



February 28, 2013

CERTIFIED MAIL # 7012 1640 0000 2326 9616

Mr. Lowell Spackman, District 1 Supervisor  
Land Quality Division  
Wyoming Department of Environmental Quality  
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**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 February, installation work was started on replacement of the west pond liner. The liner was installed, anchored and seamed. Due to unfavorable weather integrity testing and seam abutment welds could not be completed. The contractor is currently on hold to complete this work, pending favorable weather conditions. Due to these events, the west pond remains in its unusable state.

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 (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

**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	-

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

Elevated results in January were likely due to wash water from the work-over of deep disposal well#1 placed into the impoundment. It should be noted that due to the increase in concentrations, chloride is now being reported as g/L and not mg/L and conductivity is now reported as mS/cm and not  $\mu$ S/cm. 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  
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cc: Cameco-Cheyenne