	460	460	480	470	460	470	1810	1370	1450	1680	1540	1550	190
Sulfide as S	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	1.9	0.61	0.19	0.05	0.44	<0.02	0.10
TOC	mg/L	9	NA	NA	NA	NA	NA	NA	29	NA	NA	NA	NA	NA	18
TDS	mg/L	850	930	970	940	930	970	950	3040	2520	2560	2980	2850	2670	610
TSS	mg/L	<5	5	9	<5	<5	<5	<5	833	18	<5	<5	<5	310	168
Dissolved Metals															
Aluminum	mg/L	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.06	<0.06	0.09	<0.03	<0.06	<0.03	0.07
Arsenic	mg/L	0.0073	0.0046	0.0059	0.0062	<0.03	0.0054	0.0088	0.002	<0.01	0.003	0.007	0.007	0.006	0.0111
Barium	mg/L	0.016	NA	NA	NA	NA	NA	NA	0.038	NA	NA	NA	NA	NA	0.044
Boron	mg/L	0.21	0.31	0.31	0.36	0.34	0.33	0.38	0.36	0.48	0.52	0.47	0.46	0.53	2.63
Cadmium	mg/L	<0.0001	NA	NA	NA	NA	NA	NA	<0.0002	NA	NA	NA	NA	NA	<0.0001
Calcium	mg/L	92.6	101.0	100	103	104	101	101	495	368	385	500	384	409	8.8
Cesium	mg/L	<0.0002	NA	NA	NA	NA	NA	NA	<0.0004	NA	NA	NA	NA	NA	<0.0002
Chromium	mg/L	0.03	NA	NA	NA	NA	NA	NA	<0.02	NA	NA	NA	NA	NA	<0.01
Copper	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.02	<0.02	<0.02	<0.01	0.02	<0.01	<0.01
Iron	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.12	0.91	<0.04	1.48	1.43	1.77	0.03
Lead	mg/L	0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.002	<0.0002	<0.0002	<0.0002	0.0010	<0.0001
Magnesium	mg/L	61.0	75.0	72.9	77.0	76.0	76.0	77.6	230	217	228	254	218	257	4.8
Manganese	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.33	1.43	0.81	0.937	1.15	0.802	0.019
Mercury	mg/L	<0.0002	NA	NA	NA	NA	NA	NA	<0.0002	NA	NA	NA	NA	NA	<0.0002
Molybdenum	mg/L	0.03	0.01	0.01	<0.01	0.02	<0.01	0.01	0.04	<0.02	<0.02	<0.01	<0.02	0.02	0.06
Nickel	mg/L	<0.01	NA	NA	NA	NA	NA	NA	<0.02	NA	NA	NA	NA	NA	<0.01
Potassium	mg/L	18.1	16.8	16.9	16.4	15.5	16.2	16.0	16.7	20.8	19.7	20.3	18.2	20.2	12.0
Selenium	mg/L	0.0273	0.0279	0.0309	0.0280	0.0270	0.0236	0.0256	0.079	0.010	0.0007	0.0002	0.0004	<0.0002	0.0017
Sodium	mg/L	79.2	82.7	82.2	83.1	80.2	81.3	79.1	34.1	29.7	29.4	32.8	29.8	31.0	202
Uranium	mg/L	0.0775	0.1030	0.1080	0.0986	0.0952	0.0970	0.0905	0.0578	0.033	0.0861	0.0164	0.0143	0.0055	0.0245
Vanadium	mg/L	0.018	0.014	0.016	0.010	0.015	0.014	0.012	<0.01	<0.01	<0.01	<0.005	<0.01	<0.005	0.025
Zinc	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.02	<0.02	<0.01	0.02	<0.01	<0.01
Dissolved Radionuclides															
Gross Alpha	pCi/L	36	56	42	45	51	70	46	42	23	7	11	15	12	26
Gross Alpha - U/Rn	pCi/L	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA	NA	<0.8	NA
Gross Beta	pCi/L	34	33	40	29	33	36	31	23.0	24.0	23	20	22	37	20
Radium 226	pCi/L	<0.35	<0.25	<0.4	<0.28	<0.17	0.17	0.3	12.0	0.54	0.49	0.89	0.33	0.73	<0.45
Radium 228	pCi/L	NA	NA	NA	NA	NA	<1.5	<1.3	NA	NA	NA	NA	1.5	<1.5	NA
Lead 210	pCi/L	NA	NA	NA	NA	NA	<3	<3	NA	NA	NA	NA	5.4	<3	NA
Thorium 230	pCi/L	NA	NA	NA	NA	NA	<0.59	<0.53	NA	NA	NA	NA	<0.59	1.5	NA

**TABLE 2A
ON-SITE GROUNDWATER ANALYTICAL RESULTS**

Well Number		PW-1							PW-2						
Sample Date		8/12/2008	8/13/2008	11/14/2008	2/24/2009	4/30/2009	7/30/2009	6/3/2010	8/8/2008	8/11/2008	11/13/2008	2/24/2009	4/29/2009	7/31/2009	6/3/2010
Field Parameters	Unit														
Temperature	°C	18.0	17.5	15.4	15.0	15.8	17.9	16.8	18.8	20.0	14.6	15.0	16.2	20.8	15.4
pH	s.u.	7.50	7.02	7.53	7.52	7.43	7.72	7.45	7.52	7.49	7.31	7.40	7.39	7.37	7.46
Conductivity	µS/cm	1,151	1,132	1,161	1,247	1,184	1,263	1,196	1,294	1,317	1,275	1,391	1,318	1,357	1,332
Dissolved Oxygen	mg/L	7.35	7.20	0.81	0.09	3.29	0.49	0.48	6.13	5.47	1.52	0.22	0.50	0.69	0.18
ORP	mV	31	142	-154	-144	-162	-151	-188	100	90	-124	-210	-204	-183	-247
General Chemistry															
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
TOC	mg/L	10	9	NA	NA	NA	NA	NA	8	11	NA	NA	NA	NA	NA
TDS	mg/L	810	810	820	810	820	830	840	940	930	920	910	940	940	960
TSS	mg/L	<5	<5	106	24	18	25	38	38	43	55	66	49	93	61
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	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	<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
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	NA	<1.5	NA	NA	NA	NA	NA	<1.5	<1.3
Lead 210	pCi/L	NA	NA	NA	NA	NA	NA	<5	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

