

**CAMECO RESOURCES  
CROW BUTTE OPERATION**



**86 Crow Butte Road  
P.O. Box 169  
Crawford, Nebraska 69339-0169**

**(308) 665-2215  
(308) 665-2341 – FAX**

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June 11, 2015

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

Marty Link, Acting Water Quality Division Administrator  
Nebraska Department of Environmental Quality  
P.O. Box 98922  
Lincoln, NE 68509-8922

Class III UIC Permit NE0122611  
May 2015 Monthly Restoration Report

Dear Ms. Link:

Please find enclosed the May 2015 Monthly Restoration Reports for Mine Units 2, 3, 4, 5 and 6. The reverse osmosis (RO) units continue to inject permeate and reductant into Mine Units 4, and 5, with groundwater sweep continuing in portions of the two mine units. IX treatment was suspended on May 11, 2015 in Mine Unit 6 so that piping changes can be made to allow for RO treatment. A small wellfield bleed continues in this mine unit for excursion control.

Mine Units 2 and 3 remain in stability monitoring. A summary of all composite samples taken during stability monitoring is included in this report.

If you have any questions regarding this submittal, please feel free to contact me at (308) 665-2215, ext. 114.

Sincerely,  
Cameco Resources  
Crow Butte Operation

Larry Teahon  
SHEQ Manager

Enclosures: As Stated

cc: Ron Burrows - NRC  
CBO - File  
ec: CR - Casper  
Shar Sapp – Chadron Field Office

CROW BUTTE MINE  
MONTHLY RESTORATION REPORT  
MAY 2015  
MINE UNIT 2

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep		X	(if yes, complete part 3)
c. Groundwater Treatment		X	
d. Wellfield Recirculation		X	
e. Other (explain):	X		The Mine Unit is in Stability Monitoring.

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

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3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

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4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

No samples were collected during the month. Attached is a summary of all composite samples taken during stability monitoring.

