



May 2, 2013

CERTIFIED MAIL # 7012 2210 0002 5617 0192

Mr. Robin Jones, 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*

*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 Monthly Update including Response to LQD's Review of the January 2013 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.

Installation work was started in February 2013 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 remaining work is currently on hold pending favorable weather conditions.

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.

FSME20

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
04/4/2013	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

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	-
04/4/2013	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	-

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

LQD's letter dated March 6, 2013 also requested the volume of wash down water placed in the East Impoundment. Cameco's formal response to the March 6, 2013 letter is attached.

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 0208
Document Control Desk, NRC Certified Mail # 7012 2210 0002 5617 0215

ec: Cameco-Cheyenne

JANUARY 2013 EAST IMPOUNDMENT REPORT
PERMIT 633
CAMECO RESOURCES

INTRODUCTION

Cameco submitted the January Monthly Impoundment Update in a letter dated February 1, 2013. LQD responded to the update in a letter dated March 6, 2013 with concerns for the elevated monitoring parameters. The following provides LQD comments and Cameco responses.

COMMENTS

1. *The placement of very poor water quality into a leaky pond is unacceptable. Please schedule a meeting with the review staff within 15 days to discuss this action. (SI/PCR)*

Cameco Response: A meeting was held with LQD review staff to discuss the East Impoundment on March 15, 2013. At that time Cameco was expecting the results of the pond investigation and discussed that the preliminary results indicate that the pond is not leaking below the clay liner. Cameco formally submitted the East Impoundment Investigation Report for LQD's review in a letter dated April 8, 2013.

2. *The volume of washdown water placed in the East Impoundment is not presented. Please discuss how much washdown water was placed in the pond. (SI)*

Cameco Response: Approximately a total of 68,208 gallons of wash down water was placed into the East Impoundment.