**TABLE 2A
ON-SITE GROUNDWATER ANALYTICAL RESULTS**

Well Number	Sample Date	PW-3							CDPHE Domestic Water Supply Standards	CDPHE Agricultural Standards	EPA Drinking Water Standards
		8/6/2008	8/7/2008	11/13/2008	2/26/2009	4/30/2009	7/31/2009	6/3/2010			
Field Parameters	Unit										
Temperature	°C	15.7	16.0	13.7	14.7	15.1	18.1	15.7	None	None	None
pH	s.u.	7.59	7.56	7.58	7.66	7.42	7.83	7.54	6.5-8.5	6.5-8.5	6.5-8.5
Conductivity	µS/cm	1,256	1,245	1,218	1,306	1,240	1,299	1,208	None	None	None
Dissolved Oxygen	mg/L	7.68	7.70	7.18	7.39	10.33	4.78	7.63	None	None	None
ORP	mV	61	105	95	34	-20	-55	-88	None	None	None
General Chemistry											
Alkalinity as CaCO ₃	mg/L	243	241	252	242	252	262	263	None	None	None
Carbonate as CaCO ₃	mg/L	3	<2	<2	<2	<2	<2	<2	None	None	None
Bicarbonate as CaCO ₃	mg/L	240	241	252	242	252	262	263	None	None	None
Chloride	mg/L	35	35	35	37	36	35	36	250	None	250 ⁽¹⁾
Fluoride	mg/L	0.5	0.4	0.5	0.5	0.5	0.4	0.4	4.0	2	4.0(2.0 ⁽¹⁾)
Ammonia as N	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	None	None	None
Nitrate/Nitrite as N	mg/L	0.98	1.04	1.14	0.77	0.68	0.67	0.89	10.0	100	10
Silica	mg/L	18.7	18.9	15.2	15.6	15.3	15.6	15.2	None	None	None
Sulfate	mg/L	380	380	380	390	390	380	390	250	None	250 ⁽¹⁾ (500 ⁽²⁾)
Sulfide as S	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	None	None	None
TOC	mg/L	7	7	NA	NA	NA	NA	NA	None	None	None
TDS	mg/L	830	840	860	850	860	870	870	None	None	500 ⁽¹⁾
TSS	mg/L	<5	<5	10	<5	<5	14	<5	None	None	None
Dissolved Metals											
Aluminum	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	None	5	0.05 ⁽¹⁾
Arsenic	mg/L	0.0135	0.0138	0.0118	0.0120	0.0118	0.0078	0.0090	0.01	0.1	0.01
Barium	mg/L	0.032	0.032	NA	NA	NA	NA	NA	2.0	None	2
Boron	mg/L	0.39	0.37	0.42	0.43	0.43	0.41	0.44	None	0.75	None
Cadmium	mg/L	0.0001	<0.0001	NA	NA	NA	NA	NA	0.005	0.01	0.005
Calcium	mg/L	67.0	66.9	72.7	73.7	76.3	74	71.9	None	None	None
Cesium	mg/L	<0.0002	<0.0002	NA	NA	NA	NA	NA	None	None	None
Chromium	mg/L	<0.01	<0.01	NA	NA	NA	NA	NA	0.1	0.1	0.1 (total)
Copper	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	1	0.2	1.3 (1.0 ⁽¹⁾)
Iron	mg/L	0.02	0.02	0.06	<0.02	0.04	0.25	0.04	0.3	5	0.3 ⁽¹⁾
Lead	mg/L	0.0002	<0.0001	<0.0001	<0.0001	0.0010	<0.0001	<0.0001	0.05	0.1	0.015
Magnesium	mg/L	80.6	82.4	70.0	71.7	72.7	72.2	68.5	None	None	None
Manganese	mg/L	<0.005	<0.005	0.008	<0.005	<0.005	0.021	<0.005	0.05	0.2	0.05 ⁽¹⁾
Mercury	mg/L	<0.0002	<0.0002	NA	NA	NA	NA	NA	0.002	0.01	0.002
Molybdenum	mg/L	<0.01	<0.01	0.01	<0.01	0.02	<0.01	0.03	0.035	None	None
Nickel	mg/L	<0.01	<0.01	NA	NA	NA	NA	NA	0.1	0.2	None
Potassium	mg/L	12.7	12.3	14.3	14.3	14.3	14.6	13.9	None	None	None
Selenium	mg/L	0.0208	0.0203	0.0215	0.0209	0.0196	0.0176	0.0150	0.05	0.02	0.05
Sodium	mg/L	100	98.9	102	101	101	102	104	None	None	20 ⁽²⁾
Uranium	mg/L	0.0826	0.0837	0.0797	0.0731	0.0771	0.0665	0.0735	0.03	None	0.030 ⁽¹⁾
Vanadium	mg/L	0.014	0.021	0.020	0.024	0.019	0.014	0.017	None	0.1	None
Zinc	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	5	2	5 ⁽¹⁾
Dissolved Radionuclides											
Gross Alpha	µCi/L	40	35	32	33	23	25	27	15-	None	15 ⁽³⁾
Gross Alpha - U/Rn	µCi/L	NA	NA	NA	NA	NA	NA	<0.5			
Gross Beta	µCi/L	27	26	29	19	20	27	20	4 mrem/yr	None	4 mrem/yr
Radium 226	µCi/L	0.26	<0.20	<0.35	0.23	0.48	0.25	<0.22	5 (total)	5 (total)	5 (total)
Radium 228	µCi/L	NA	NA	NA	NA	NA	<1.5	<1.3			
Lead 210	µCi/L	NA	NA	NA	NA	NA	<4.6	<3	None	None	None
Thorium 230	µCi/L	NA	NA	NA	NA	NA	<0.54	<0.58	60 (Total+Th-232)	None	None

