

**TABLE 1
STRATIGRAPHIC AND HYDROGEOLOGIC UNITS IN THE PARADOX VALLEY BASIN**

Era	System	Stratigraphic Unit	Unit Thickness (feet)	Lithologic Characteristics	Hydrologic Characteristics	
Cenozoic	Quaternary	Alluvium*	0 - 100	Alluvial sands and gravels, loess, colluvium, windblown sands	Locally yields large quantities for domestic, stock, and municipal	
	Upper Cretaceous	Mancos Shale	1,000 - 5,000	Shales interbedded with minor sandstone	Confining unit; none	
Mesozoic	Lower Cretaceous	Dakota Sandstone	0 - 200	Fine to coarse-grained cross-bedded sandstone	Yields some water, stock and domestic	
		Burro Canyon Fm	0 - 250	Conglomerate, sandstone and shale	Yields water to springs	
	Upper Jurassic	Morrison Fm	Brushy Basin Member	400 - 500	Shales interbedded with minor sandstone	None
			Saltwash Member	300	Medium-grained sandstone interbedded with red shale	Yields small quantities, stock and domestic
	Upper and Middle Jurassic	Summerville Fm		0 - 120	Shales interbedded with minor sandstone	None
		Entrada Sandstone		15 - 170	Buff to grayish-white cross-bedded sandstones	Yields water
		Carmel Formation		0 - 40	Siltstone and mudstone interbedded with fine-grained sandstone	None
		Navajo Sandstone		0 - 125	Fine-grained, cross-bedded quartz sandstone	Small to moderate amounts from fractures, stock and domestic
		Kayenta Fm*		0 - 200	Sandstone interbedded with siltstone and thin-bedded shale	Yields littler to no water
	Upper Triassic	Wingate Sandstone*		0 - 400	Medium grained, poorly cemented, cross-bedded sandstone	Yields water to numerous springs
		Dolores Fm		150 - 230	Pink to red mudstone and fine-grained sandstone. Not present in all areas	Not water bearing
		Chinle Fm*		0 - 500	Shales, siltstones, interbedded with minor fine-grained sandstone	Yields small quantities where fractured, stock and domestic
Lower Triassic	Moenkopi Fm*		0 - 480	Mudstone interbedded with minor sandstone	Yields small quantities	
Paleozoic	Permian	Cutler Fm*	0 - 3,500	Fine grained sandstone interbedded with minor conglomerate and mudstone	Yields small quantities where fractured, stock and domestic	
	Pennsylvanian	Hermosa Formation*	0 - 3,900	Shales, limestones, salt, and gypsum; includes the Paradox Member	None	
	Mississippian	Leadville Limestone	20 - 100	Massive to thinly laminated, gray buff and yellow limestone	Transmits saltwater through fractures	
	Devonian and Cambrian	Ouray, Elbert, and Ignacio Formations	0 - 150	Limestone, shale, dolomite; Ignacio is a quartzite		

NOTES:

*Identified within the study area

- The Wingate Sandstone is defined as Upper Triassic by the Colorado Geological Society; however, other sources (Cater 1954, 1955) define it as Jurassic.

REFERENCE:

Colorado Geological Society, Ground Water Atlas of Colorado, Table 6.1-1, Chapter 6.5, Paradox Basin

TABLE 2
AVERAGE MONTHLY PRECIPITATION AND EVAPORATION

Month	Average Precipitation¹ (inches)	Calculated Lake Evaporation² (inches)
January	0.9	0.8
February	0.8	1.2
March	1	2.2
April	1	3.3
May	0.9	4.8
June	0.5	5.8
July	1.2	6.3
August	1.4	5.4
September	1.5	3.8
October	1.5	2.5
November	1.1	1.2
December	0.9	0.7
Total	12.7	38

NOTES:

- 1) Precipitation values obtained for Uravan weather station from 1961 to 2007; Western Regional Climate Center.
- 2) Calculated evaporation scaled by a factor of 0.7 to reflect lake evaporation.

**TABLE 3
SUMMARY OF WELLS AND EXPLORATORY BOREHOLES**

ID	Boring/Well Type	Date Drilling Completed	Survey Coordinates ¹			Screened Interval Depth (ft bgs) ³	Total Drilled Depth of Borehole (ft bgs) ³	Bottom of Well Casing Depth (ft bgs) ³
			Northing (ft)	Easting (ft)	Elevation of Top of PVC Casing (ft amsl) ²			
EX-2	Exploration Hole	2/19/2008	1,592,898	2,063,411	5503.88	NA	100	NA
EX-3	Exploration Hole	2/19/2008	1,592,562	2,063,175	5511.87	NA	140	NA
EX-4	Exploration Hole	2/27/2008	1,591,959	2,063,068	5523.86	NA	800	NA
EX-5	Exploration Hole	3/14/2008	1,589,983	2,060,959	5623.14	360 - 420	880	440
EX-6	Exploration Hole	3/20/2008	1,592,072	2,058,690	5570.92	300 - 360	1040	380
EX-7	Exploration Hole	4/3/2008	1,590,780	2,059,985	5606.73	314 - 374	440	394
EX-8	Exploration Hole	5/5/2008	1,589,672	2,061,087	5620.83	360 - 420	440	440
EX-9	Exploration Hole	5/16/2008	1,588,854	2,061,741	5661.90	360 - 420	460	440
EX-10	Exploration Hole	5/15/2008	1,588,711	2,062,893	5641.01	280 - 340	440	360
EX-11	Exploration Hole	5/12/2008	1,589,480	2,062,218	5614.11	320 - 380	700	380
EX-12	Exploration Hole	5/8/2008	1,594,120	2,056,437	5556.91	300 - 360	390	380
EX-13	Exploration Hole	5/15/2008	1,597,851	2,053,864	5450.00	220 - 280	280	280
EX-14	Exploration Hole	5/19/2008	1,600,623	2,051,774	5383.00	260 - 320	340	320
EX-15	Exploration Hole	5/21/2008	1,582,399	2,076,965	5699.00	200 - 240	260	260
EX-20	Exploration Hole	6/6/2008	1,591,554	2,062,794	5535.61	NA	440	NA
EX-21	Exploration Hole	6/10/2008	1,591,715	2,060,670	5539.99	NA	600	NA
EX-22	Exploration Hole	6/9/2008	1,592,297	2,060,966	5528.84	NA	600	NA
EX-23	Exploration Hole	6/9/2008	1,593,569	2,060,458	5492.29	NA	380	NA
MW-1	Monitor Well	9/12/2007	1,597,209	2,060,295	5423.76	15.4 - 24.9	600	30
MW-2	Monitor Well	10/4/2007	1,597,132	2,062,819	5432.65	10.6 - 20.0	100	25.6
MW-3	Monitor Well	9/20/2007	1,595,227	2,059,205	5452.29	75 - 95	300	100
MW-4	Monitor Well	10/2/2007	1,594,834	2,063,803	5475.55	50.5 - 60.0	140	65.6
MW-5	Monitor Well	9/25/2007	1,591,191	2,060,281	5572.89	274.6 - 294.2	600	299.7
MW-6	Monitor Well	9/8/2007	1,591,044	2,062,551	5554.47	459.6 - 479.0	490	484.5
MW-7	Monitor Well	3/14/2008	1,589,983	2,060,960	5624.93	365 - 425	880	425
MW-8b	Monitor Well	7/15/2008	1,591,822	2,062,942	5530.19	298 to 417	430	422
MW-9	Monitor Well	7/18/2008	1,592,244	2,060,677	5527.72	328 to 417	440	422
PW-1	Production Well	7/16/2008	1,592,060	2,058,688	5570.66	320 to 370	380	380
PW-1-OB-A	Observation Well	5/28/2008	1,592,072	2,058,793	5565.29	260 to 360	360	360
PW-1-OB-B	Observation Well	5/29/2008	1,592,375	2,058,723	5553.49	250 to 350	400	350
PW-2	Production Well	7/31/2008	1,589,686	2,061,086	5622.46	340 to 410	420	420
PW-2-OB-A	Observation Well	6/5/2008	1,589,788	2,061,066	5626.02	400 to 460	460	460
PW-2-OB-B	Observation Well	6/3/2008	1,589,494	2,061,333	5620.01	400 to 460	460	460
PW-3	Production Well	7/25/2008	1,594,134	2,056,445	5557.88	240 to 280 320 to 370	380	380
PW-3-OB-A	Observation Well	5/29/2008	1,594,214	2,056,397	5550.01	220 to 320	320	320
PW-3-OB-C	Observation Well	6/2/2008	1,593,873	2,056,600	5563.93	260 to 360	360	360

