



40-8964

August 29, 2012

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

CAMECO RESOURCES
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CERTIFIED MAIL # 7011 3500 0000 5274 0887 RETURN RECEIPT REQUESTED

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

Dear Mr. Spackman:

On November 7, 2011, Power Resources, Inc. d/b/a Cameco Resources (Cameco) provided verbal notification 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. Written notification followed in the Monthly Update dated November 30, 2011

Since the discovery of water in the sump, samples have continued to be taken on a weekly and monthly basis, when obtainable. Results are provided in the tables below. As reported in previous monthly updates, sulfate analysis is being done at an external lab.

Weekly Sample Results

Sample Date	Chloride (mg/L)	Conductivity (mS/cm)	Sample Date	Chloride (mg/L)	Conductivity (mS/cm)
11/04/2011	407	3869	05/23/2012	310	3046
12/14/2011	402	4133	05/30/2012	343	3662
12/28/2011	241	2439	06/06/2012	339	3703
01/10/2012	247	2607	06/21/2012	346	3510
01/19/2012	295	3336	06/29/2012	335	3278
02/8/2012	241	2663	07/24/2012	293	2937
02/15/2012	203	2407	08/02/2012	305	3033
02/29/2012	173	2256	08/16/2012	294	2987
03/12/2012	184	2213			
04/05/2012	196	2287			
04/10/2012	184	2313			
04/17/2012	215	2316			

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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	-

Cameco submitted responses to LQD's review of the January 2012 monthly update, together with an Investigation Work Plan under a cover letter dated May 25, 2012. A plan for relining of the impoundment network was outlined in the May monthly update. Both are pending LQD review. 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 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 3500 0000 5274 0894
Document Control Desk, NRC Certified Mail # 7011 3500 0000 5274 0900 ✓

ec: Cameco-Cheyenne