MINE UNIT #2

WellID	SampleDate	Alkalinity	Carbonate	Bicarbonate	Calcium	Chloride	Fluoride	Magnesium	Nitrogen Ammonia	Nitrogen Nitrate+Nitrite	Potassium	Silica	Sodium	Sulfate	Conductivity	pH	TDS	Aluminum	Arsenic	Barium	Boron	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Uranium	Uranium Activity	Vanadium	Zinc	Radium 226	Radium 226 precision	Radium 226 MDC	AC Balance	Anions	Cations	TDS Calc	TDS Balance	
Reporting Limit		1	1	1	1	1	0.1	1	0.05	0.1	1	0.2	1	1	1	0.01	10	0.1	0.001	0.1	0.1	0.005	0.05	0.01	0.03	0.001	0.01	0.001	0.1	0.05	0.005	0.0003	2.00E-10	0.1	0.01	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Baseline	Jun-91	585			134	250	4	35	10	10.0	126		4108	369		6.5-8.5	1170	0.1	0.050	1.0		0.005	0.05	1.0	0.30	0.05	0.05	0.002	1.0	0.15	0.05	5.0		0.2	5.0	1058.0								
MU2 Comp	2/28/2013	185	2	223	5	44	0.7	1	<.05	1.0*	5	12.4	141	83	666	8.19	411	<.1	0.036	<.1	0.6	<.005	<.05	<.01	0.10	<.001	<.01	<.001	0.1	<.05	<.005	0.4280	2.89E-07	0.1	0.01	66.0	2.50	0.40	-2.000	6.85	6.58	410	1.00	
	6/18/2013	167	3	197	5	39	0.7	1	<.05	<.1	5	11.8	130	73	616	8.30	380	<.1	0.036	<.1	0.6	<.005	<.05	<.01	0.12	<.001	0.01	<.001	<.1	<.05	<.005	0.4070	2.76E-07	0.2	0.01	100.0	2.90	0.27	0.180	6.06	6.09	370	1.03	
	7/18/2013	175	<1	213	4	42	0.7	1	<.05	<.1	5	12.1	140	79	641	8.21	396	<.1	0.034	<.1	0.6	<.005	<.05	<.01	0.12	0.002	0.01	<.001	<.1	<.05	<.005	0.4050	2.74E-07	0.1	0.01	134.0	2.40	0.24	1.240	6.36	6.52	390	1.01	
	8/15/2013	182	4	214	5	45	0.7	1	<.05	<.1	5	11.2	135	85	669	8.13	409	<.1	0.031	<.1	0.6	<.005	<.05	<.01	0.11	0.001	0.01	<.001	<.1	<.05	<.005	0.4020	2.72E-07	0.1	<.01	78.0	2.60	0.34	-3.250	6.76	6.33	400	1.02	
	9/12/2013	195	5	228	6	47	0.6	<1	0.68	<.1	6	11.6	147	87	686	8.11	411	<.1	0.032	<.1	0.6	<.005	<.05	<.01	0.11	0.001	0.01	<.001	<.1	<.05	<.005	0.4290	2.90E-07	0.1	<.01	87.0	1.90	0.17	-1.050	7.10	6.95	420	0.97	
	10/10/2013	195	2	233	5	49	0.7	1	<.05	<.1	5	11.3	146	91	697	8.12	428	<.1	0.031	<.1	0.6	<.005	<.05	<.01	0.11	<.001	0.01	<.001	0.1	<.05	<.005	0.4040	2.74E-07	0.1	<.01	99.0	2.10	0.19	-2.980	7.26	6.84	430	1.00	
	11/14/2013	188	2	225	5	47	0.7	1	<.05	<.1	6	12.1	159	90	716	8.14	433	<.1	0.031	<.1	0.6	<.005	<.05	<.01	0.10	<.001	0.01	<.001	0.1	<.05	<.005	0.4010	2.72E-07	0.1	<.01	90.0	1.80	0.17	2.870	6.98	7.40	440	0.99	
	12/12/2013	186	2	222	5	50	0.7	1	<.05	<.1	5	12.7	157	93	722	8.11	440	<.1	0.029	<.1	0.5	<.005	<.05	<.01	0.10	<.001	0.01	<.001	<.1	<.05	<.005	0.3770	2.55E-07	0.1	<.01	67.0	1.60	0.16	0.994	7.16	7.30	440	1.00	
	3/13/2014	200	5	235	5	48	0.6	1	<.05	<.1	5	11.1	146	93	721	8.16	430	<.1	0.029	<.1	0.6	<.005	<.05	<.01	0.10	<.001	0.01	<.001	0.1	<.05	<.005	0.3760	2.55E-07	0.1	<.01	74.0	1.70	0.15	-3.480	7.32	6.82	420	1.03	
	6/26/2014	194				50								93	711		430																											
	7/31/2014	190				50								92	722		452																											
	8/29/2014	190				50								93	723		438																											
9/26/2014	192				52								97	724		438																												
10/23/2014	193				50								93	726		433																												

\*Sampling error - composite submitted fixed with nitric acid.



CROW BUTTE MINE  
MONTHLY RESTORATION REPORT  
MAY 2015  
MINE UNIT 3

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep		X	(if yes, complete part 3)
c. Groundwater Treatment		X	
d. Wellfield Recirculation		X	
e. Other (explain):	X		The Mine Unit is in Stability Monitoring.

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

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3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

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4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

No samples were collected during the month. Attached is a summary of all composite samples taken during stability monitoring.