**TABLE 2B
OFF-SITE GROUNDWATER ANALYTICAL RESULTS**

Well ID		Hurdle Well		Davis Well		BLM Well		Boren Well		Stone Spring		
Sample Date		4/22/2008	5/13/2010	7/29/2009	6/23/2010	7/30/2009	5/13/2010	7/31/2009	5/12/2010	8/2/2009	10/21/2009	5/12/2010
Field Parameters	Unit											
Temperature	°C	21	FL	18.8	16.2	18.4	FL	20.1	FL	21.1	18.7	FL
pH	s.u.	7.9	FL	7.72	7.51	7.42	FL	7.50	FL	7.59	7.44	FL
Conductivity	µS/cm	1240	FL	885	843	1444	FL	1441	FL	1093	1082	FL
Dissolved Oxygen	mg/L	6.90	FL	0.72	0.73	2.54	FL	4.82	FL	4.52	3.92	FL
ORP	mV	108	FL	76	60	-68	FL	152	FL	146	136	FL
General Chemistry												
Alkalinity as CaCO ₃	mg/L	198	209	264	257	235	229	422	409	271	274	246
Carbonate as CaCO ₃	mg/L	<2	<2	5	9	<2	<2	<2	10	<2	<2	8
Bicarbonate as CaCO ₃	mg/L	198	209	258	248	235	229	422	399	271	274	238
Chloride	mg/L	35	37	16	17	21	22	87	80	59	62	59
Fluoride	mg/L	0.5	0.5	0.5	0.6	0.5	0.5	0.4	0.4	0.4	0.4	0.4
Ammonia as N	mg/L	<0.05	<0.05	<0.05	<0.05	<0.05	<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	7.58	8.08	1.71	2.22	0.83
Silica	mg/L	16.0	13.6	12.0	10.9	15.4	14.9	16.1	15.9	14.3	15.2	14.1
Sulfate	mg/L	310	310	90	100	440	500	220	200	200	210	200
Sulfide as S	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.05	<0.02
TOC	mg/L	3	3	4	7	3	3	6	7	4	17	4
TDS	mg/L	810	870	530	560	1020	1100	910	820	630	640	610
TSS	mg/L	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Dissolved Metals												
Aluminum	mg/L	<0.03	0.05	<0.03	<0.03	<0.03	0.07	<0.03	<0.03	<0.03	<0.03	0.04
Arsenic	mg/L	0.0032	0.0074	0.0056	0.0044	0.0029	0.0066	0.0112	0.0149	0.0089	0.0083	0.0112
Barium	mg/L	0.015	0.016	0.032	0.032	0.017	0.016	0.059	0.060	0.028	0.027	0.024
Boron	mg/L	0.15	0.19	0.83	0.81	0.22	0.27	0.39	0.41	0.37	0.33	0.35
Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<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	64.1	59.9	52.8	51.4	50.8
Cesium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<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	<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	<0.01	0.02	<0.01	<0.01	0.01
Iron	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	<0.02
Lead	mg/L	0.0006	0.0009	0.0002	0.0003	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium	mg/L	85.2	78.2	45.2	45.5	91.1	91.8	112	101	58.5	56.3	49.6
Manganese	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<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	<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	<0.01	0.01	0.02	0.02	0.03
Nickel	mg/L	<0.01	0.03	<0.01	<0.01	<0.01	0.04	<0.01	0.05	<0.01	<0.01	0.05
Potassium	mg/L	11.2	11.0	26.2	24.9	13.8	15.3	18.0	17.2	16.1	15.7	16.3
Selenium	mg/L	0.0484	0.0455	0.0474	0.0436	0.0561	0.0605	0.0181	0.0160	0.0218	0.0223	0.0214
Sodium	mg/L	66.9	68.0	58.4	61.9	66.9	77.8	72.4	74.4	79.7	15.2	85.0
Uranium	mg/L	0.0256	0.0251	0.0352	0.0326	0.0389	0.0439	0.0416	0.0447	0.0510	0.0527	0.0577
Vanadium	mg/L	<0.005	0.006	0.007	0.007	0.010	0.021	0.020	0.030	0.018	<0.005	0.024
Zinc	mg/L	0.03	0.21	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dissolved Radionuclides												
Gross Alpha	ρCi/L	17	16	15	22	16	22	16	21	17	18	27
Gross Alpha - U/Rn	ρCi/L	NA	<0.5	NA	<0.8	NA	<0.5	NA	<0.5	NA	NA	<0.5
Gross Beta	ρCi/L	19	14	30	31	21	15	25	25	25	26	20
Radium 226	ρCi/L	0.08	<0.3	0.33	0.32	0.47	0.36	0.13	<0.22	0.07	0.2	<0.27
Radium 228	ρCi/L	NA	<1.3	1.6	<1.3	<1.5	<1.3	2	<1.3	<1.4	1.6	<1.3
Lead 210	ρCi/L	NA	<2.8	<4.8	<2.7	<4.3	3.6	<4.9	<3.1	<3.5	<4	<3.2
Thorium 230	ρCi/L	NA	<0.64	<0.64	2.2	<0.64	<0.65	<0.55	<0.63	<0.59	<0.78	<0.58

