

**CAMECO RESOURCES
CROW BUTTE OPERATION**



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

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

June 16, 2010

Mr. Michael Linder, Director
Nebraska Department of Environmental Quality
P.O. Box 98922
Lincoln, NE 68509-8922

Subject: Class III UIC Permit NE0122611
May 2010 Monthly Restoration Report

Dear Mr. Linder:

Please find enclosed the May 2010 Monthly Restoration Reports for Mine Units 2, 3, 4, and 5. The reverse osmosis (RO) units continue to inject permeate and reductant into Mine Units 2 and 3. Mine Unit's 4 and 5 are in ion exchange.

The bioremediation study continues in Mine Unit 4.

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: Mr. Dave Carlson, NDEQ Chadron Office

Mr. Joe Brister, Cheyenne Office

Mr. Ron Burrows, NRC

CBO File

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
MAY 2010
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		RO P97, P112, P113, I180P, and P209.
d. Wellfield Recirculation		X	
e. Other (explain):		X	

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:

P112, P113, and P209

Mine Unit 2 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
P112	05/05/10	2.94								
P112	05/12/10	1.92								1522
P112	05/19/10	2.83								
P112	05/26/10	2.85								1480
P113	05/05/10	2.95								
P113	05/12/10	1.97								1460
P113	05/19/10	3.20								
P113	05/26/10	2.45								1440
P209	05/05/10	3.94								
P209	05/12/10	3.41								1880
P209	05/19/10	4.27								
P209	05/26/10	3.96								1820

CROW BUTTE MINE

MONTHLY RESTORATION REPORT

MAY 2010

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		RO and Reductant CM1-1, CM1-11, P222, P224, P225, P226, P228, P232, P235, P242, P251, I296P, I298P, I304P, I315P, I326P, RES1E, RES2E, RES3E, and RES4E.
d. Wellfield Recirculation		X	
e. Other (explain):		X	

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:

CM1-1, CM1-11, P222, P224, P225, P226, P228, P232, P235, P251, I296P, I298P, I304P, I315P, I326P, I343P, RES1E, RES2E, RES3E, and RES4E.

Mine Unit 3 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
CM1-1	05/05/10	9.34								
CM1-1	05/12/10	10.33								3170
CM1-1	05/19/10	11.73								
CM1-1	05/26/10	10.75								3110
CM1-11	05/05/10	7.77								
CM1-11	05/12/10	7.48								2930
CM1-11	05/19/10	9.16								
P222	05/05/10	3.41								
P222	05/12/10	2.44								1596
P222	05/19/10	3.33								
P222	05/26/10	2.79								1360
P224	05/05/10	17.67								
P224	05/12/10	17.36								2820
P224	05/19/10	18.28								
P224	05/26/10	17.13								2820
P225	05/05/10	16.16								
P225	05/12/10	14.45								3550
P225	05/19/10	14.98								
P225	05/26/10	13.46								3140
P226	05/05/10	5.28								
P226	05/12/10	4.18								2400
P226	05/19/10	5.37								
P226	05/26/10	4.77								2320
P228	05/05/10	14.78								
P228	05/12/10	14.25								3000
P228	05/19/10	15.14								
P228	05/26/10	13.34								2730
P232	05/05/10	7.66								
P232	05/12/10	6.83								2370
P232	5/19/2010	7.69								
P232	5/26/2010	6.96								2290
P235	5/5/2010	8.38								
P235	5/12/2010	8.34								2070
P235	5/19/2010	9.57								
P235	5/26/2010	8.23								1970

Mine Unit 3 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
P251	05/05/10	2.48								
P251	05/12/10	1.52								2020
P251	05/19/10	2.78								
P251	05/26/10	2.60								2220
I296P	05/05/10	15.27								
I296P	05/12/10	14.08								3210
I296P	05/19/10	14.47								
I296P	05/26/10	12.59								3040
I298P	05/05/10	4.12								
I298P	05/12/10	2.75								2230
I298P	05/19/10	3.00								
I298P	05/26/10	2.27								1760
I304P	05/05/10	5.24								
I304P	05/12/10	3.85								1478
I304P	05/19/10	3.80								
I304P	05/26/10	3.28								1349
I315P	05/05/10	2.70								
I315P	05/12/10	1.92								1531
I315P	05/19/10	3.08								
I315P	05/26/10	2.73								1467
I326P	05/05/10	8.06								
I326P	05/12/10	8.29								2980
I326P	05/19/10	9.51								
I326P	05/26/10	9.34								3090
I343P	05/05/10	25.28								
I343P	05/12/10	24.31								3900
I343P	05/19/10	23.64								
I343P	05/26/10	20.35								3130
RES1E	05/05/10	27.79								
RES1E	05/12/10	28.17								3800
RES1E	05/19/10	29.42								
RES1E	06/26/10	26.71								3590
RES2E	05/05/10	14.90								
RES2E	05/12/10	15.57								3480
RES2E	05/19/10	16.38								
RES2E	05/26/10	15.96								3350

Mine Unit 3 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
RES3E	05/05/10	11.19								
RES3E	05/12/10	12.80								2900
RES3E	05/19/10	14.19								
RES3E	05/26/10	13.61								2920
RES4E	05/05/10	18.65								
RES4E	05/12/10	19.89								2940
RES4E	05/19/10	22.24								
RES4E	05/26/10	22.64								3040

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
MAY 2010
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		IX P383, P385, and P405
d. Wellfield Recirculation		X	
e. Other (explain): Bioremediation test started on 12/17/08.	X		P380, P386, P421, P422, P423, and P424

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:

P383, P385, P405, and I555P.