¹ Colorado State Plane (South Zone) NAD83 horizontal datum (adjusted to ground) with NAV88 vertical datum; all locations surveyed except EX-13, EX-14 and EX-15, for which coordinates were obtained by GPS

² ft amsl: feet above mean sea level

³ ft bgs: feet below ground surface

TABLE 4
WATER LEVELS IN EXPLORATORY BOREHOLES

Borehole	Top of Casing Elevation (ft amsl¹)	Date	Depth to Water (ft btoc²)	Groundwater Elevation (ft amsl¹)
EX-2	5503.88	2/22/2008	dry	dry
EX-3	5511.87	2/22/2008	dry	dry
EX-4	5523.86	2/29/2008	dry	dry
EX-5	5623.14	4/21/2008	345.45	5277.69
EX-6	5570.92	4/24/2008	291.00	5279.92
EX-7	5606.73	4/23/2008	330.08	5276.65
EX-8	5620.83	5/15/2008	343.95	5276.88
EX-9	5661.90	5/17/2008	308.19	5353.71
EX-10	5641.01	5/17/2008	286.81	5354.20
EX-11	5614.11	5/19/2008	259.65	5354.46
EX-11	5614.11	11/12/08	260.71	5353.40
EX-12	5556.91	5/16/2008	239.93	5316.98
EX-13	5450.00	5/19/2008	181.47	5268.53
EX-14	5383.00	6/4/2008	239.70	5143.30
EX-15	5699.00	5/23/2008	149.00	5550.00
EX-20	5535.61	6/18/2008	384.90	5150.71
EX-21	5539.99	6/18/2008	405.10	5134.89
EX-22	5528.84	6/18/2008	381.85	5146.99
EX-23	5492.29	6/18/2008	357.52	5134.77

NOTES:

- 1) ft amsl: feet above mean sea level
- 2) ft btoc: feet below top of casing

**TABLE 5
WATER LEVELS IN MONITORING WELLS, PRODUCTION WELLS, AND
OBSERVATION WELLS**

Well	Top of Casing Elevation (ft amsl¹)	Depth of Well² (ft btoc³)	Date	Depth to Water (ft btoc³)	Water Column Height (ft)	Groundwater Elevation (ft amsl¹)
MW-1	5423.76	32.49	10/10/07	dry	dry	dry
MW-1	5423.76	32.49	1/29/08	dry	dry	dry
MW-1	5423.76	32.49	4/29/08	dry	dry	dry
MW-1	5423.76	32.49	8/3/08	dry	dry	dry
MW-1	5423.76	32.49	11/12/08	dry	dry	dry
MW-1	5423.76	32.49	2/16/09	dry	dry	dry
MW-2	5432.65	27.42	10/10/07	25.12	2.30	5407.53
MW-2	5432.65	27.42	1/29/08	dry	dry	dry
MW-2	5432.65	27.42	4/29/08	26.55	0.87	5406.10
MW-2	5432.65	27.42	8/3/08	dry	dry	dry
MW-2	5432.65	27.42	11/12/08	dry	dry	dry
MW-2	5432.65	27.42	2/16/09	dry	dry	dry
MW-3	5452.29	102.65	10/10/07	99.25	3.40	5353.04
MW-3	5452.29	102.65	1/29/08	dry	dry	dry
MW-3	5452.29	102.65	4/29/08	dry	dry	dry
MW-3	5452.29	102.65	8/3/08	100.21	2.44	5352.08
MW-3	5452.29	102.65	11/12/08	100.65	2.00	5351.64
MW-3	5452.29	102.65	2/16/09	dry	dry	dry
MW-4	5475.55	67.67	10/10/07	dry	dry	dry
MW-4	5475.55	67.67	1/29/08	dry	dry	dry
MW-4	5475.55	67.67	4/29/08	dry	dry	dry
MW-4	5475.55	67.67	8/3/08	dry	dry	dry
MW-4	5475.55	67.67	11/12/08	dry	dry	dry
MW-4	5475.55	67.67	2/16/09	dry	dry	dry
MW-5	5572.89	302	10/16/07	292.72	9	5280.17
MW-5	5572.89	302	1/31/08	282.50	20	5290.39
MW-5	5572.89	302	4/29/08	281.94	20	5290.95
MW-5	5572.89	302	8/3/08	281.94	20	5290.95
MW-5	5572.89	302	11/12/08	281.66	20	5291.23
MW-5	5572.89	302	2/19/09	281.02	21	5291.87
MW-6	5554.47	487	10/16/07	407.45	80	5147.02
MW-6	5554.47	487	1/29/08	408.00	79	5146.47
MW-6	5554.47	487	4/22/08	407.59	80	5146.88
MW-6	5554.47	487	4/29/08	407.40	80	5147.07
MW-6	5554.47	487	8/4/08	406.94	80	5147.53
MW-6	5554.47	487	11/12/08	406.86	80	5147.61
MW-6	5554.47	487	2/18/09	407.78	80	5146.69
MW-7	5624.93	428	8/2/08	337.68	90	5287.25
MW-7	5624.93	428	11/12/08	335.71	92	5289.22