**TABLE 2C
QUALITY CONTROL ANALYTICAL RESULTS**

Well Number	DUP-1 (MW-6)	DUP1-72108 (MW-8B)	DUP091008 (MW-9)	DUP-111408 (PW-1)	MW-7 DUP (MW-7)	MW-5 DUP (MW-5)	DUP022409 (PW-2)	DUP1-0409 (MW-6)	DUP2-0409 (PW-3)	DUPLICATE (MW-8B)	DUPLICATE (PW-1)	DUP051210 (Boren Well)	DUP060310 (PW-3)	DUPLICATE (MW-8B)	Equipment Rinsate - Sample Pump	Equipment Rinsate - 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	4/28/2009	4/30/2009	7/29/2009	7/30/2009	5/12/2010	6/3/2010	6/24/2010	10/16/2007	7/22/2008	
Field Parameters	Unit																
Temperature	°C	18.8	18.4	17.6	15.4	14.6	14.5	15.1	18.7	15.1	17.4	17.9	FL	15.7	14.8	NA	NA
pH	s.u.	7.01	6.36	8.23	7.53	7.52	7.96	7.41	6.85	7.47	6.83	7.72	FL	7.54	6.82	NA	NA
Conductivity	µS/cm	3,140	3,060	993	1,161	1,338	1,043	1,391	3,290	1,243	3,020	1,263	FL	1,208	2,890	NA	NA
Dissolved Oxygen	mg/L	0.02	6.10	2.12	0.81	4.78	6.82	0.24	0.24	10.33	0.11	0.49	FL	7.63	0.18	NA	NA
ORP	mV	-373	-122.8	154	-154	88	86	-209	-355	-20	-189	-151	FL	-88	-203	NA	NA
General Chemistry																	
Alkalinity as CaCO ₃	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbonate as CaCO ₃	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate as CaCO ₃	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Chloride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Fluoride	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ammonia as N	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate/Nitrite as N	mg/L	NA	NA	NA	NA	NA	NA	NA	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	9.9	15.2	12.4	19.0	16.0	15.3	16.6	NA	0.5
Sulfate	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide as S	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TDS	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TSS	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Dissolved Metals																	
Aluminum	mg/L	<0.03	<0.03	0.08	<0.03	0.03	0.95	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	NA	<0.03
Arsenic	mg/L	<0.0005	0.002	0.0110	0.0008	0.0062	0.0028	<0.0005	<0.03	0.0124	0.0005	0.0067	0.0147	0.0095	0.0059	NA	<0.0005
Barium	mg/L	0.025	0.040	0.046	0.006	0.013	0.065	0.006	0.021	0.009	0.008	0.024	0.061	0.013	0.036	NA	<0.03
Boron	mg/L	2.39	0.37	2.65	0.30	0.36	0.44	0.47	2.48	0.43	0.32	0.50	0.41	0.44	0.53	NA	<0.01
Cadmium	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0004	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	NA	<0.0001
Calcium	mg/L	129	515	8.9	68.3	103.0	70.3	83.3	139	75.8	69.1	403	60.1	72.2	407	NA	0.7
Cesium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<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	<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	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	NA	<0.01
Iron	mg/L	<0.02	0.13	0.03	2.09	<0.02	0.80	21.40	<0.02	0.03	2.80	1.49	<0.02	0.02	1.76	NA	0.03
Lead	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0020	<0.0002	<0.0001	0.0014	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	NA	<0.0005
Magnesium	mg/L	314	237	4.8	83.5	76.7	58.4	65.9	327	72.6	81.2	227.0	100	69.2	254	NA	<0.2
Manganese	mg/L	0.012	0.34	0.042	0.160	<0.005	0.172	0.227	<0.005	<0.005	0.150	1.040	<0.005	<0.005	0.807	NA	<0.005
Mercury	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<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	0.01	0.02	<0.01	0.01	<0.01	0.02	0.01	NA	<0.01
Nickel	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.01	<0.01	0.04	<0.01	<0.01	NA	<0.01
Potassium	mg/L	107	17.0	12.2	10.4	16.5	16.8	17.1	98.9	15.3	10.7	19.2	16.8	13.9	19.9	NA	<0.03
Selenium	mg/L	0.1440	0.081	0.0018	0.0097	0.0256	0.0207	0.0025	0.0288	0.0195	0.0078	0.0006	0.0162	0.0152	0.0002	NA	<0.001
Sodium	mg/L	209	34.7	202	73.2	83.5	89.5	103	196	100	73.7	28.8	77.2	104	30.9	NA	<0.3
Uranium	mg/L	<0.0001	0.0589	0.0249	0.0286	0.0987	0.1020	0.0078	<0.0001	0.0759	0.0305	0.0158	0.0448	0.0730	0.0057	NA	<0.0001
Vanadium	mg/L	<0.005	<0.005	0.027	<0.005	<0.005	0.015	<0.005	<0.005	0.020	<0.005	<0.005	0.028	0.020	<0.005	NA	<0.005
Zinc	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	NA	<0.01
Dissolved Radionuclides																	
Gross Alpha	pCi/L	NA	54	20	7.2	40	42	5.4	<8.6	30	12	16	32	31	19	1	NA
Gross Alpha - U/Rn	pCi/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.5	NA	NA	NA	NA
Gross Beta	pCi/L	NA	8.5	31	11	31	36	15	110	26	15	26	22	21	48	<2.0	NA
Radium 226	pCi/L	NA	7.8	0.18	-0.07	6.3	0.25	<0.22	1.7	0.35	0.09	0.55	0.21	<0.24	0.88	<0.2	NA
Radium 228	pCi/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	2	<1.5	<1.3	<1.3	<1.3	NA	NA
Lead 210	pCi/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	<4.7	<3.8	<2.7	<2.6	<3.6	NA	NA
Thorium 230	pCi/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.53	<0.58	<0.58	<0.61	1.1	NA	NA

TABLE 2A, 2B AND 2C NOTES

Abbreviations:

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

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

FIGURES

Figure 1 Water Levels – Chinle/Moenkopi Aquifer

Figure 2 Water Levels – Moenkopi/Hermosa Contact

Figure 1
Water Levels - Chinle/Moenkopi Aquifer

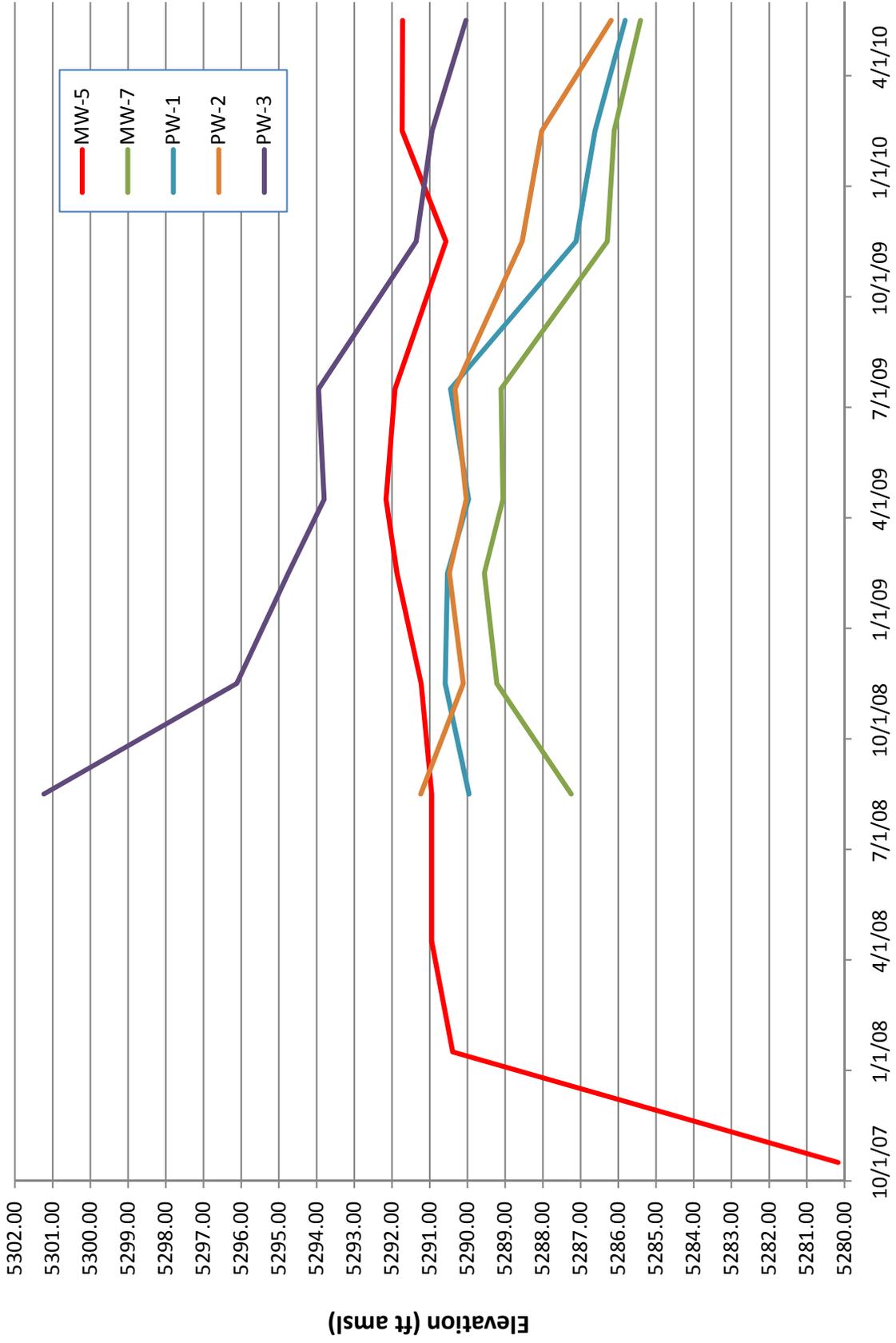
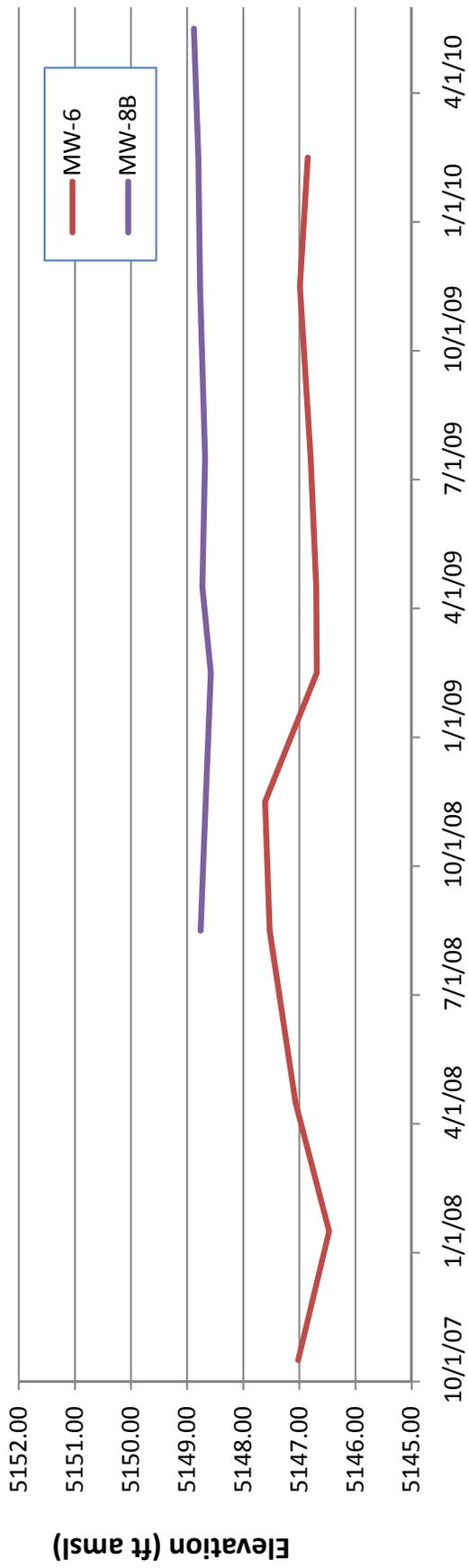


