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January 7, 2013

CERTIFIED MAIL # 7011 0470 0001 0202 2467

Mr. Lowell Spackman, District 1 Supervisor  
Land Quality Division  
Wyoming Department of Environmental Quality  
Herschler Building  
122 West 25<sup>th</sup> Street  
Cheyenne, WY 82002

**CAMECO RESOURCES**  
Smith Ranch-Highland  
Operation  
Mail:  
P.O. Box 1210  
Glenrock, WY  
82637 USA

Tel: (307) 358-6541  
Fax: (307) 358-4533  
www.cameco.com

**East Impoundment (Evaporation Pond) Leak, Cameco Resources, Smith Ranch-Highland Uranium Project, Permit to Mine No. 633**

Dear Mr. Spackman:

Power Resources, Inc. d/b/a Cameco Resources (Cameco) is herein providing a monthly update to the Wyoming Department of Environmental Quality, Land Quality Division (LQD) and the Nuclear Regulatory Commission (NRC) regarding a leak into secondary containment (sump) discovered on November 4, 2011 at the East Impoundment, referred to as Evaporation Pond in Permit 633, Volume 1, Section 5.5.5.

Cameco received comments regarding TFN 5 5/331, Review of Source of Leak and Liner Repair Plan, from the LQD in a letter dated October 17, 2012. Relining of both the east and west impoundments was discussed during LQD's October 2012 Site Inspection. Cameco and LQD agreed that Cameco would provide a response, together with an as-built drawing, to the TFN comments once relining of the impoundments is complete.

During the month of December work continued to remove solids in the west impoundment. Installment of the new liner in the west impoundment was postponed in December due to unfavorable weather. High winds and low temperatures would have negatively impacted seam bonding of the new liner material, as well as pose a safety hazard for personnel completing the installment.

FSME20

Samples for the east sump have continued to be taken on a weekly and monthly basis, when obtainable. Results are provided in the tables below.

#### Weekly Sample Results

Sample Date	Chloride (mg/L)	Conductivity (μS/cm)
11/04/2011	407	3869
12/14/2011	402	4133
12/28/2011	241	2439
01/10/2012	247	2607
01/19/2012	295	3336
02/8/2012	241	2663
02/15/2012	203	2407
02/29/2012	173	2256
03/12/2012	184	2213
04/05/2012	196	2287
04/10/2012	184	2313
04/17/2012	215	2316
05/23/2012	310	3046
05/30/2012	343	3662
06/06/2012	339	3703
06/21/2012	346	3510
06/29/2012	335	3278
07/24/2012	293	2937
08/02/2012	305	3033
08/16/2012	294	2987
9/11/2012	295	2994
10/23/2012	2013	3053
11/01/2012	1474	9242
11/7/2012	1122	8462
11/14/2012	973	7832
11/21/2012	655	5612
11/28/2012	655	5337
12/04/2012	804	5410
**12/11/2012	26939	61300
**12/21/2012	31568	70569
**12/25/2012	28494	65943

### Monthly Sample Results

Sample Date	Chloride (mg/L)	Conductivity (mS/cm)	Bicarbonate (mg/L)	Uranium (mg/L)	Sulfate (ppm)
11/04/2011	407	3869	650	179	-
12/28/2011	241	2439	442	134	900
01/10/2012	247	2607	424	135	-
02/01/2012	-	-	-	-	1080
02/21/2012	182	2286	540	105	-
02/29/2012	173	2256	511	106	-
03/01/2012	-	-	-	-	771
03/12/2012	184	2213	259	94	-
04/5/2012	196	2287	413	126	780
04/10/2012	184	2313	618	134	-
04/17/2012	215	2316	462	96	-
05/23/2012	310	3046	446	102	1160
05/30/2012	343	3662	466	112	-
06/06/2012	339	3703	448	125	1390
06/21/2012	346	3510	448	102	-
06/29/2012	335	3278	436	155	-
07/24/2012	293	2937	490	105	1120
08/02/2012	305	3033	490	108	-
08/07/2012	-	-	-	-	1130
08/16/2012	294	2987	517	121	-
09/11/2012	295	2994	433	80.8	1100
*10/23/2012	2013	3053	533	50.1	-
*11/14/2012	973	7832	644	115	-
*11/15/2012	-	-	-	-	2610
**12/11/2012	26939	61300	No Result	610	1980
**12/21/2012	31568	70569	No Result	678	-
**12/24/2012	28494	65943	No Result	788	-


\* Sample was taken when the impoundment water level was very low.

\*\* Elevated results are likely due to wash water from the work-over of deep disposal well #1 placed into the impoundment.

Routine monitoring will continue to be conducted and reported in the monthly update to LQD.

Please contact me at (307) 358-6541 ext. 476 or [Kenneth\\_Garoutte@cameco.com](mailto:Kenneth_Garoutte@cameco.com) if you have questions.

Sincerely,



Ken Garoutte  
Safety, Health, Environment, Quality (SHEQ) Manager

KG/vg

cc: File SR 4.3.3.1 File SR 4.3.3.4  
Special Volume: Impoundment Reports Start February 1999  
Mr. Doug Mandeville – NRC Certified Mail # 7011 0470 0001 0202 2474  
Document Control Desk, NRC Certified Mail # 7011 0470 0001 0202 2481

cc: Cameco-Cheyenne