TABLE 5
WATER LEVELS IN MONITORING WELLS, PRODUCTION WELLS, AND
OBSERVATION WELLS

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-7	5624.93	428	2/18/09	335.37	92	5289.56
MW-8b	5530.19	425	8/2/08	381.43	43	5148.76
MW-8b	5530.19	425	11/12/08	381.52	43	5148.67
MW-8b	5530.19	425	2/18/09	381.66	43	5148.53
MW-9	5527.72	424	8/2/08	406.22	18	5121.50
MW-9	5527.72	424	11/12/08	409.58	15	5118.14
PW-1	5570.66	382	8/2/08	280.70	101	5289.96
PW-1	5570.66	382	11/12/08	280.07	102	5290.59
PW-1	5570.66	382	2/24/09	280.13	102	5290.53
PW-1-OB-A	5565.29	361	8/2/08	269.64	92	5295.65
PW-1-OB-A	5565.29	361	11/12/08	270.51	91	5294.78
PW-1-OB-B	5553.49	351	8/2/08	264.42	87	5289.07
PW-1-OB-B	5553.49	351	11/12/08	263.54	88	5289.95
PW-2	5622.46	422	8/2/08	331.22	90	5291.24
PW-2	5622.46	422	11/12/08	332.35	89	5290.11
PW-2	5622.46	422	2/24/09	331.98	90	5290.48
PW-2-OB-A	5626.02	461	8/2/08	327.43	134	5298.59
PW-2-OB-A	5626.02	461	11/12/08	326.41	135	5299.61
PW-2-OB-B	5620.01	462	8/2/08	301.05	160	5318.96
PW-2-OB-B	5620.01	462	11/12/08	303.61	158	5316.40
PW-3	5557.88	382	8/2/08	256.65	125	5301.23
PW-3	5557.88	382	11/12/08	261.76	120	5296.12
PW-3	5557.88	382	2/26/09	263.13	119	5294.75
PW-3-OB-A	5550.01	322	8/2/08	252.19	70	5297.82
PW-3-OB-A	5550.01	322	11/12/08	255.68	67	5294.33
PW-3-OB-C	5563.93	362	8/2/08	262.50	99	5301.43
PW-3-OB-C	5563.93	362	11/12/08	267.92	94	5296.01

NOTES:

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

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 6
OFF-SITE WATER WELLS AND SPRINGS IN THE CHINLE FORMATION**

Permit #	Proposed for Monitoring (Yes/No)	Owner/Name	Well Depth (ft)	Well Yield (gpm)	Depth to Water (ft)	Construction Date	Distance from Site Boundary (miles)	Status	Permitted Use
WELLS									
258704	Yes	BLM	280	15	168	2/28/2004	2.6	Operational	Stock
269575	Yes	Fehlmann, Lin D. & Davis, Robert M.	302	8	158	1/21/2007	3.2	Operational	Domestic & Stock
226684	Yes	Hurdle, Sylvia S.	320	14	134	7/30/2000	4.0	Operational	Domestic
253522	Yes	Boren, Verl	100	20	28 ⁽¹⁾	--	5.0	Operational	Domestic
234136	Yes	Herron, William & Katherine Gray	255	10	157	10/26/2001	4.0	Operational	Domestic
91065	No	Russell, John D.	143	10	103	1st use: 5/16/1978	4.0	No longer in use	Domestic & Stock
86582	No	Blackburn Ranches	160 ⁽²⁾	15	Varies ⁽²⁾	--	3.2	Intermittent use only	Stock
86583	No	Blackburn Ranchettes	160 ⁽²⁾	0	Dry ⁽²⁾	--	3.2	Dry ⁽²⁾	Stock
SPRINGS									
NA	Yes	Stone Spring (used by Verl Boren)	NA	~10 ⁽³⁾	NA	NA	4.8	Flowing	--
NA	No	Merrill Spring	NA	--	NA	NA	4.7	Dry in June 2009	--

NOTES:

Well information provided from the Colorado Division of Water Resources, Well Permit Database, accessed September 30, 2008 and June 19, 2009.

NA: Not Applicable

(1) Depth to water provided from personal communication between Verl Boren and Energy Fuels Resources Corporation, June 17, 2009. Depth to water from state permit database is 40 ft.

(2) Information provided from personal communication between Dan Cooper and Dick White of Energy Fuels Resources Corporation, October 1, 2008.

(3) Information obtained from site visit to Boren property on June 17, 2009.

