

**CAMECO RESOURCES
CROW BUTTE OPERATION**



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

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

August 12, 2011

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

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

Subject: Class III UIC Permit NE0122611
July 2011 Monthly Restoration Report

Dear Mr. Linder:

Please find enclosed the July 2011 Monthly Restoration Reports for Mine Units 2, 3, 4, 5 and 6. Mine Unit 2 was put into recirculation on July 7, 2011. The reverse osmosis (RO) units continue to inject permeate and reductant into Mine Unit 3. Mine Units 4 and 5 are in ion exchange. A hydrologic bleed was maintained in Mine Unit 6 for excursion control.

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

A handwritten signature in cursive script that reads "Larry Teahon". The signature is written in dark ink and is positioned above the printed name and title.

Larry Teahon
SHEQ Manager

Enclosures: As Stated

cc: Dave Carlson, NDEQ Chadron Office
Ron Burrows, NRC
CBO File
ec: CR - Cheyenne

CROW BUTTE MINE
MONTHLY RESTORATION REPORT

JULY 2011

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 PR15, P97, P120, I137P, I188P, 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:

P97, P120, I137P, I188P, and P209.

Mine Unit 2 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
P97	07/06/11	2.15								1619
P97	07/13/11	2.39								
P97	07/20/11	2.25								1688
P97	07/27/11	2.20								
P120	07/06/11	0.66								870
P120	07/13/11	0.70								
P120	07/20/11	0.71								861
P120	07/27/11	0.69								
I137P	07/06/11	1.84								784
I137P	07/13/11	1.2								
I137P	07/20/11	0.79								713
I137P	07/27/11	0.88								
I188P	07/06/11	0.74								919
I188P	07/13/11	1.23								
I188P	07/20/11	1.13								975
I188P	07/27/11	1.15								
P209	07/06/11	1.81								1451
P209	07/13/11	2.14								
P209	07/20/11	2.17								1516
P209	07/27/11	2.12								

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
JULY 2011
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 CM1-11, IJ13P, P228, P251, I298P, I326P, I343P, RES1E, RES2E, and RES3E.
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:

CM1-11, P228, P251, P298P, I326P, I343P, RES1E, RES2E, and RES3E.

Mine Unit 3 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
CM1-11	07/13/11	0.77								
CM1-11	07/20/11	0.52								1485
P228	07/13/11	1.51								
P228	07/20/11	1.80								868
P251	07/13/11	1.66								
P251	07/20/11	1.74								1753
I298P	07/13/11	0.38								
I298P	07/20/11	0.15								971
I326P	07/13/11	2.09								
I326P	07/20/11	2.10								1003
I343P	07/13/11	5.33								
I343P	07/20/11	6.14								1695
RES1E	07/13/11	0.82								
RES1E	07/20/11	1.94								972
RES2E	07/13/11	2.95								
RES2E	07/20/11	2.33								1351
RES3E	07/13/11	2.25								
RES3E	07/20/11	1.92								1056

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
JULY 2011
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 CM2-4, P393, P394, P424, P429, P430, P434, P437, P438, P442, P443, P447, P450, P461, I548P, I549P, I551P, I613P.
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:

4. LIST WELLS SAMPLED DURING MONTH AND ASSAY RESULTS:

P394, P442, P447, P450, P461, I549P, and I551P.

Mine Unit 4 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
P394	07/13/11	12.96								
P394	07/20/11	12.25								4520
P394	07/27/11	11.65								
P442	07/13/11	18.95								
P442	07/20/11	18.69								4270
P442	07/27/11	18.07								
P447	07/06/11	4.81								4360
P447	07/13/11	5.81								
P447	07/20/11	5.12								4320
P447	07/27/11	5.01								
P450	07/06/11	11.63								4750
P450	07/13/11	12.59								
P450	07/20/11	12.48								4720
P450	07/27/11	12.29								
P461	07/13/11	7.05								
P461	07/20/11	7.82								4850
P461	07/27/11	7.18								
I549P	07/13/11	7.12								
I549P	07/20/11	7.04								4490
I549P	07/27/11	6.65								
I551P	07/13/11	14.08								
I551P	07/20/11	13.97								4610
I551P	07/27/11	13.17								

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
JULY 2011
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 BL5-5, I676P, P707, P709, P773, P790, P800, P837, I854P, P1075, and P1232.
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:

BL5-5, I676P, P709, P773, P790, P800, P837, I854P, P1075, and P1232.

Mine Unit 5 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
BL5-5	07/13/11	1.48	<1							
BL5-5	07/20/11	0.62								3390
BL5-5	07/27/11	0.43								
I676P	07/13/11	12.12	<1							
I676P	07/20/11	11.06								3900
I676P	07/27/11	11.13								
P709	07/13/11	11.67	<1							
P709	07/20/11	11.12								3980
P709	07/27/11	11.49								
P773	07/13/11	3.75	<1							
P773	07/20/11	3.24								2419
P773	07/27/11	3.02								
P790	07/13/11	7.38	<1							
P790	07/20/11	6.34								3870
P790	07/27/11	6.36								
P800	07/13/11	3.87	<1							
P800	07/20/11	3.42								2846
P800	07/27/11	3.52								
P837	07/27/11	5.27	<1							3990
I854P	07/27/11	2.39	<1							4040
P1075	07/13/11	11.53	<1							
P1075	07/20/11	10.67								3360
P1075	07/27/11	10.02								
P1232	07/13/11	14.44	<1							
P1232	07/20/11	13.91								3660
P1232	07/27/11	13.55								

CROW BUTTE MINE
MONTHLY RESTORATION REPORT
JULY 2011
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	
d. Wellfield Recirculation		X	
e. Other (explain):	X		Wellfield bleed for excursion control. P1567 and P1633.

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:

P1567

Mine Unit 6 Restoration Data

Well	Date	U ₃ O ₈	V	Total CO ₃	pH	Ca	Na	Cl	SO ₄	Cond
P1567	07/13/11	12.40	<1							
P1567	07/20/11	12.46								4260
P1567	07/27/11	12.51								