Figure 2
Water Levels - Moenkopi/Hermosa Contact



ATTACHMENT A

Second Quarter 2010 Sampling Field Sheets



GROUNDWATER SAMPLING FIELD DATA SHEET

Well No. MW-8		Purge Equipment <input checked="" type="checkbox"/> Disposable Bailor <input type="checkbox"/> Bladder Pump <input type="checkbox"/> Grundfos Pump <input type="checkbox"/> Other:		Analytical Equipment pH meter (temp): <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:			Sampler's initials JWF		Time 1737MST		Date 6/24/10	
Casing Diameter (in.) 4		Comments:		Cond. Meter (temp): <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:			Meter Calibration Time: 1116mst Date: 8/24/2010 Auto. Calibrations? Yes pH <input checked="" type="checkbox"/> Cond. <input checked="" type="checkbox"/> D.O. <input checked="" type="checkbox"/> ORP <input checked="" type="checkbox"/>					
Total Well Depth (ft.) 422		Sample Equipment <input checked="" type="checkbox"/> Disposable Bailor <input type="checkbox"/> Bladder Pump <input type="checkbox"/> Grundfos Pump <input type="checkbox"/> Other:		DO Meter: <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:			pH pH std. # 1 = 7 at 27.9 °C Calibration Evaluation pH std. # 2 = 10.00 at 27.9 °C 3 Bars Slope = 58.1 mV/pH Assymetry = -13 mV					
Static Water Level (ft.) 381.22		Comments:		ORP Meter: <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:			Specific Conductance Cell Constant = 0.482 1/cm Calibration Evaluation 3 Bars					
Water Thickness (ft.) 40.78		Filtration Equipment: 0.45 micron filter		Turbidity Meter: <input type="checkbox"/> WTW <input type="checkbox"/> Other: Comments:			Dissolved Oxygen Relative Slope = 0.94 at 28.6 °C Calibration Evaluation 3 Bars					
Casing Volume (gal.) 26.32		Water Level Meter: <input checked="" type="checkbox"/> Keck <input type="checkbox"/> Other: Comments:		Comments:			Oxygen-Reduction Potential Conductance Standard: 220 mV Reads: 222 mV					
Stick-up 2.58 (ft.)	Screen Int. 297-417 (ft.)	Purge Contaminized: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Destination:			Comments: Post sampling calibration performed at 1646 MST, all good.					
Casing Volume multipliers (gal/ft): 2"=(.16) 3"=(.37) 4"=(.65) 6"=(1.5)												
Time	Volume Removed (casings)	Temp. (°C)	pH (s.u.)	Cond (mS/cm)	DO (mg/L)	ORP (mV)	Water Level (ft below TOC)	Pumping Rate (gal/min)	Visual Description			
1610MST							381.88		Started purge-water clear			
1642MST		14.9	7.24	2.54	0.87	-156	381.90		Started readings			
1655MST		15.0	6.82	2.88	0.48	-192			Dump 5 gal @ 1626 MST			
1700MST		15.0	6.83	2.89	0.44	-196	381.90		Dump 5 gal @ 1633 MST			
1705MST		14.9	6.82	2.92	0.42	-199			Dump 5 gal @ 1649 MST			
1710MST		14.9	6.81	2.90	0.36	-202	381.92		Dump 5 gal @ 1706			
1725MST		14.9	6.82	2.89	0.29	-201			Dump 5 gal @ 1722			
1720MST		14.9	6.81	2.90	0.28	-201	381.96		Dump = 4.5 gal @ 1737			
1725MST		14.9	6.82	2.90	0.22	-202						
1730MST		14.9	6.82	2.89	0.19	-201	382.01					
1737MST		14.9	6.82	2.89	0.17	-201	382.00		Pulled Samples			
1756MST		15.4	6.84						Filtered PH			
1759MST		14.8	6.82	2.89	0.18	-203						
Set pump at 400' with new tubing, no flow. Pulled pump and examined connections and pump, no apparent problems, re-set same results. Pulled pump and changed to production well pump (decontaminated), no luck. Put MW-8 pump back in the well, started pump then slowly raised pump until flow started (≈ 388'). Slowly lowered pump to ≈ 392', flow remained constant, checked lowest pressure that pump would keep pumping (190psi). Set at 220psi with intake and exhaust strokes equal at 22sec. Purged 5 gal of water prior to starting to take readings. Hooked block back up after taking samples and filtered PH, final readings at 1759MST.												
Condition of Sampler: All good.							Full Suite: Yes /		Pump Depth: 392' ft BTOC			
							# MW-8		Duplicate Yes \		#	
							Partial Suite: / No		Rinsate \ No		#	
							#		Trip Blank \ No		#	
Additional Comments: Gallons removed approximately 35.. Post Sampling calibration performed @ 2035 MST.							PPE Utilized		Gloves <input checked="" type="checkbox"/>			
									Safety Glasses <input checked="" type="checkbox"/>			
							Signature: <i>Jess W. Talley</i>					