MINE UNIT #3

WellID	SampleDate	Alkalinity	Carbonate	Bicarbonate	Calcium	Chloride	Fluoride	Magnesium	Nitrogen Ammonia	Nitrogen Nitrate+Nitrite	Potassium	Silica	Sodium	Sulfate	Conductivity	pH	TDS	Aluminum	Arsenic	Barium	Boron	Cadmium	Chromium	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Uranium	Uranium Activity	Vanadium	Zinc	Radium 226	Radium 226 precision	Radium 226 MDC	AC balance	Anions	Cations	TDS Calc	TDS Balance	
Reporting Limit		1	1	1	1	1	0.1	1	0.05	0.1	1	0.2	1	1	1	0.01	10	0.1	0.001	0.1	0.1	0.005	0.05	0.01	0.03	0.001	0.01	0.001	0.1	0.05	0.005	0.0003	2.00E-10	0.1	0.01	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Baseline	Jun-92	592			133	250	4.0	35	10	10	139		4280	404		6.5-8.5	1183		0.050	1.0		0.005		1.0	0.30	0.05	0.05	0.002	1.0	0.15	0.05	5.0		0.2	5.0	611.0								
MU 3 Comp	3/1/2013	208	3	248	7	40	0.7	1	0.09	<.1	5	12.0	138	75	675	8.04	420	<.1	0.046	<.1	0.6	<.005	<.05	<.01	0.07	0.001	0.01	<.001	<.1	<.05	<.005	0.6020	4.07E-07	0.2	<.01	64.0	2.30	0.28	-2.370	6.96	6.64	410	1.03	
	6/18/2013	206	1	248	6	45	0.7	1	<.05	<.1	5	11.8	150	85	707	8.02	439	<.1	0.043	<.1	0.6	<.005	<.05	<.01	0.05	0.001	0.01	<.001	0.1	<.05	<.005	0.7570	5.12E-07	0.2	<.01	284.0	3.30	0.16	-0.821	7.24	7.12	430	1.02	
	7/19/2013	212	<1	258	6	44	0.7	2	0.08	<.1	5	12.0	146	81	694	8.14	426	<.1	0.042	<.1	0.6	<.005	<.05	<.01	0.07	0.002	<.01	<.001	0.1	<.05	<.005	0.5940	4.02E-07	0.2	<.01	233.0	2.60	0.17	-1.930	7.23	6.95	430	1.00	
	8/16/2013	205	5	241	6	44	0.7	1	<.05	<.1	5	11.5	139	81	684	8.16	420	<.1	0.044	<.1	0.6	<.005	<.05	<.01	0.08	0.002	0.01	<.001	0.1	<.05	<.005	0.5930	4.02E-07	0.2	<.01	168.0	4.00	0.37	-3.890	7.10	6.57	410	1.01	
	9/13/2013	216	7	250	6	39	0.7	1	0.76	<.1	5	11.6	140	72	673	8.19	417	<.1	0.039	<.1	0.6	<.005	<.05	<.01	0.06	0.002	0.01	<.001	0.1	<.05	<.005	0.5550	3.76E-07	0.1	<.01	172.0	2.70	0.17	-2.280	6.95	6.64	410	1.02	
	10/11/2013	205	4	242	5	40	0.7	1	<.05	<.1	5	11.3	140	75	662	8.23	410	<.1	0.039	<.1	0.6	<.005	<.05	<.01	0.08	0.002	0.01	<.001	0.1	<.05	<.005	0.5410	3.67E-07	0.2	<.01	175.0	2.80	0.20	-2.270	6.89	6.59	400	1.01	
	11/15/2013	211	5	247	5	40	0.7	1	0.34	<.1	5	11.8	153	78	691	8.23	416	<.1	0.035	<.1	0.5	<.005	<.05	<.01	0.06	0.002	0.01	<.001	0.1	<.05	<.005	0.5670	3.84E-07	0.2	<.01	142.0	2.20	0.16	0.482	7.08	7.14	420	0.98	
	12/13/2013	211	5	247	6	43	0.7	1	0.06	<.1	5	12.6	140	78	702	8.23	432	<.1	0.042	<.1	0.7	<.005	<.05	<.01	0.07	0.002	0.01	<.001	0.1	<.05	<.005	0.6140	4.15E-07	0.2	0.01	115.0	2.20	0.19	-3.540	7.16	6.67	420	1.04	
	3/14/2014	226	5	265	7	46	0.7	1	0.05	<.1	6	11.5	153	90	761	8.13	455	<.1	0.041	<.1	0.6	<.005	<.05	<.01	0.08	0.002	0.01	<.001	0.1	<.05	<.005	0.5980	4.05E-07	0.1	<.01	120.0	3.00	0.32	-3.490	7.78	7.25	450	1.00	
9/26/2014	238	3	285	8	54	0.7	2	0.05	<.1	6	12.7	174	102	825	8.03	504	<.1	0.039	<.1	0.7	<.005	<.05	<.01	0.05	<0.001	0.01	<.001	0.1	<.05	<.005	0.6310	4.27E-07	0.1	<.01	82.0	1.90	0.22	-1.480	8.51	8.26	500	1.00		



