August 24, 2015

Mr. Ken Garoutte, Manager
Safety, Health, Environment, and Quality
Cameco Resources
P.O. Box 1210
Glenrock, WY 82637

SUBJECT: 4th QUARTER 2014 INJECTION WELL CASING LEAK INVESTIGATION PROGRESS REPORT, SMITH RANCH HIGHLAND URANIUM PROJECT, SOURCE MATERIALS LICENSE SUA-1548

Dear Mr. Garoutte:

By letter dated April 22, 2015, Power Resources Inc., doing business as Cameco Resources, submitted a copy of its 4th Quarter 2014 Annual Report on the Injection Well Casing Leak Investigation to the U.S. Nuclear Regulatory Commission (NRC). The report provided an update of Cameco's activities investigating injection well casing leaks in Mine Units C, E, and F, as well as the area in the vicinity of purge storage reservoir 2 (PSR 2) at the Highland portion of the Smith Ranch Highland Uranium Project (SR-HUP). Additionally, Cameco has provided updates on its investigation efforts to the NRC staff during past inspections of the SR-HUP facility.

In previous correspondence with Cameco dated June 17, 2013, (ADAMS ML13151A104) and April 9, 2014 (ADAMS ML14093B206), the NRC staff discussed restoration standards and provided comments for Cameco to consider when developing a corrective action plan. Based on discussions with Cameco during the April 2015 inspection, the NRC staff wanted to reiterate several points from previous correspondence and identify the next steps to address seepage from PSR 2.

The liquids disposed of in PSR 2 fall within the definition of byproduct material in Section 11e.(2) of the Atomic Energy Act of 1954, as amended, and are therefore subject to NRC regulation. The NRC's ground water restoration standards for uranium in-situ recovery facilities are contained in Criterion 5B of 10 CFR Part 40, Appendix A. Criterion 5B(5) identifies the applicable ground water restoration standards for all portions of a licensed site as: (a) the Commission approved background concentration; (b) maximum value given in Table 5C; or (c) an alternate concentration limit established by the Commission.

The NRC staff understands that Cameco is nearing completion or has completed ground water investigation activities in a large portion of Mine Units C, E, and F. This is particularly evident in the northern portion of Mine Unit C closest to PSR 2. Within 60 days of receipt of this letter, Cameco should submit a corrective action plan to the NRC or propose an alternative timeframe. The corrective action plan should identify the location and concentration of constituents targeted for corrective action in the vicinity of PSR 2. Additionally, the corrective action plan should

identify the treatment method and monitoring techniques to document progress towards meeting the restoration goals. Further details on the contents of a corrective action plan can be found in the April 9, 2014 letter from the NRC staff to Cameco (ADAMS ML14093B206).

Going forward, the NRC staff will review and approve the corrective action plan. Additionally, the staff will continue its inspections of the facility to verify that the corrective action plan is followed. Throughout this process, the NRC staff will keep the Wyoming Department of Environmental Quality (WDEQ) informed of efforts to address seepage from PSR 2.

In accordance with 10 CFR 2.390 of 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 ADAMS. ADAMS is accessible from the NRC Web site at: http://www.nrc.gov/reading-rm/adams.html.

If you have any questions regarding this matter, please contact me 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.: 40-8964
License No.: SUA-1548

cc: M. Bennett, WDEQ
L. McGonagle, Cameco

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cc: M. Bennett, WDEQ
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DATE	7/23/15	7/23/15	7/28/15	8/12/15	8/24/15

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