

January 19, 2016

Mr. Larry Reimann
Cameco Resources
550 North Poplar Street, Suite 100
Casper, WY 82601

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION ON NORTH BUTTE FLOW RATE INCREASE, CAMECO SMITH RANCH HIGHLAND URANIUM PROJECT, SOURCE MATERIAL LICENSE SUA-1548 (TAC NO. L00783)

Dear Mr. Reimann:

By letter dated, April 10, 2015, Power Resources Inc., doing business as Cameco Resources (Cameco) submitted to the U.S. Nuclear Regulatory Commission (NRC) a request to amend Source Materials License SUA-1548 to increase the flow at its North Butte remote satellite plant from 15,140 Liters Per Minute (L/min) (4,000 Gallons Per Minute (GPM)) to 22,710 L/min (6,000 GPM). The submittal was made publicly available in NRC's Agencywide Documents Access and Management System (ADAMS) on May 21, 2015 (ADAMS Accession No. ML15132A085) and the staff accepted the request for a detailed safety review on December 22, 2015 (ADAMS Accession No. ML15349A885).

Upon reviewing this submittal, the NRC staff has identified several items that require further clarification in order for the staff to complete its review. The NRC staff's comments are contained in the enclosure.

In accordance with 10 CFR 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

L. Reimann

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If you have any questions regarding this request, I can be reached at 301-415-0724, or by e-mail at Douglas.Mandeville@nrc.gov.

Sincerely,

/RA/

Douglas T. Mandeville, Project Manager
Uranium Recovery Licensing Branch
Division of Decommissioning, Uranium Recovery,
and Waste Programs
Office of Nuclear Material Safety
and Safeguards

Docket No.: 040-8964
License No.: SUA-1548

Enclosure: As Stated

cc: R. Jones (WDEQ)
L. McMahan (WDEQ)

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L. McMahan (WDEQ)

DISTRIBUTION: R. Kellar/RIV L. Gersey/RIV

ADAMS Accession No.: ML16012A088

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|---------------|---------------|-----------|--------------|--------------|---------------|
| OFFICE | DUWP/URLB/PM | DUWP/URLB | DUWP/URLB/LA | DUWP/URLB/BC | DUWP/URLB/PM |
| NAME | D. Mandeville | E. Striz | S. Achten | B. VonTill | D. Mandeville |
| DATE | 1/12/16 | 1/12/16 | 1/13/16 | 1/15/16 | 1/19/16 |

OFFICIAL RECORD COPY

Request for Additional Information (RAI) for the North Butte Flow Rate Increase

RAI 1

Description of Deficiency

The information provided in the amendment application does not meet the applicable requirements of 10 CFR Part 40, using review procedures in Section 3.1.2 and acceptance criteria outlined in Section 3.1.3 of the SRP.

Basis for Request

In the amendment request, Cameco Resources (Cameco) states that “the deep disposal well has the capacity to increase the disposal rate by 20 Gallons Per Minute (GPM) without adverse effect on the well.” The U.S. Nuclear Regulatory Commission (NRC) staff also understands that Cameco is permitting additional deep disposal wells at North Butte. However, without understanding the current deep disposal well injection capacity at North Butte, the NRC staff does not have sufficient information to be able to make a reasonable assurance finding that Cameco has sufficient waste disposal capacity to meet production and restoration schedules while operating at 6,000 GPM. Additionally, the NRC staff does not have sufficient information to make a reasonable assurance finding related to future waste disposal capacity while operating at 6,000 GPM.

Formulation of RAI

Please clearly state the number of deep disposal wells currently installed at North Butte and the operational or observed capacity of each well. Additionally, please identify the number of additional deep disposal wells that Cameco is permitting for North Butte.

RAI 2

Description of Deficiency

The information provided in the amendment application does not meet the applicable requirements of 10 CFR Part 40, using review procedures in Section 3.1.2 and acceptance criteria outlined in Section 3.1.3 of the SRP.

Basis for Request

The amendment request does not address the use of reverse osmosis to reduce the amount of liquid waste that will need to be disposed of via deep well injection. Page 8 of the amendment request only discusses deep disposal well capacity. During its review, the NRC staff consulted the North Butte water balance contained in the license renewal application to confirm consistency between the approaches in the two submittals. The NRC staff observes that the North Butte water balance contained in Table 3.14 of the license renewal application is based on a 6,000 GPM flow rate. However, in Section 3.9.2 of the license renewal application

ENCLOSURE

Cameco estimates a maximum Reverse Osmosis (RO) rate of 935 GPM, but only discusses maintaining 600 GPM of RO capacity. Additionally, the license renewal application discusses installation of RO capacity at North Butte at initiation of operations at the remote satellite. Based on the NRC staff's review, there appears to be a deficit of RO capacity between years 5 and 15 of operation. The NRC does not have sufficient information to make a reasonable assurance finding that Cameco has sufficient disposal capacity to operate at 6,000 GPM flow rate.

Formulation of RAI

Please provide the current installed RO capacity at North Butte. Additionally, please either revise the water balance to reflect the amount of RO capacity planned for North Butte or adjust the water balance so it matches the planned RO capacity.