CROW BUTTE MINE  
MONTHLY RESTORATION REPORT  
MAY 2015  
MINE UNIT 4

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep	X		(if yes, complete part 3)
c. Groundwater Treatment	X		RO and Reductant CM2-1, P390, P392, P410, I539P, I543P, I544P, I545P, I546P, and I547P.
d. Wellfield Recirculation		X	
e. Other (explain):			

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

BL10, CM1-7, CM2-4, PM-3, P372, P391, I508P, I535P, I536P, I538P, P6023, P6024, and P6029.

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

BL10, BL19, BL20, CM1-7, CM2-1, CM2-4, CM3-9, PM-3, P372, P390, P391, P392, P410, P427, I508P, I526P, I533P, I535P, I536P, I538P, I539P, I543P, I544P, I545P, I546P, I547P, P6023, P6024 and P6029.

# Mine Unit 4 Restoration Data

Well Name	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	As	Fe	U	V
BL-10	5/5/2015		30.74		8.28	478.0	341.9						5.574	0.295
	5/12/2015	555.0	32.27	233.0	8.43	481.4	341.7	2398	7.73	1517	0.056	0.000	5.738	0.298
	5/19/2015		29.81		7.92	473.5	332.4						5.209	0.296
	5/27/2015		27.96		7.07	440.9	312.4						4.905	0.313
BL-19	5/12/2015	369.0	7.62	98.0	1.92	281.8	141.7	1323	8.14	828		0.018	6.157	
BL-20	5/12/2015	281.0	6.48	77.0	1.00	211.3	100.9	1019	7.98	614		0.152	0.814	
CM1-7	5/5/2015		14.36		4.54	340.8	223.7						2.907	0.142
	5/12/2015	390.0	15.76	147.0	4.58	333.1	217.7	1617	7.68	1023	0.033	0.005	2.995	
CM2-1	5/5/2015		64.45		18.80	643.0	512.5						3.553	0.109
	5/12/2015	699.0	63.93	330.0	18.36	637.7	502.8	3217	7.40	2122		0.012	3.517	
CM2-4	5/5/2015		12.56		3.49	298.9	197.4						0.525	0.050
	5/12/2015	361.0	13.29	145.0	3.61	313.5	206.2	1534	7.73	977	0.033	0.027	0.594	
CM3-9	5/12/2015	193.0	8.00	57.0	2.10	134.9	61.5	693	8.15	485	0.016	0.038	0.368	
I508P	5/12/2015	566.0	24.36	179.0	6.08	468.4	274.6	2211	8.01	1368		0.021	4.490	
I526P	5/12/2015	536.0	96.96	310.0	20.36	471.1	397.3	2659	7.64	1710	0.012	0.324	0.711	
I533P	5/12/2015	377.0	10.03	109.0	2.33	298.8	165.5	1427	8.36	896		0.011	2.580	
I535P	5/5/2015		36.72		11.10	533.7	418.0						2.641	0.118
	5/12/2015	562.0	37.13	277.0	11.05	549.2	425.0	2661	7.72	1711		0.002	2.684	
	5/19/2015		36.81		11.03	541.9	404.2						2.699	0.116
	5/27/2015		38.12		11.36	553.5	435.5						2.728	0.119