ENERGY FUELS RESOURCES CORPORATION

Project: Piñon Ridge Mill Site

GROUNDWATER SAMPLING FIELD DATA SHEET

Well No. PW-1		Purge Equipment <input checked="" type="checkbox"/> Disposable Bailor <input checked="" type="checkbox"/> Bladder Pump <input type="checkbox"/> Grundfos Pump <input type="checkbox"/> Other :		Analytical Equipment pH meter (temp): <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:			Sampler's Initials ZR JSF		Time 1110		Date 6/3/10	
Casing Diameter (in.) 6		Comments:		Cond. Meter (temp): <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:			Meter Calibration Time: Date: Auto. Calibrations? pH Cond. D.O.					
Total Well Depth (ft.) 380		Sample Equipment <input checked="" type="checkbox"/> Disposable Bailor <input checked="" type="checkbox"/> Bladder Pump <input type="checkbox"/> Grundfos Pump <input type="checkbox"/> Other :		DO Meter: <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:			pH pH std. # 1 = at °C Calibration Evaluation pH std. # 2 = at °C Bars Slope = mV/pH Assymetry = mV					
Static Water Level (ft.) 284.84		Comments:		ORP Meter: <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:			Specific Conductance Cell Constant = 1/cm Calibration Evaluation Bars					
Water Thickness (ft.) 95		Filtration Equipment: 0.45 micron filter		Turbidity Meter: <input type="checkbox"/> WTW <input type="checkbox"/> Other: Comments:			Dissolved Oxygen Relative Slope = at °C Calibration Evaluation Bars					
Casing Volume (gal.) 143		Stick-up 1.8 (ft.)		Comments:			Oxygen-Reduction Potential Conductance Standard: mV Reads: mV					
Screen Int. 320-370 (ft.)		Water Level Meter: <input checked="" type="checkbox"/> Keck <input type="checkbox"/> Other: Comments:		Casing Volume multipliers (gal/ft): 2"= (.16) 3"= (.37) 4"= (.65) 6"= (1.5)								
Purge Containerized: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Destination:										
Time	Volume Removed (casings)	Volume Removed (gal)	Temp. (°C)	pH (s.u.)	Cond (mS/cm)	DO (mg/L)	ORP (mV)	Water Level (ft below TOC)	Pumping Rate (gal/min)	Visual Description		
1043								284.77		284.77 - rusty for 1 285.06 - than 1043		
1049			17.0	7.78	1176	0.69	-185	285.06				
1053			17.0	7.59	1189	0.51	-188	.05				
1057			16.9	7.51	1191	0.49	-189					
1101		3	16.8	7.51	1196	0.48	-188	.06				
		filtered =	18.6	7.45								
Condition of Sampler:							Full Suite: Yes / No		Pump Depth: 345 ft BTOC			
							#		Duplicate		Yes \ No #	
Additional Comments:							Partial Suite: Yes / No		Rinsate		Yes \ No #	
							#		Trip Blank		Yes \ No #	
							PPE Utilized		Gloves		X	
									Safety Glasses		X	
							Signature: _____					



ENERGY FUELS RESOURCES CORPORATION

Project: Piñon Ridge Mill Site

GROUNDWATER SAMPLING FIELD DATA SHEET

Well No. PW-2	Purge Equipment <input checked="" type="checkbox"/> Disposable Bailer <input checked="" type="checkbox"/> Bladder Pump	Analytical Equipment pH meter (temp): <input checked="" type="checkbox"/> WTW 3400i	Sampler's Initials ZR/JF	Time 0915	Date 6/3/10
Casing Diameter (in.) 6	Grundfos Pump Other:	Other: Comments:	Meter Calibration		
Total Well Depth (ft.) 420	Comments:	Cond. Meter (temp): <input checked="" type="checkbox"/> WTW 3400i	Time: pH	Date: Cond.	Auto. Calibrations? D.O. ORP
Static Water Level (ft.) 336.27	Sample Equipment <input checked="" type="checkbox"/> Disposable Bailer <input checked="" type="checkbox"/> Bladder Pump	Other: Comments:	pH pH std. # 1 = at °C Calibration Evaluation pH std. # 2 = at °C Bars Slope = mV/pH Assymetry = mV		
Water Thickness (ft.) 84	Other: Comments:	DO Meter: <input checked="" type="checkbox"/> WTW 3400i	Specific Conductance Cell Constant = 1/cm Calibration Evaluation Bars		
Casing Volume (gal.) 126	Filtration Equipment: 0.45 micron filter	Other: Comments:	Dissolved Oxygen Relative Slope = at °C Calibration Evaluation Bars		
Stick-up 1.7 (ft.)	Screen Int. 340-410 (ft.)	ORP Meter: <input checked="" type="checkbox"/> WTW 3400i	Oxygen-Reduction Potential Conductance Standard: mV Reads: mV		
Purge Containerized: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Level Meter: <input checked="" type="checkbox"/> Keck	Other: Comments:	Turbidity Meter: WTW Other:		
Destination:	Other: Comments:	Comments:	Casing Volume multipliers (gal/ft): 2"=(.16) 3"=(.37) 4"=(.65) 6"=(1.5)		

Time	Volume Removed (casings)	Volume Removed (gal)	Temp. (°C)	0.1 pH (s.u.)	10 ⁹ Cond (uS/cm)	10 ⁶ DO (mg/L)	10 ³ ORP (mV)	Water Level (ft below TOC)	Pumping Rate (gal/min)	Visual Description
0839								336.52		Started pumping. At low at first - stopped when order - clean quickly
0841			15.2	7.39	1293	3.75	-178	336.83		
0845			15.4	7.57	1322	0.48	-238	336.79		
0849			15.4	7.57	1327	0.27	-243	336.79		
0853			15.5	7.57	1330	0.17	-249	.76		
0857		3.5	15.4	7.56	1332	0.18	-247	.77		
			15.5	7.96						
0930								336.62		

Condition of Sampler:	Full Suite: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Pump Depth: 375 ft BTOC
	# PW-2	Duplicate Yes \ No #
	Partial Suite: Yes / No	Rinsate Yes \ No #
	#	Trip Blank Yes \ No #
Additional Comments:	PPE Utilized	Gloves <input checked="" type="checkbox"/>
		Safety Glasses <input checked="" type="checkbox"/>
Signature:		



GROUNDWATER SAMPLING FIELD DATA SHEET

Well No. PW-3	Purge Equipment <input checked="" type="checkbox"/> Disposable Bailer <input checked="" type="checkbox"/> Bladder Pump <input type="checkbox"/> Grundfos Pump <input type="checkbox"/> Other :	Analytical Equipment pH meter (temp): <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:	Sampler's Initials ZP/JP	Time 1330	Date 6/3/10
Casing Diameter (in.) 6	Comments:	Cond. Meter (temp): <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:	Meter Calibration		
Total Well Depth (ft.) 380	Sample Equipment <input checked="" type="checkbox"/> Disposable Bailer <input checked="" type="checkbox"/> Bladder Pump <input type="checkbox"/> Grundfos Pump <input type="checkbox"/> Other :	DO Meter: <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:	Time: pH	Date: Cond.	Auto. Calibrations? D.O. ORP
Static Water Level (ft.) 267.89	Comments:	ORP Meter: <input checked="" type="checkbox"/> WTW 3400i <input type="checkbox"/> Other: Comments:	pH pH std. # 1 = at °C Calibration Evaluation pH std. # 2 = at °C Bars Slope = mV/pH Assymetry = mV		
Water Thickness (ft.) 112	Comments:	Turbidity Meter: <input type="checkbox"/> WTW <input type="checkbox"/> Other: Comments:	Specific Conductance Cell Constant = 1/cm Calibration Evaluation Bars		
Casing Volume (gal.) 168	Filtration Equipment: 0.45 micron filter Comments:	Comments:	Dissolved Oxygen Relative Slope = at °C Calibration Evaluation Bars		
Stick-up 1.7	Screen Int. 240-280' 320-370'	Water Level Meter: <input checked="" type="checkbox"/> Keck <input type="checkbox"/> Other: Comments:	Oxygen-Reduction Potential Conductance Standard: mV Reads: mV		
Purge Containerized: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Comments:	Comments:	Casing Volume multipliers (gal/ft): 2"=(.16) 3"=(.37) 4"=(.65) 6"=(1.5)		
Destination:					