**TABLE 7
SUMMARY OF AQUIFER PROPERTIES**

Boring/ Well ID	Category of Boring/Well	Phase of Testing	Pumping Rate (gpm) ¹	Total Pumping Time (hours)	Maximum Observed Drawdown (ft)	Phase of Test for Analysis	Solution Type	Estimated Transmissivity (cm ² /s)	Estimated Aquifer Thickness (ft)	Estimated Hydraulic Conductivity (cm/s)	Estimated Storativity
EX-5	Exploration Hole	Phase 1	19.8	6	45.38	pumping (step test) recovery	Cooper-Jacob - Confined Theis (Recovery)	0.5 0.3	55 55	3 x 10 ⁻⁴ 2 x 10 ⁻⁴	-- --
EX-6	Exploration Hole	Phase 1	27.8	6.7	29.14	pumping (step test) recovery	Cooper-Jacob - Confined Theis (Recovery)	10 6	48 48	7 x 10 ⁻³ 4 x 10 ⁻³	-- --
EX-7	Exploration Hole	Phase 1	19.4	6.7	27.54	pumping (step test) recovery	Cooper-Jacob - Confined Theis (Recovery)	11 10	60 60	6 x 10 ⁻³ 5 x 10 ⁻³	-- --
EX-8	Exploration Hole	Phase 2	26.2	4	19.2	pumping recovery	Cooper-Jacob - Confined Theis (Recovery)	11 10	60 60	6 x 10 ⁻³ 5 x 10 ⁻³	-- --
EX-10	Exploration Hole	Phase 2	14.9	5	16.7	pumping recovery	Cooper-Jacob - Confined Theis (Recovery)	0.8 6	60 60	4 x 10 ⁻⁴ 3 x 10 ⁻³	-- --
EX-11	Exploration Hole	Phase 2	8.8	4	47.9	pumping recovery	Cooper-Jacob - Confined Theis (Recovery)	0.2 0.5	60 60	9 x 10 ⁻⁵ 3 x 10 ⁻⁴	-- --
EX-12	Exploration Hole	Phase 2	39.8	6	3.57	pumping recovery	Cooper-Jacob - Confined Theis (Recovery)	10 32	60 60	6 x 10 ⁻³ 2 x 10 ⁻²	-- --
EX-15	Exploration Hole	Phase 2	14.4	6	53.78	pumping recovery	Cooper-Jacob - Confined Theis (Recovery)	0.8 3	91.1 91.1	3 x 10 ⁻⁴ 9 x 10 ⁻⁴	-- --
MW-6	Monitor Well	Phase 1	4.71	5	18.31	pumping (step test)	Cooper-Jacob - Confined	0.5	30	6 x 10 ⁻⁴	--
MW-7	Monitor Well	Phase 3	--	--	2.1	pumping recovery	Theis - Confined Agarwal (CJ) - Confined	3 4	40 40	3 x 10 ⁻³ 3 x 10 ⁻³	3 x 10 ⁻⁴ 3 x 10 ⁻⁴
MW-8b	Monitor Well	Phase 2	slug test	--	--	falling head rising head	Dagan - Unconfined Dagan - Unconfined	-- --	-- --	1 x 10 ⁻⁴ 2 x 10 ⁻⁴	-- --
MW-9	Monitor Well	Phase 2	rising head test	--	--	rising head	Bouwer-Rice - Unconfined	--	--	2 x 10 ⁻⁸	--
PW-1	Production Well	Phase 3	52.1 ²	48.0	45.6 ²	pumping	Theis - Distance-Drawdown	3	30	3 x 10 ⁻³	3 x 10 ⁻⁵
PW-1 OB-A	Observation Well	Phase 3	--	--	12.5	pumping recovery	Theis - Confined Agarwal (CJ) - Confined	3 4	30 30	4 x 10 ⁻³ 4 x 10 ⁻³	2 x 10 ⁻⁵ 1 x 10 ⁻⁵
PW-1 OB-B	Observation Well	Phase 3	--	--	5.8	pumping recovery	Theis - Confined Agarwal (CJ) - Confined	3 7	30 30	4 x 10 ⁻³ 8 x 10 ⁻³	3 x 10 ⁻⁵ 4 x 10 ⁻⁵
PW-2	Production Well	Phase 3	10.3	48.0	33.5	pumping	Theis - Distance-Drawdown	4	40	3 x 10 ⁻³	5 x 10 ⁻⁴
PW-2 OB-A	Observation Well	Phase 3	--	--	2.6	pumping recovery	Theis - Confined Agarwal (CJ) - Confined	4 4	40 40	3 x 10 ⁻³ 3 x 10 ⁻³	7 x 10 ⁻⁴ 1 x 10 ⁻³
PW-2 OB-B	Observation Well	Phase 3	--	--	NR ³		--	--	--	--	--
PW-3	Production Well	Phase 3	67.5	48.0	54.2	pumping	Theis - Distance-Drawdown	4	80	1 x 10 ⁻³	1 x 10 ⁻²
PW-3 OB-A	Observation Well	Phase 3	--	--	8.2	pumping recovery	Cooper-Jacob - Unconfined Agarwal (CJ) - Unconfined	4 5	80 80	2 x 10 ⁻³ 2 x 10 ⁻³	1 x 10 ⁻² 1 x 10 ⁻²
PW-3 OB-B	Observation Well	Phase 3	--	--	2.0	pumping recovery	Cooper-Jacob - Unconfined slow recovery, could not be analyzed	8 --	80 --	3 x 10 ⁻³ --	9 x 10 ⁻³ --

¹ gpm: gallons per minute

² Pumping rate and max drawdown listed for final pumping rate. At a pumping rate of 66 gpm during first 5 hours of test, a maximum drawdown of 53.6 feet was observed.

³ NR: No response observed during pumping test

cm/s: centimeters per second

cm²/s: centimeters squared per second

TABLE 8A
ESTIMATED 5-YEAR SUSTAINABLE PUMPING RATES FROM AQUIFER STORAGE (GPM)

Scenario	Estimated 5-Year Sustainable Pumping Rates (gpm)					Estimated Total Pumping Rate from Aquifer (gpm)
	PW-1	PW-2	PW-3	PW-4*	PW-5*	
One-Boundary	20	10	35	35	35	135
Two-Boundary (4,500 ft wide)	2	2	20	20	20	64

*PW-4 and PW-5 have not been installed.

TABLE 8B
ESTIMATED 5-YEAR SUSTAINABLE PUMPING RATES FROM AQUIFER STORAGE AND RECHARGE

Scenario	Estimated 5-Year Sustainable Pumping Rates (gpm)					Estimated Total Pumping Rate from Aquifer (gpm)
	PW-1	PW-2	PW-3	PW-4*	PW-5*	
One-Boundary	60	50	75	75	75	175
Two-Boundary (4,500 ft wide)	42	42	60	60	60	104

*PW-4 and PW-5 have not been installed.

**TABLE 9
GROUNDWATER SAMPLING SCHEDULE FOR MONITORING WELLS AND PRODUCTION WELLS**

Quarter and Year	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8B	MW-9	PW-1	PW-2	PW-3
4Q 2007	Dry	NS	NS	Dry	NS	X	NI	NI	NI	NI	NI	NI
1Q 2008	Dry	Dry	Dry	Dry	X	X	NI	NI	NI	NI	NI	NI
2Q 2008	Dry	NS	Dry	Dry	X	X	X	NI	NI	NI	NI	NI
3Q 2008	Dry	Dry	NS	Dry	X	X	X	X	X*	X	X	X
4Q 2008	Dry	Dry	NS	Dry	X	X	X	X	NS	X	X	X
1Q 2009	Dry	Dry	Dry	Dry	X	X	X	X	NS	X	X	X

NOTES:

X: Sample Collected

NI: Well Not Installed

NS: Insufficient water or recharge to sample

*Well required 33 days to recharge sufficiently to sample

**TABLE 10
ANALYTICAL DATA FOR MONITORING WELL SAMPLES**

Analyte	CDPHE Domestic Water Supply Standards ¹	CDPHE Agricultural Standards ¹	MW-5					MW-6					MW-7				MW-8b			MW-9 ²	
			1/31/08*	4/30/08	8/7/08	11/14/08	2/19/09	10/16/07	1/29/08	4/29/08	8/7/08	11/14/08	2/18/09	6/7/08	9/9/08	11/13/08	2/18/09	7/21/08	11/13/08	2/18/09	9/10/08*
Dissolved Metals																					
Aluminum (mg/L)	None	5	0.23	<0.030 ³	0.040	0.040	0.32	<0.10	<0.060	<0.060	<0.060	<0.060	<0.060	0.050	<0.030	<0.030	<0.030	<0.060	<0.060	0.090	0.070
Arsenic (mg/L)	0.01	0.1	0.0015	0.0021	0.0025	0.0028	0.0027	<0.0010	<0.0010	0.00060	0.0010	<0.010	0.0020	0.0073	0.0046	0.0059	0.0062	0.0020	<0.010	0.0030	0.011
Barium (mg/L)	2.0	None	0.034	0.021	NA ⁴	NA	NA	<0.10	NA	0.024	NA	NA	NA	0.016	NA	NA	NA	0.038	NA	NA	0.044
Boron (mg/L)	None	0.75	0.59	0.53	0.47	0.46	0.45	2.2	2.3	2.3	2.5	2.4	2.4	0.21	0.31	0.31	0.36	0.36	0.48	0.52	2.6
Cadmium (mg/L)	0.005	0.01	0.00020	<0.00010	NA	NA	NA	<0.0050	NA	0.00010	NA	NA	NA	<0.00010	NA	NA	NA	<0.00020	NA	NA	<0.00010
Calcium (mg/L)	None	None	70	77	69	70	70	109	123	121	133	132	137	93	101	100	103	495	368	385	8.8
Cesium (mg/L)	None	None	<0.00020	<0.00020	NA	NA	NA	<0.10	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00040	NA	NA	<0.00020
Chromium (mg/L)	0.1	0.1	<0.010	<0.010	NA	NA	NA	<0.050	NA	<0.010	NA	NA	NA	0.030	NA	NA	NA	<0.020	NA	NA	<0.010
Copper (mg/L)	1	0.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	<0.020	<0.020	<0.020	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	<0.020	<0.010
Iron (mg/L)	0.3	5	0.19	<0.020	<0.020	0.040	0.22	1.5	<0.040	<0.040	<0.040	<0.040	0.12	<0.020	<0.020	<0.020	<0.020	0.12	0.91	<0.040	0.030
Lead (mg/L)	0.05	0.1	0.0020	<0.00010	<0.00010	<0.00010	0.00060	<0.0010	<0.00040	<0.00010	<0.00020	<0.0020	<0.00020	0.00010	<0.00010	<0.00010	<0.00010	<0.00020	<0.0020	<0.00020	<0.00010
Magnesium (mg/L)	None	None	55	61	60	57	59	261	284	288	309	295	304	61	75	73	77	230	217	228	4.8
Manganese (mg/L)	0.05	0.2	0.042	0.012	0.028	0.025	0.053	0.060	0.010	0.0090	<0.010	0.020	<0.010	<0.0050	<0.0050	<0.0050	<0.0050	0.33	1.4	0.81	0.019
Mercury (mg/L)	0.002	0.01	<0.00020	<0.00020	NA	NA	NA	<0.0010	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	NA	<0.00020	NA	NA	<0.00020
Molybdenum (mg/L)	0.035	None	0.030	0.030	0.020	0.010	<0.010	<0.10	<0.020	0.030	<0.020	<0.020	<0.020	0.030	0.010	0.010	<0.010	0.040	<0.020	<0.020	0.060
Nickel (mg/L)	0.1	0.2	<0.010	<0.010	NA	NA	NA	0.050	NA	<0.010	NA	NA	NA	<0.010	NA	NA	NA	<0.020	NA	NA	<0.010
Potassium (mg/L)	None	None	18	18	19	17	17	91	98	95	105	100	97	18	17	17	16	17	21	20	12
Selenium (mg/L)	0.05	0.02	0.017	0.036	0.020	0.023	0.021	0.0030	0.027	0.17	0.032	0.24	0.048	0.027	0.028	0.031	0.028	0.079	0.010	0.00070	0.0017
Sodium (mg/L)	None	None	136	127	109	95	90	172	205	190	219	208	206	79	83	82	83	34	30	29	202
Uranium (mg/L)	0.03	None	0.076	0.090	0.11	0.11	0.10	<0.00030	<0.00020	<0.00010	<0.0030	<0.0020	0.00030	0.078	0.10	0.11	0.099	0.058	0.033	0.086	0.025
Vanadium (mg/L)	None	0.1	0.0070	0.0060	0.012	0.0090	0.013	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010	0.018	0.014	0.016	0.010	<0.010	<0.010	<0.010	0.025
Zinc (mg/L)	5	2	0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.010	<0.020	<0.020	<0.020	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	<0.020	<0.010
General Water Quality																					
Alkalinity as CaCO ₃ (mg/L)	None	None	240	234	203	207	205	392	394	386	387	397	399	154	198	218	223	426	436	389	243
Carbonate as CaCO ₃ (mg/L)	None	None	NA	<20	5.0	<20	13	<10	<20	<20	<20	<20	<20	<20	<20	<20	4.0	<20	<20	<20	11
Bicarbonate as CaCO ₃ (mg/L)	None	None	240	234	203	207	192	478	394	386	387	397	399	154	198	218	218	426	436	389	232
Chloride (mg/L)	250	None	21	22	33	24	24	142	170	160	170	160	170	25	28	30	32	48	37	40	19
Fluoride (mg/L)	4.0	2	0.40	0.50	0.60	0.60	0.50	0.30	0.30	0.40	0.40	0.40	0.30	0.70	0.60	0.60	0.50	0.70	0.60	0.50	1.0
Ammonia as N (mg/L)	None	None	0.080	0.23	0.060	0.10	<0.050	1.0	0.80	0.95	1.1	1.1	0.91	<0.050	<0.050	<0.050	<0.050	0.060	0.12	<0.050	<0.50
Nitrate/Nitrite as N(mg/L)	10.0	100	1.1	1.2	2.5	2.2	2.0	<0.10	<0.020	<0.020	0.060	<0.020	0.030	0.61	0.85	0.72	0.77	0.040	<0.020	0.030	10
Silica (mg/L)	None	None	18	17	18	14	16	10	11	11	11	9.8	10	16	20	18	19	12	17	19	12
Sulfate (mg/L)	250	None	390	370	390	370	370	1330	1400	1070	1490	1460	1490	460	460	460	480	1810	1370	1450	190
Sulfide as S (mg/L)	None	None	0.040	<0.020	<0.020	<0.020	<0.080	NA	13	10	12	12	12	<0.020	<0.020	<0.020	<0.020	1.9	0.61	0.19	0.10
Total Organic Carbon (mg/L)	None	None	12	8.0	NA	NA	NA	<10	NA	12	NA	NA	NA	9.0	NA	NA	NA	29	NA	NA	18
Total Dissolved Solids (mg/L)	None	None	840	820	820	770	790	2400	2670	1140	2740	2750	2760	850	930	970	940	3040	2520	2560	610
Total Suspended Solids (mg/L)	None	None	120	780	NA	78	350	13	<50	<50	NA	13	<50	<50	5.0	9.0	<50	833	18	<50	168
Dissolved Radionuclides																					
Gross Alpha (pCi/L)**	15**	None	50	65	49	49	41	11	17	12	9.7	3.7	12	36	56	42	45	42	23	7.0	26
Gross Beta (pCi/L)	4 mrem/yr	None	32	41	32	30	27	93	140	91	110	99	96	34	33	40	29	23	24	23	20
Radium 226 (pCi/L)	5 (Ra 226 and 228)	5 (Ra 226 and 228)	0.53	0.33	0.42	0.23	0.30	1.6	2.2	1.9	3.3	1.9	2.1	0.12	0.17	0.050	0.10	12	0.54	0.49	0.29
Calculated Values																					
Charge Balance (%)	None	None		6.4	1.5	0.80	0.80	-3.5	-1.2	7.8	0.70	-0.60	-0.70	0.40	3.0	0.30	0.30	-2.5	-0.50	0.50	3.1
Field Parameters																					
Temperature (°C)	None	None	12	18	16	16	15	18	18	19	19	19	18	19	16	15	15	18	16	15	18
pH (std. units)	6.5-8.5	6.5-8.5	10	7.5	7.5	8.0	7.7	7.7	5.3	7.0	6.9	6.9	6.9	8.0	7.8	7.4	7.5	6.4	6.7	6.8	8.2
Specific Conductivity (mS/cm)	None	None	2338	1194	1225	1101	1043	3170	5319	3140	3430	3290	3510	1064	1276	1251	1338	3060	2630	2800	993
Dissolved Oxygen (mg/L)	None	None	6.0	2.1	5.9	5.8	6.8	2.6	1.5	0.020	0.060	0.14	0.11	2.2	4.0	4.0	4.8	6.1	0.29	0.26	2.1
ORP (mV) ⁵	None	None	--	--	203	150	86	--	-310	-373	-361	-331	333	29	161	125	88	-123	-167	198	154