# Mine Unit 4 Restoration Data

Well Name	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	As	Fe	U	V
I536P	5/5/2015		28.47		8.31	416.7	321.9						9.583	0.148
	5/12/2015	495.0	28.95	180.0	8.38	411.9	316.1	2124	7.79	1306		-0.002	10.160	
	5/19/2015		30.59		8.56	432.3	333.4						10.590	0.137
	5/27/2015		30.33		8.70	425.3	331.9						11.090	0.153
I538P	5/12/2015	490.0	25.88	195.0	6.71	456.1	324.9	2245	8.21	1394	0.016	0.006	5.381	0.090
I539P	5/5/2015		32.26		9.66	486.2	364.8						4.250	0.141
	5/12/2015	565.0	33.83	251.0	9.88	491.5	371.1	2550	7.80	1629		0.006	4.333	
	5/19/2015		31.93		9.56	510.2	364.7						4.051	0.128
	5/27/2015		32.22		9.57	502.5	371.5						3.950	0.144
I543P	5/5/2015		35.23		11.05	321.4	258.6						1.226	0.231
	5/12/2015	611.0	84.01	238.0	24.15	510.1	483.3	2693	7.20	1734		0.006	1.956	
	5/19/2015		134.80		38.23	694.6	698.6						3.573	0.248
	5/27/2015		169.60		46.48	810.6	870.4						5.154	0.275
I544P	5/5/2015		55.61		16.27	534.5	453.3						5.123	0.417
	5/12/2015	662.0	58.83	234.0	16.95	549.1	459.4	2806	7.36	1818		0.010	5.323	
	5/19/2015		57.05		16.59	534.3	440.3						5.034	0.440
	5/27/2015		58.26		16.61	542.6	453.9						4.708	0.432
I545P	5/5/2015		20.20		5.86	344.0	231.7						1.551	0.411
	5/12/2015	424.0	22.83	171.0	6.55	369.0	251.6	1815	7.67	1126		0.002	1.739	
	5/19/2015		22.70		6.57	359.9	241.7						1.701	0.418
	5/27/2015		36.99		10.26	397.8	291.9						2.193	0.432
I546P	5/5/2015		60.00		16.97	613.3	493.2						3.418	0.071



# Mine Unit 4 Restoration Data

Well Name	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	As	Fe	U	V
	5/12/2015	659.0	63.74	369.0	17.72	621.5	502.0	3200	7.44	2109	0.013	0.074	3.441	
	5/19/2015		64.77		18.16	644.9	513.5						3.415	0.077
	5/27/2015		66.92		18.34	637.9	519.9						3.324	0.072
I547P	5/5/2015		68.30		19.67	699.6	650.5						5.711	0.239
	5/12/2015	799.0	70.48	292.0	20.18	704.8	651.8	3503	7.17	2322		0.032	5.759	
	5/19/2015		66.31		19.45	705.3	640.8						5.751	0.238
	5/27/2015		63.28		18.51	687.0	627.4						5.552	0.243
P372	5/5/2015		35.57		9.40	482.3	366.7						19.700	0.138
	5/12/2015	512.0	36.81	262.0	9.52	487.4	367.9	2424	7.33	1536		0.075	20.370	
	5/19/2015		35.91		9.42	486.4	368.1						19.090	0.156
	5/27/2015		36.13		9.39	477.6	365.8						19.060	0.156
P390	5/5/2015		21.08		6.01	399.3	279.3						2.605	0.148
	5/12/2015	451.0	20.81	166.0	5.79	389.7	265.2	1866	7.79	1154		0.005	2.425	
	5/19/2015		19.77		5.55	375.6	249.9						2.404	0.142
	5/27/2015		18.68		5.21	363.6	249.9						2.292	0.142
P391	5/5/2015		31.85		9.06	470.4	382.7						2.492	0.184
	5/12/2015	474.0	30.88	239.0	8.69	466.7	374.8	2341	7.88	1471		0.001	2.563	
	5/19/2015		29.76		8.45	475.1	377.5						2.394	0.175
	5/27/2015		29.42		8.13	449.1	360.2						2.359	0.167
P392	5/5/2015		51.88		13.78	456.3	368.7						2.629	0.326
	5/12/2015	587.0	64.09	262.0	16.62	500.6	419.9	2655	7.64	1708		0.000	2.989	
	5/19/2015		69.42		18.30	553.6	468.4						3.178	0.310
	5/27/2015		77.26		20.06	595.9	506.8						3.555	0.309
P410														