Time	Volume Removed (casings)	Temp. (°C)	pH (s.u.)	Cond (mS/cm)	DO (mg/L)	ORP (mV)	Water Level (ft below TOC)	Pumping Rate (gal/min)	Visual Description
1307							268.00		Start of pump - clean - see notes
1310		16.5	7.42	1133	7.90	-83	.11		
1314		15.7	7.41	1179	7.61	-83	.12		
1319-1323	1323	CHINA 2							
1324		15.7	7.46	1197	7.53	-85			
1328	4	15.7	7.38	1208	7.63	-88	.15		
	filtered =	184	7.54						

Condition of Sampler:	Full Suite: <input checked="" type="checkbox"/> Yes / No	Pump Depth: 335 ft BTOC
	#	Duplicate <input checked="" type="checkbox"/> Yes / No # DLR 02/03/10-1
	Partial Suite: Yes / No	Rinsate Yes / No #
	#	Trip Blank Yes / No #
Additional Comments:	PPE Utilized	Gloves <input checked="" type="checkbox"/>
		Safety Glasses <input checked="" type="checkbox"/>
Signature: _____		



GROUNDWATER SAMPLING FIELD DATA SHEET

Well No. Davis Well		Purge Equipment <input type="checkbox"/> Disposable Bailor <input type="checkbox"/> Bladder Pump <input checked="" type="checkbox"/> Grundfos Pump Pre-installed Pump		Analytical Equipment pH meter (temp): <input checked="" type="checkbox"/> WTW 3400i Other: Comments:			Sampler's Initials JWF		Time 1942 MST		Date 6/23/10	
Casing Diameter (in.) 4"		<input checked="" type="checkbox"/> Other: Pre-installed Pump		Cond. Meter (temp): <input checked="" type="checkbox"/> WTW 3400i Other: Comments:			Motor Calibration					
Total Well Depth (ft.)		Comments:		DO Meter: <input checked="" type="checkbox"/> WTW 3400i Other: Comments:			Time: 0833mst Date: 6/23/2010 Auto. Calibrations? Yes		pH <input checked="" type="checkbox"/> Cond. <input checked="" type="checkbox"/> D.O. <input checked="" type="checkbox"/> ORP			
Static Water Level (ft.) See Note Below		Sample Equipment <input type="checkbox"/> Disposable Bailor <input type="checkbox"/> Bladder Pump <input type="checkbox"/> Grundfos Pump <input checked="" type="checkbox"/> Other: Pre-installed Pump		Comments:			pH pH std. # 1 = 7 at 26.7 °C Calibration Evaluation pH std. # 2 = 10.00 at 26.7 °C 3 Bars Slope = -58.6 mV/pH Assymetry = -11 mV		Specific Conductance Cell Constant = 0.486 1/cm Calibration Evaluation 3 Bars			
Water Thickness (ft.)		<input checked="" type="checkbox"/> Other: Pre-installed Pump		Comments:			Dissolved Oxygen Relative Slope = 0.96 at 28.9 °C Calibration Evaluation 3 Bars		Oxygen-Reduction Potential Conductance Standard: RH28 @ 26.4 °C Reads: 218 mV			
Casing Volume (gal.)		Filtration Equipment: N/A micron filler		ORP Meter: <input checked="" type="checkbox"/> WTW 3400i Other: Comments:			Turbidity Meter: <input type="checkbox"/> WTW <input type="checkbox"/> Other: Comments:		Casing Volume multipliers (gal/ft): 2"=(.16) 3"=(.37) 4"=(.65) 6"=(1.5)			
Stick-up (ft.)	Screen Int. (ft.)	Water Level Meter: <input checked="" type="checkbox"/> Keck <input type="checkbox"/> Other: Comments:		Comments:			Comments:					
Purge Containerized: <input type="checkbox"/> Yes <input type="checkbox"/> No		Destination:										
Time	Volume Removed (casings)	Temp. (°C)	pH (s.u.)	Cond (uS/cm)	DO (mg/L)	ORP (mV)	Water Level (ft below TOC)	Pumping Rate (gal/min)	Visual Description			
18:10								8.57	Started Purge 8.57gpm, water clear, block hooked up, full flow			
19:18	582.8	16.2	7.47	849	0.71	60						
19:23	625.6	16.2	7.50	847	0.71	59						
19:28	688.5	16.2	7.52	845	0.73	59						
19:33	711.3	16.2	7.52	845	0.73	59						
19:42	788.4	16.2	7.51	843	0.73	60						
Note: Not able to get depth probe in well but owner states 158', we discussed modification of the well cap to accept our depth probe. Contained most of the purge water in a tank provided by Mr. Davis.												
Condition of Sampler: Very good.							Full Sults: Yes /		Pump Depth: ft BTOC			
							Davis Well		Duplicate \ No #			
							Partial Sults: / No		Rinsate \ No #			
							#		Trip Blank \ No #			
Additional Comments: Post sampling calibration @ 2138 MST. Full set of samples plus extra 1/2 gal for Energy Labs.							PPE Utilized		Gloves <input checked="" type="checkbox"/>			
									Safety Glasses <input type="checkbox"/>			
							Signature: <i>Jess W. Fullbright</i>					