NOTES:

- 1) Colorado Department of Public Health and Environment, Water Quality Control Commission, 5 CCR 1002-41, Regulation 41, *The Basic Standards for Ground Water*, Effective May 31, 2008
- 2) Results for MW-9 qualified by Kleinfelder due to slow recharge of MW-9
- *Groundwater sample may contain drill water
- 3) Concentrations detected below the practical quantitation limit are shown as the detected value. Undetected concentrations are shown as less than the method detection limit.
- 4) NA: Not Analyzed. Cesium, cadmium, barium, nickel, chromium, mercury and total organic carbon were generally analyzed in the initial sampling event only.
- **The gross alpha standard does not include gross alpha from radon and uranium. However, the laboratory results include the alpha contribution from radon and uranium.
- 5) ORP: Oxidation Reduction Potential

**TABLE 11
ANALYTICAL DATA FOR PRODUCTION WELL SAMPLES**

Analyte	CDPHE Domestic Water Supply Standards ¹	CDPHE Agricultural Standards ¹	PW-1				PW-2				PW-3			
			8/12/08 ²	8/13/08	11/14/08	2/24/09	8/8/08	8/11/08	11/13/08	2/24/09	8/6/08	8/7/08	11/13/08	3/3/09
Dissolved Metals														
Aluminum (mg/L)	None	5	<0.030 ³	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Arsenic (mg/L)	0.01	0.1	0.017	0.018	0.00090	0.00070	0.0034	0.0024	0.00070	<0.00050	0.014	0.014	0.012	0.012
Barium (mg/L)	2.0	None	0.013	0.027	NA ⁴	NA	0.013	0.0090	NA	NA	0.032	0.032	NA	NA
Boron (mg/L)	None	0.75	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)	0.005	0.01	<0.00010	<0.00010	NA	NA	<0.00010	<0.00010	NA	NA	0.00010	<0.00010	NA	NA
Calcium (mg/L)	None	None	69	67	69	68	91	90	88	83	67	67	73	74
Cesium (mg/L)	None	None	<0.00020	<0.00020	NA	NA	<0.00020	<0.00020	NA	NA	<0.00020	<0.00020	NA	NA
Chromium (mg/L)	0.1	0.1	<0.010	<0.010	NA	NA	<0.010	<0.010	NA	NA	<0.010	<0.010	NA	NA
Copper (mg/L)	1	0.2	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Iron (mg/L)*	0.3	5	0.020	0.020	2.9	3.4	0.12	0.12	4.2	21	0.020	0.020	0.060	<0.020
Lead (mg/L)	0.05	0.1	0.00020	0.00010	<0.00010	<0.00010	0.0020	0.00010	<0.00010	<0.00010	0.00020	<0.00010	<0.00010	<0.00010
Magnesium (mg/L)	None	None	86	88	84	84	66	70	71	66	81	82	70	72
Manganese (mg/L)*	0.05	0.2	<0.0050	<0.0050	0.18	0.18	0.0090	0.012	0.10	0.23	<0.0050	<0.0050	0.0080	<0.0050
Mercury (mg/L)	0.002	0.01	<0.00020	<0.00020	NA	NA	<0.00020	<0.00020	NA	NA	<0.00020	<0.00020	NA	NA
Molybdenum (mg/L)	0.035	None	<0.010	<0.010	<0.010	<0.010	0.020	0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010
Nickel (mg/L)	0.1	0.2	<0.010	0.010	NA	NA	<0.010	<0.010	NA	NA	<0.010	<0.010	NA	NA
Potassium (mg/L)	None	None	9.8	10	11	11	17	18	18	17	13	12	14	14
Selenium (mg/L)	0.05	0.02	0.018	0.017	0.0089	0.0078	0.017	0.017	0.013	0.0024	0.021	0.020	0.022	0.021
Sodium (mg/L)	None	None	72	72	74	75	102	102	102	102	100	99	102	101
Uranium (mg/L)	0.03	None	0.11	0.096	0.025	0.020	0.061	0.064	0.045	0.0078	0.083	0.084	0.080	0.073
Vanadium (mg/L)	None	0.1	0.035	0.041	<0.0050	<0.0050	0.010	0.0070	<0.0050	<0.0050	0.014	0.021	0.020	0.024
Zinc (mg/L)	5	2	<0.010	<0.010	<0.010	<0.010	0.060	0.020	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
General Water Quality														
Alkalinity as CaCO ₃ (mg/L)	None	None	225	228	225	217	249	241	246	214	243	241	252	242
Carbonate as CaCO ₃ (mg/L)	None	None	<20	5.0	<20	<20	<20	<20	<20	<20	3.0	<20	<20	<20
Bicarbonate as CaCO ₃ (mg/L)	None	None	225	223	225	217	249	241	246	214	240	241	252	242
Chloride (mg/L)	250	None	36	36	36	38	38	36	34	38	35	35	35	37
Fluoride (mg/L)	4.0	2	0.50	0.50	0.50	0.50	0.40	0.50	0.40	0.50	0.50	0.40	0.50	0.50
Ammonia as N (mg/L)	None	None	<0.050	31	0.30	0.16	<0.050	<0.30	0.050	<0.50	<0.050	<0.050	<0.050	<0.050
Nitrate/Nitrite as N(mg/L)	10.0	100	1.8	1.5	0.36	0.37	0.66	0.66	0.29	0.030	0.98	1.0	1.1	0.77
Silica (mg/L)	None	None	19	19	10	11	17	15	13	11	19	19	15	16
Sulfate (mg/L)	250	None	380	360	380	380	430	430	440	430	380	380	380	390
Sulfide as S (mg/L)	None	None	<0.020	<0.020	<0.020	<0.20	<0.020	0.030	<0.020	0.11	<0.020	<0.020	<0.020	<0.020
Total Organic Carbon (mg/L)	None	None	10	9.0	NA	NA	8.0	11	NA	NA	7.0	7.0	NA	NA
Total Dissolved Solids (mg/L)	None	None	810	810	820	810	940	930	920	910	830	840	860	850
Total Suspended Solids (mg/L)	None	None	<50	<50	106	24	38	43	55	66	<50	<50	10	<50
Dissolved Radionuclides														
Gross Alpha (pCi/L)**	15**	None	46	40	7.8	11	31	27	18	1.4	40	35	32	33
Gross Beta (pCi/L)	4 mrem/yr	None	26	23	15	11	29	25	21	18	27	26	29	19
Radium 226 (pCi/L)	5 (Ra 226 and 228)	5 (Ra 226 and 228)	0.15	0.23	0.040	0.040	0.19	0.13	0.090	0.11	0.26	0.18	0.25	0.23
Calculated Values														
Charge Balance (%)	None	None	1.5	10	2.2	2.2	-0.70	1.0	1.0	4.0	3.2	3.5	0.70	1.1
Field Parameters														
Temperature (°C)	None	None	18	18	15	15	19	20	15	15	16	16	14	15
pH (std. units)	6.5-8.5	6.5-8.5	7.5	7.0	7.5	7.5	7.5	7.5	7.3	7.4	7.6	7.6	7.6	7.6
Specific Conductivity (mS/cm)	None	None	1151	1132	1161	1248	1294	1317	1275	1391	1256	1245	1218	1306
Dissolved Oxygen (mg/L)	None	None	7.4	7.2	0.81	0.080	6.1	5.5	1.5	0.24	7.7	7.7	7.2	6.4
ORP (mV) ⁵	None	None	31	142	-154	-145	100	90	-124	-209	61	105	95	86

