



September 5, 2013

CERTIFIED MAIL # 7012 2210 0002 5617 0499

Mr. Robin Jones, District 1 Supervisor
Land Quality Division
Wyoming Department of Environmental Quality
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East Impoundment (Evaporation Pond) Leak Monthly Update, Cameco Resources, Smith Ranch-Highland Uranium Project, Permit to Mine No. 633

Dear Mr. Jones:

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.

Replacement of the west impoundment liner was completed in May 2013. Work on the east impoundment commenced in June 2013 with the transfer of liquid to the west impoundment. Due to heavy rain events in late July, dewatering and removal of solids from the east impoundment continued through the report period. Once the solids are removed, installation of the new liner will begin.

Because of dewatering efforts no water has been present in the east sump and no samples have been collected since June 19, 2013. The east sump will continue to be monitored and samples will continue to be taken on a weekly and monthly basis, when obtainable. Tables showing the accumulated sample results for 2013 are provided below.

Weekly Sample Results

Sample Date	Chloride (g/L)	Conductivity (mS/cm)
01/02/2013	26.8	60.7
01/09/2013	27.5	60.5
01/17/2013	14.7	35.3
01/23/2013	14.9	30.7
01/30/2013	16.5	33.4
02/05/2013	7.5	10.9
02/12/2013	1.9	9.0
02/20/2013	1.7	5.0
02/27/2013	1.9	8.0
03/14/2013	5.2	15.4
03/21/2013	1.7	7.0
03/27/2013	1.7	6.7
04/04/2013	1.7	6.0
04/10/2013	5.3	5.7
04/18/2013	1.6	3.1
04/24/2013	2.0	6.8
04/30/2013	1.5	6.6
05/08/2013	2.8	5.2
05/13/2013	2.5	5.7
05/20/2013	1.4	5.5
05/27/2013	1.4	6.4
06/04/2013	2.7	8.5
06/11/2013	2.1	6.3
06/19/2013	2.7	9.0

Monthly Sample Results

Sample Date	Chloride (g/L)	Conductivity (mS/cm)	Bicarbonate (mg/L)	Uranium (ppm)	Sulfate (mg/L)
01/02/2013	26.8	60.7	* 1405	927.8	-
01/08/2013	-	-	-	-	1720
01/09/2013	27.5	60.5	* 1491	585.6	-
01/17/2013	14.7	35.3	* 1258	723.1	-
01/23/2013	14.9	30.7	* 1050	623.9	-
01/30/2013	16.5	33.4	* 1164	633.6	-
02/05/2013	7.5	10.9	891	416.9	1910
02/12/2013	1.9	9.0	560	183.3	-
02/20/2013	1.7	5.0	651	183.3	-
02/27/2013	1.9	8.0	600	143.7	-
03/12/2013	-	-	-	-	966
03/14/2013	5.2	15.4	726	312.0	-
03/21/2013	1.7	7.0	542	128.0	-
03/27/2013	1.7	6.7	594	144.6	-
04/04/2013	1.7	6.0	842	112.0	-
04/10/2013	5.3	5.7	504	128.4	588
04/18/2013	1.6	3.1	453	101.8	-
04/24/2013	2.0	6.8	513	116.7	-
04/30/2013	1.5	6.6	527	102.9	-
05/08/2013	2.8	5.2	623	104.2	-
05/13/2013	2.5	5.7	503	103.3	524
05/20/2013	1.4	5.5	534	98.6	-
05/27/2013	1.4	6.4	519	116.4	-
06/04/2013	2.7	8.5	526	143.7	-
06/11/2013	2.1	6.3	504	116.7	620
06/19/2013	2.7	9.0	485	196.2	-

* Results were initially reported as inconclusive through lab analysis. After further lab analysis results were provided.

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 # 7012 2210 0002 5617 0505
Document Control Desk, NRC Certified Mail # 7012 2210 0002 5617 0512

cc: Cameco-Cheyenne