# Mine Unit 4 Restoration Data

Well Name	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	As	Fe	U	V
	5/12/2015	665.0	66.69	293.0	18.72	599.7	470.7	2946	7.55	1917		0.004	2.795	
	5/19/2015		70.42		19.33	600.1	491.0						3.179	0.379
	5/27/2015		75.27		20.00	605.4	500.6						3.351	0.365
P427	5/12/2015	269.0	4.30	61.0	1.13	176.9	65.9	848	8.55	536		0.007	0.868	
P6023	5/5/2015		84.74		24.29	990.4	1003.0						1.773	0.047
	5/12/2015	931.0	83.83	368.0	22.67	939.3	947.7	4465	6.93	2952		0.030	1.538	
	5/19/2015		74.76		20.64	914.7	907.6						1.484	0.031
	5/27/2015		67.79		18.49	845.1	832.7						1.462	0.028
P6024	5/5/2015		99.61		27.35	903.8	754.4						5.265	0.058
	5/12/2015	978.0	97.06	469.0	26.28	885.3	727.3	4399	7.38	2920		0.080	4.975	
	5/19/2015		93.78		25.79	885.5	722.3						4.790	0.030
	5/27/2015		92.20		25.24	866.4	712.9						4.606	0.045
P6029	5/5/2015		171.00		43.26	1027.0	1003.0						12.530	0.067
	5/12/2015		179.30	457.0	44.57	1018.0	1004.0	5181	7.25	3377		0.052	13.580	
	5/19/2015		162.10		42.27	1039.0	1012.0						13.620	0.060
	5/27/2015		177.50		43.93	1041.0	1018.0						13.600	0.069
PM-3	5/5/2015		7.54		2.09	196.0	119.3						0.409	0.116
	5/12/2015	234.0	7.31	74.0	1.89	184.0	108.6	928	7.94	584		0.004	0.396	



CROW BUTTE MINE  
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MINE UNIT 5

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep	X		(if yes, complete part 3)
c. Groundwater Treatment	X		RO and Reductant I678P, P683, I685P, I687P, I689P, P694, P695, P789, P796, P810, P889, I1126P, P1156, P1209, P1216, P1239, I1246P, and P1259.
d. Wellfield Recirculation		X	
e. Other (explain):		X	

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:  
BL5-4, BL5-5, CPW-1, I693P, P837, P859, P1002, P1203, and P1213.

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

BL5-4, BL5-5, BL-17, I678P, P683, I688P, I689P, I693P, P694, P695, P796, P810, P837,  
P859, P889, P1002, P1156, P1203, P1209, P1213, P1216, P1239, and P1259.

# Mine Unit 5 Restoration Data

Well Name	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	As	Fe	U	V
BL-17	5/12/2015		89.28	405	26.17	1108.0	961.2	5208	7.23	3380		0.00	6.156	
BL5-4	5/5/2015		52.20		13.96	654.1	541.8						0.779	0.032
	5/12/2015	697	51.06	299	13.43	633.9	519.0	3203	7.80	2112	0.00	0.11	0.895	
	5/19/2015		48.63		13.38	653.9	527.7						0.832	0.022
BL5-5	5/5/2015		53.94		14.42	642.2	599.9						0.389	0.025
	5/12/2015	546	55.20	352	14.50	646.4	595.1	3302	7.78	2185		0.10	0.409	
	5/19/2015		53.24		14.35	659.3	603.3						0.42	0.018
I678P	5/5/2015		29.01		7.15	457.6	366.8						5.917	0.328
	5/12/2015	499	28.40	197	7.06	458.0	351.3	2313	7.98	1447	0.05	0.03	5.796	
	5/19/2015		25.97		6.40	437.8	336.2						5.226	0.361
	5/27/2015		24.11		5.84	410.7	306.8						5.023	0.378
I688P	5/5/2015		14.55		3.71	343.2	287.4						2.916	0.267
	5/12/2015	311	13.79	176	3.37	341.5	281.1	1760	7.92	1098	0.06	0.00	3.366	
I689P	5/5/2015		11.28		3.08	304.1	237.6						3.078	0.467
	5/12/2015	322	12.24	140	3.22	319.5	251.9	1593	7.74	1011		0.18	3.164	
I693P	5/5/2015		18.22		4.49	442.4	381.5						7.791	0.463
	5/12/2015	395	18.99	223	4.57	449.4	381.7	2254	8.04	1401		0.02	8.463	
	5/19/2015		17.54		4.32	438.3	373.8						7.718	0.489
	5/27/2015		17.71		4.21	427.5	360.9						7.736	0.462
P1002	5/5/2015		18.44		5.15	399.2	342.0						1.653	0.307
	5/12/2015	380	18.44	178	5.06	402.1	340.9	2002	8.03	1233		0.00	1.863	
	5/19/2015		18.02		5.01	404.3	331.5						1.692	0.306
P1156	5/5/2015		25.03		6.86	443.4	347.8						3.254	0.345
	5/12/2015	484	25.37	208	6.78	441.0	345.7	2293	7.94	1431	0.02	0.03	3.417	
	5/19/2015		24.56		6.67	453.1	351.0						3.218	0.313
	5/27/2015		23.79		6.38	431.1	333.3						3.108	0.290
P1203														