NOTES:

- 1) Colorado Department of Public Health and Environment, Water Quality Control Commission, 5 CCR 1002-41, Regulation 41, *The Basic Standards for Ground Water*, Effective May 31, 2008
 - 2) The August 2008 samples were collected during pumping tests with discharge rates above 10 gpm. The November 2008 and January 2009 samples were collected using low-flow sampling techniques (<0.5 gpm).
 - 3) Concentrations detected below the practical quantitation limit are shown as the detected value. Undetected concentrations are shown as less than the method detection limit.
 - 4) NA: Not Analyzed. Cesium, cadmium, barium, nickel, chromium, mercury and total organic carbon were generally analyzed in the initial sampling event only.
- *Elevated iron and manganese concentrations in the fourth quarter 2008 and first quarter 2009 are likely due to the steel casing.
 **The gross alpha standard does not include gross alpha from radon and uranium. However, the laboratory results include the alpha contribution from radon and uranium.
 5) ORP: Oxidation Reduction Potential

**TABLE 12
ANALYTICAL DATA FOR SAMPLES FROM EXPLORATORY HOLES AND DOMESTIC WELL IN THE SITE VICINITY**

Analyte	CDPHE Domestic Water Supply Standards ¹	CDPHE Agricultural Standards ¹	EX-5	EX-6	EX-7	EX-8	EX-10	EX-11	EX-12	EX-15	EX-23	Vicinity Well*
			4/22/2008	4/25/2008	4/24/2008	5/15/2008	5/18/2008	5/16/2008	5/17/2008	8/6/2008	7/21/2008	4/22/2008
Dissolved Metals												
Aluminum (mg/L)	None	5	0.0900	<0.030 ²	0.030	NA ³	<0.030	NA	<0.030	0.030	<0.20	<0.030
Arsenic (mg/L)	0.01	0.1	0.0070	0.011	0.011	NA	0.0054	NA	0.013	0.0047	0.010	0.0032
Barium (mg/L)	2.0	None	0.011	0.013	0.0090	NA	0.010	NA	0.011	0.022	0.020	0.015
Boron (mg/L)	None	0.75	0.24	0.36	0.35	NA	0.44	NA	0.41	0.87	11	0.15
Cadmium (mg/L)	0.005	0.01	<0.00010	<0.00010	<0.00010	NA	<0.00010	NA	<0.00010	<0.00010	<0.0020	<0.00010
Calcium (mg/L)	None	None	102	69	89	NA	99	NA	69	50	558	83
Cesium (mg/L)	None	None	<0.00020	<0.00020	<0.00020	NA	<0.00020	NA	<0.00020	<0.00020	<0.0040	<0.00020
Chromium (mg/L)	0.1	0.1	<0.010	<0.010	<0.010	NA	<0.010	NA	<0.010	<0.010	<0.050	<0.010
Copper (mg/L)	1	0.2	<0.010	<0.010	<0.010	NA	<0.010	NA	<0.010	0.010	<0.050	0.020
Iron (mg/L)	0.3	5	<0.020	<0.020	<0.020	NA	<0.020	NA	<0.020	<0.020	0.30	<0.020
Lead (mg/L)	0.05	0.1	0.00040	0.0011	0.0012	NA	0.00010	NA	0.00010	0.0040	<0.0020	0.00060
Magnesium (mg/L)	None	None	76	73	84	NA	76	NA	69	47	371	85
Manganese (mg/L)	0.05	0.2	<0.0050	<0.0050	<0.0050	NA	<0.0050	NA	<0.0050	<0.0050	0.41	<0.0050
Mercury (mg/L)	0.002	0.01	<0.00020	<0.00020	<0.00020	NA	<0.00020	NA	<0.00020	<0.00020	<0.00020	<0.00020
Molybdenum (mg/L)	0.035	None	<0.010	0.020	0.010	NA	0.020	NA	<0.010	0.040	0.10	0.010
Nickel (mg/L)	0.1	0.2	<0.010	<0.010	<0.010	NA	<0.010	NA	<0.010	<0.010	<0.050	<0.010
Potassium (mg/L)	None	None	16	12	15	NA	19	NA	14	29	41	11
Selenium (mg/L)	0.05	0.02	0.038	0.017	0.023	NA	0.020	NA	0.020	0.058	3.0	0.048
Sodium (mg/L)	None	None	80	95	87	NA	99	NA	98	71	57	67
Uranium (mg/L)	0.03	None	0.022	0.072	0.10	NA	0.056	NA	0.067	0.031	0.0060	0.026
Vanadium (mg/L)	None	0.1	0.012	0.011	0.025	NA	0.013	NA	0.021	0.013	<0.030	<0.0050
Zinc (mg/L)	5	2	<0.010	<0.010	<0.010	NA	<0.010	NA	<0.010	0.040	<0.050	0.030
General Water Quality												
Alkalinity as CaCO ₃ (mg/L)	None	None	176	235	216	NA	235	NA	235	250	316	198
Carbonate as CaCO ₃ (mg/L)	None	None	<20	<20	<20	NA	<20	NA	<20	10	<20	<20
Bicarbonate as CaCO ₃ (mg/L)	None	None	176	235	216	NA	235	NA	235	239	316	198
Chloride (mg/L)	250	None	28	38	24	NA	24	NA	31	18	71	35
Fluoride (mg/L)	4.0	2	0.60	0.40	0.50	NA	0.40	NA	0.40	0.60	1.6	0.50
Ammonia as N (mg/L)	None	None	0.12	<0.050	<0.050	NA	<0.050	NA	<0.050	<0.050	0.58	<0.050
Nitrate/Nitrite as N(mg/L)	10.0	100	0.62	3.7	1.8	NA	0.75	NA	1.0	22	0.090	15
