



January 27, 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
Smith Ranch-Highland
Operation
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CERTIFIED MAIL # 7011 0470 0001 0202 3044 RETURN RECEIPT REQUESTED

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

Dear Mr. Spackman:

On June 20, 2011, Power Resources, Inc. d/b/a Cameco Resources (Cameco) provided written notification to the Wyoming Department of Environmental Quality, Land Quality Division and the Nuclear Regulatory Commission regarding a leak into secondary containment discovered on June 13, 2011 at the East Evaporation Pond. Cameco drained the pond to investigate the leak into secondary containment and repaired a tear in the primary liner on July 7, 2011. Following repairs, water was returned to the pond.

On August 15, 2011 water was again discovered in the East Evaporation Pond Sump. Verbal notification was made to the Wyoming Department of Environmental Quality, Land Quality Division and the Nuclear Regulatory Commission on August 16, 2011 with written notification following in the monthly report on August 31, 2011. The pond level was lowered for the second time to reexamine the primary liner. Another tear was discovered and repairs were made August 29, 2011. Following repairs, water was returned to the pond.

On November 4, 2011 water was again discovered in the East Evaporation Pond Sump. Verbal notification was made to the Wyoming Department of Environmental Quality, Land Quality Division and the Nuclear Regulatory Commission on November 7, 2011.

Samples were collected from the sump on November 4, 2011 and analyzed for chloride, specific conductance, uranium and bicarbonate. Results are provided in the table below. No samples were obtained between November 4, 2011 and December 14, 2011, as the sump remained dry. Samples continue to be taken on a weekly basis when obtainable. Cameco no longer has the ability to complete sulfate analysis at our on-site lab, therefore, monthly samples obtained are being sent to an external lab for analysis of sulfate per Permit 633 requirements. Cameco would

like to note that results for these analyses will take additional time to receive, often times 30 days or more. Sulfate determination for January has been sent to Energy Labs and results are pending.

Weekly Sample Results

Sample Date	Chloride (mg/L)	Conductivity (mS/cm)
06/15/2011	257	3194
06/20/2011	413	3645
08/15/2011	464	3647
08/16/2011	435	3924
11/04/2011	407	3869
12/14/2011	402	4133
12/28/2011	241	2439
1/10/2012	247	2607
1/19/2012	295	3336

Monthly Sample Results

Sample Date	Chloride (mg/L)	Conductivity (mS/cm)	Bicarbonate (mg/L)	Uranium (mg/L)	Sulfate (ppm)
06/20/2011	413	3645	925	248	905
08/16/2011	435	3924	811	158	947
11/04/2011	407	3869	650	179	Not analyzed
12/28/2011	241	2439	442	134	900
1/10/2012	247	2607	424	135	Analysis Pending

Work to find and repair any tear in the pond liner is postponed due to weather. The snow and ice on the pond make it difficult to visually find tears at the present time without further damaging the integrity of the pond liner. Once Cameco is able to adequately inspect the pond, plans to repair the leak will be shared with the LQD.

Routine monitoring will continue to be conducted and a monthly report will be submitted until the basis for the water found in the sump is determined and successful abated. Please contact me at (307) 358-6541 ext. 476 or Kenneth_Garoutte@cameco.com if you have questions.

Sincerely,



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

KG/vg

cc: File SR 4.3.3.1 File SR 4.3.3.4
Special Volume: Wellfield Release Reports, Evaporation Ponds, Spill Reports
Mr. Doug Mandeville – NRC (2 Copies) Certified Mail # 7011 0470 0001 0202 3051
Document Control Desk, NRC Certified Mail # 7011 0470 0001 0202 3068

ec: CR-Cheyenne