# Mine Unit 5 Restoration Data

Well Name	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	As	Fe	U	V
P1209	5/5/2015		19.04		5.07	394.9	353.0						1.171	0.278
	5/12/2015	333	18.91	180	4.97	389.6	342.9	1958	8.12	1210		0.01	1.245	
	5/19/2015		18.54		4.93	385.5	328.2						1.167	0.301
	5/27/2015		18.76		4.83	381.5	335.6						1.164	0.252
P1213	5/5/2015		13.78		4.03	297.7	205.0						2.892	0.612
	5/12/2015	329	13.07	127	3.76	285.5	191.1	1451	8.00	913	0.09	0.04	2.825	
	5/19/2015		13.79		4.06	312.7	208.5						3.035	0.565
	5/27/2015		14.88		4.28	330.3	232.0						3.309	0.556
P1216	5/5/2015		12.11		3.40	359.8	237.6						2.305	1.040
	5/12/2015		12.59		3.45	363.0	240.5					0.01	2.296	
	5/19/2015		12.90		3.61	371.0	247.9						2.324	0.975
	5/27/2015		13.91		3.77	375.5	260.2						2.29	0.924
P1239	5/5/2015		67.32		20.48	1039.0	749.7						17.99	1.548
	5/12/2015		67.54	476	20.29	1051.0	742.4	4940	7.63	3314	0.04	0.00	17.83	
	5/5/2015		19.33		5.65	414.8	347.4						4.353	0.565
	5/12/2015	420	19.51	180	5.75	414.4	339.4	2101	8.06	1292		0.01	4.274	
P1259	5/19/2015		18.45		5.39	398.1	328.0						3.946	0.636
	5/27/2015		18.13		5.17	386.8	310.7						3.815	0.591
	5/5/2015		32.67		10.04	665.8	481.6						15.7	0.735
	5/12/2015	735	32.98	294	10.07	664.1	470.1	3198	7.72	2108		0.00	16.11	
P683	5/19/2015		31.18		9.67	648.3	461.4						15.77	0.823
	5/5/2015		23.29		6.48	435.3	312.4						5.588	0.347
	5/12/2015	528	23.81	188	6.40	430.7	309.5	2212	7.95	1368	0.08	0.01	5.697	
	5/19/2015		22.48		6.26	434.4	304.7						5.382	0.337
P694	5/27/2015		22.78		6.15	425.7	301.1						5.559	0.370
	5/5/2015		14.66		4.02	363.4	263.0						1.85	0.319
	5/12/2015	381	14.46	158	3.96	353.6	247.4	1747	7.99	1091		0.06	1.801	
	5/19/2015		13.68		3.76	345.5	242.2						1.681	0.372