Silica (mg/L)	None	None	18	18	19	NA	17	NA	17	12	13	16
Sulfate (mg/L)	250	None	460	410	500	NA	520	NA	390	170	2,720	310
Sulfide as S (mg/L)	None	None	<0.020	<0.020	<0.020	NA	<0.020	NA	<0.020	<0.020	74	<0.020
Total Organic Carbon (mg/L)	None	None	2.0	4.0	3.0	NA	3.0	NA	1.0	13	30	3.0
Total Dissolved Solids (mg/L)	None	None	920	870	940	NA	1030	NA	830	590	4290	810
Total Suspended Solids (mg/L)	None	None	5.0	<50	43	NA	53	NA	100	<50	1130	<50
Dissolved Radionuclides												
Gross Alpha (pCi/L)**	15**	None	53	29	58	NA	42	NA	40	21	NA	17
Gross Beta (pCi/L)	4 mrem/yr	None	42	35	39	NA	31	NA	35	35	NA	19
Radium 226 (pCi/L)	5 (Ra 226 and 228)	5 (Ra 226 and 228)	0.12	0.11	0.070	NA	0.14	NA	0.11	0.35	NA	0.080
Calculated Values												
Charge Balance (%)	None	None	4.4	-1.8	0.0	NA	-0.90	NA	0.0	6.3	-2.7	11
Field Parameters												
Temperature (°C)	None	None	17	17	17	17	17	17	15	NA	27	NA
pH (std. units)	6.5-8.5	6.5-8.5	7.4	7.5	7.5	7.4	7.6	7.4	7.7	NA	7.0	7.87
Specific Conductivity (mS/cm)	None	None	1.3	1.4	1.3	1.3	1.5	1.5	1.3	NA	4.2	1.2
Dissolved Oxygen (mg/L)	None	None	4.5	7.2	5.8	6.1	6.3	6.2	8.5	NA	2.0	6.9
ORP (mV) ⁴	None	None	123	123	145	72	68	47	55	NA	-314	108

NOTES:

1) Colorado Department of Public Health and Environment, Water Quality Control Commission, 5 CCR 1002-41, Regulation 41, *The Basic Standards for Ground Water*, Effective May 31, 2008.

*Domestic Water Well corresponds to Vicinity Well (permit no. 226684) on Figure 1 and Table 6; well was sampled from tap.

2) Concentrations detected below the practical quantitation limit are shown as the detected value. Undetected concentrations are shown as less than the method detection limit.

3) NA: Not Analyzed. Cesium, cadmium, barium, nickel, chromium, mercury and total organic carbon were generally analyzed in the initial sampling event only.

**The gross alpha standard does not include gross alpha from radon and uranium. However, the laboratory results include the alpha contribution from radon and uranium.

4) ORP: Oxidation Reduction Potential

**TABLE 13
PROPOSED GROUNDWATER MONITORING PARAMETERS**

Parameter	Laboratory Analytical Method	Reporting Limit
Indicator Parameters / Quarterly Suite		
Arsenic	200.8	0.001 mg/L
Boron	200.7	0.1 mg/L
Cadmium	200.8	0.005 mg/L
Copper	200.7	0.01 mg/L
Manganese	200.7	0.01 mg/L
Nickel	200.7	0.05 mg/L
Selenium	200.8	0.001 mg/L
Zinc	200.7	0.01 mg/L
Sulfate	SM4500-SO4 D	1 mg/L
Uranium-natural ¹	200.8	0.0001 mg/L
Radium-226	903.1	0.2 pCi/L
Radium-228	904.0	0.2 pCi/L
pH (field)	--	--
Specific conductivity (field)	--	--
Temperature (field)	--	--
ORP (field) ²	--	--
Dissolved oxygen (field)	--	--
Annual Suite³		
Total Suspended Solids	SM2540D	1 mg/L
Total Dissolved Solids	SM2540C	10 mg/L
Total Alkalinity	A2320B	1 mg/L
Ammonia as Nitrogen	A4500-NH3 G	0.05 mg/L
Silica	200.7	0.1 mg/L
Carbonate	A2320B	1 mg/L
Chloride	SM4500-Cl	1 mg/L
Sulfide	376.2	0.1 mg/L
Nitrate/Nitrite	353.2	0.1 mg/L
Calcium	200.7	1 mg/L
Potassium	200.7	1 mg/L
Sodium	200.7	1 mg/L
Magnesium	200.7	1 mg/L
TOC ⁴	SM5310B	1 mg/L
Aluminum	200.7	0.1 mg/L
Barium	200.7	0.1 mg/L
Cesium	200.8	0.01 mg/L
Chromium	200.7	0.05 mg/L
Fluoride	SM4500-F C	0.1 mg/L
Iron	200.7	0.03 mg/L
Lead	200.8	0.001 mg/L
Mercury	245.1	0.001 mg/L
Molybdenum	200.7	0.1 mg/L
Vanadium	200.7	0.1 mg/L
Gross Alpha	900.0	2 - 4 pCi/L
Gross Beta	900.0	2 - 4 pCi/L

NOTES:

- 1) For quarterly sampling events, only samples collected in the mill area will be analyzed for uranium. For annual sampling events, all samples will be analyzed for uranium.
- 2) ORP: Oxidation Reduction Potential
- 3) Annual sampling events will include the quarterly suite of parameters and the additional annual suite of parameters.
- 4) TOC: total organic carbon