Mine Unit 4 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
P383	05/26/10	10.45								3000
P385	05/05/10	5.98								
P385	05/12/10	5.33								3770
P385	05/19/10	6.26								
P385	05/26/10	5.63								3850
P405	05/05/10	8.42								
P405	05/12/10	7.55								3610
P405	05/19/10	8.68								
P405	05/26/10	8.01								3630
I555P	03/03/10	4.95								

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
MAY 2010
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		IX P683, P690, P700, I759P, P767, P793, P807, P962, I1000P, P1048, P1060, P1065, P1075, P1084, P1090, P1093, P1099, P1116, P1117, P1127, P1132, P1135, P1137, P1181, P1187, P1208, P1209, P1216, P1232, P1247, P1259, P1263, P1718, P1876, P1885, and BL5-5.
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:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

P683, P690, P700, P767, P793, P807, P962, I1000P, P1048, P1060, P1065, P1075, P1084, P1090, P1093, P1099, P1116, P1117, P1127, P1132, P1135, P1137, P1181, P1187, P1232, P1718, and P1885.

Mine Unit 5 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
P683	05/05/10	9.99								
P683	05/12/10	9.53								4550
P683	05/19/10	10.39								
P683	05/26/10	9.76								4570
P690	05/05/10	11.52								
P690	05/12/10	11.68								4560
P690	05/19/10	13.17								
P690	05/26/10	12.66								4560
P700	05/12/10	13.15								3800
P700	05/19/10	14.82								
P700	05/26/10	14.46								3840
P767	05/05/10	9.88								
P767	05/12/10	8.65								4590
P767	05/19/10	9.92								
P767	05/26/10	9.50								4590
P793	05/12/10	12.42								3650
P793	05/19/10	13.03								
P793	05/26/10	11.60								3690
P807	05/05/10	4.74								
P807	05/12/10	5.18								2740
P962	05/12/10	7.85								3980
P962	05/19/10	9.75								
P962	05/26/10	9.31								3920
P1048	05/12/10	11.01								3540
P1048	05/19/10	13.39								
P1048	05/26/10	11.94								3480
P1060	05/12/10	8.79								4330
P1060	05/19/10	9.53								
P1060	05/26/10	8.77								4170
P1065	05/12/10	11.19								3480
P1065	05/19/10	12.57								
P1065	05/26/10	11.40								3540
P1075	05/05/10	30.79								
P1075	05/12/10	25.72								3640
P1075	05/19/10	25.13								
P1075	05/26/10	20.67								3710

Mine Unit 5 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
P1084	05/05/10	1.83								
P1090	05/05/10	34.04								
P1090	05/12/10	29.09								4500
P1090	05/19/10	27.96								
P1090	05/26/10	24.91								4290
P1093	05/05/10	14.04								
P1093	05/12/10	14.46								3090
P1093	05/19/10	16.50								
P1093	05/26/10	15.11								3040
P1099	05/19/10	4.57								
P1099	05/26/10	5.42								2620
P1116	05/19/10	9.58								
P1116	05/26/10	8.68								2610
P1117	05/19/10	8.26								
P1117	05/26/10	8.04								3540
P1127	05/05/10	7.97								
P1127	05/12/10	7.30								4070
P1127	05/19/10	8.37								
P1127	05/26/10	7.89								4070
P1132	05/05/10	14.14								
P1132	05/26/10	10.12								2640
P1135	05/05/10	9.72								
P1135	05/12/10	8.93								4170
P1135	05/19/10	10.22								
P1135	05/26/10	10.02								4090
P1137	05/05/10	13.08								
P1137	05/12/10	10.44								4340
P1137	05/19/10	12.10								
P1137	05/26/10	10.41								4170
P1181	05/12/10	7.13								4190
P1181	05/19/10	8.92								
P1187	05/05/10	14.35								
P1187	05/12/10	13.61								4090
P1187	05/19/10	14.61								
P1187	05/26/10	13.78								4020

Mine Unit 5 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
P1232	05/19/10	11.24								
P1232	05/26/10	28.87								3870
P1718	05/12/10	12.71								3860
P1718	05/19/10	13.65								
P1718	05/26/10	13.06								3810
P1885	05/05/10									
P1885	05/12/10	16.80								3900
P1885	05/19/10	15.54								
I1000P	05/05/10	15.58								
I1000P	05/12/10	15.15								3920
I1000P	05/19/10	16.39								
I1000P	05/26/10	15.43								3810
I759P	05/05/10	9.04								
I759P	05/12/10	9.02								4250
I759P	05/19/10	10.22								
I759P	05/26/10	10.10								4290