# Mine Unit 5 Restoration Data

Well Name	Date	Alk	Ca	Cl	Mg	Na	SO4	Cond	pH	TDS	As	Fe	U	V
P695	5/27/2015		12.82		3.44	327.7	225.5						1.589	0.341
	5/5/2015		19.38		6.16	485.5	338.0						10.7	0.611
	5/12/2015	540	19.60	225	6.10	485.7	332.4	2398	7.94	1517	0.10	0.06	10.72	
	5/19/2015		19.60		6.30	498.5	340.5						10.63	0.579
	5/27/2015		21.00		6.50	510.8	354.7						11.3	0.549
P796	5/5/2015		18.53		4.68	329.7	254.9						0.91	0.025
	5/12/2015	352	17.60	141	4.35	319.2	238.7	1596	7.92	1012		0.02	0.929	
	5/27/2015		18.61		4.50	328.8	247.3						0.901	0.026
	5/5/2015		18.30		5.00	430.2	337.4						2.224	0.038
P810	5/12/2015	443	18.02	185	4.69	415.3	324.9	2054	8.00	1264	0.01	0.06	2.387	
	5/19/2015		17.01		4.61	422.6	312.8						2.191	0.029
	5/27/2015		16.77		4.48	411.5	315.1						2.141	0.029
	5/5/2015		30.28		8.19	408.6	330.1						1.544	0.181
P837	5/12/2015	420	29.30	188	7.74	385.8	305.6	2033	7.90	1252		0.01	1.479	
	5/27/2015		29.82		7.70	394.5	316.7						1.557	0.131
	5/5/2015		20.47		5.50	477.9	409.1						2.713	0.223
P859	5/12/2015	438	21.49	230	5.72	496.9	415.3	2430	7.95	1539		0.02	2.846	
	5/19/2015		20.72		5.61	486.2	411.7						2.704	0.225
	5/27/2015		21.80		5.76	489.4	409.5						2.691	0.232
	5/5/2015		10.80		2.72	319.8	257.2						2.371	0.259
P889	5/12/2015	292	10.63	142	2.60	305.0	244.0	1567	7.95	997		0.01	2.39	



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MINE UNIT 6

1. RESTORATION ACTIVITY DURING MONTH:

	YES	NO	
a. Groundwater Transfer		X	(if yes, complete part 2)
b. Groundwater Sweep		X	(if yes, complete part 3)
c. Groundwater Treatment	X		IX P1312, P1370, P1497, P1596, P1633, P1715, P1778, P1794, P1800, and P1865.
d. Wellfield Recirculation		X	
e. Other (explain):	X		IX treatment was suspended on May 11, 2015 so that piping changes can be made to the mine unit to allow for RO treatment. A small wellfield bleed continues for excursion control.

2. LIST WELLS USED IN GROUNDWATER TRANSFER DURING THE MONTH:

3. LIST WELLS USED IN GROUNDWATER SWEEP DURING THE MONTH:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

P1312, P1370, P1497, P1596, P1633, P1715, P1778, P1794, P1800, and P1865.

# MU6 Restoration Data

Well Name	Date	Alk	Cl	Ca	Mg	Na	SO4	Cond	pH	TDS	As	Fe	U	V
P1312	5/5/2015			53.19	17.11	936.4	697.4						7.823	0.763
	5/12/2015			60.58	17.00	956.0	698.2						12.220	1.04
	5/19/2015			59.40	17.99	958.1	700.5						12.170	0.976
	5/27/2015			58.61	16.44	937.4	684.3						12.510	0.967
P1370	5/5/2015			60.36	17.91	948.7	705.2						12.300	0.995
P1497	5/5/2015			77.93	20.22	952.2	717						30.000	0.123
	5/12/2015			80.70	20.67	970.1	716.1				0.04		29.570	
P1596	5/5/2015			56.73	17.58	933.5	686.1						9.799	1.077
	5/12/2015			56.87	17.51	964.1	702.3				0.00		9.328	
	5/19/2015			55.40	17.44	962.2	698.1						11.300	1.036
	5/27/2015			55.48	17.81	948.5	678.6						11.720	1.038
P1633	5/5/2015			43.06	16.04	889.0	669						9.544	0.892
P1715	5/5/2015			53.98	18.30	1041.0	758.5						12.870	1.286
P1778	5/5/2015			58.60	18.18	974.8	713.3						8.387	0.758
P1794	5/5/2015			47.89	16.75	910.1	678.4						6.668	1.097
P1800	5/5/2015			70.26	20.48	962.4	728.6						7.821	0.504
P1865	5/5/2015			40.21	13.89	803.5	612.9						8.198	1.156