

**Cameco Resources
Crow Butte Operation**



**86 Crow Butte Road
P.O. Box 169
Crawford, Nebraska 69339-0169**

**(308) 665-2215
(308) 665-2341 – FAX**

June 16, 2016

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Attn: Document Control Desk, Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Commercial Evaporation Pond #3
Corrective Action Report
Source Materials License SUA-1534
Docket Number 40-8943

Dear Director:

On May 18, 2016, water level readings from the north middle, northwest, south middle, and southwest underdrains on Cameco Resources – Crow Butte Operation (CBO) Commercial Evaporation Pond #3 indicated a potential liner leak. Samples were obtained from the underdrains and analyzed for alkalinity, chloride, conductivity, sodium, and sulfate. Upon verification of the potential liner leak, CBO notified Ron Burrows by phone on May 18, 2014 in accordance with License Condition 11.6. As required by License Condition 11.9, the following corrective action plan is being submitted for NRC review.

Actions Taken

May 19, 2016 – Started transferring water into Commercial Evaporation Pond #1 to lower the pond level to eliminate the liner leak.

May 23, 2016 – Inspected the liner for damage. A cut in the liner was identified on the west side of the pond at the 9 foot level. A temporary patch was installed over the cut.

June 9, 2016 – Permanently repaired the damaged area.

June 10, 2016 – Started transferring water back out of Commercial Evaporation Pond #1 into the pond to cover the repaired area.

June 15, 2016 - Underdrain measurements indicated that the damaged area had been effectively repaired.

Attachment #1 contains copies of the Weekly Evaporation Pond Underdrain Analysis for the period of May 18, 2016 to June 15, 2016.

Water Quality in Affected Underdrains

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Attachment #2 contains copies of the water chemistry of the affected underdrains for the period of May 18, 2016 to June 15, 2016. The affected underdrains will be sampled for an additional two weeks.

Commercial Pond Monitor Wells

In addition to analysis of the affected underdrains, CBO also obtained samples from pond monitor wells CPM-1 and CPM-2. The two monitor wells are completed in the first aquifer and are located at the fenced restricted area boundary and down gradient of Commercial Evaporation Pond #3. The samples were obtained and analyzed for the indicator parameters for the period of May 18, 2016 to June 14, 2016. Analytical results, contained in Attachment #3, were consistent with historical sampling results indicating no breach has occurred to the secondary liner.

Impact to Waste Disposal Capacity

On June 15, 2016, the water level in Commercial Evaporation Pond #3 was at 9.3 ft. On June 10, 2016, CBO began transferring water back into the pond from Commercial Evaporation Pond #1 to cover the patched area to test the integrity of the repair and to lower the contents of Pond #1 to inspect for a potential liner leak identified on June 8, 2016.

Current waste flow from the plant to the pond is 5 GPM. Transfer from the pond to the Pond Water Treatment circuit for disposal down the deep disposal wells is 15 GPM. Based upon the declining water level, evaporation is estimated at 30 GPM. From these values it is estimated that the pond level is being lowered at a rate of 40 GPM.

Current waste flows, deep disposal well capacity, and the capacity remaining in Commercial Evaporation Pond #1 has allowed CBO to repair the liner in Commercial Evaporation Pond #3 with minimal impact to the total waste disposal capacity.

If you have any questions, please feel free to contact me at (308) 665-2215 Ext 122.

Sincerely,
CAMECO RESOURCES
CROW BUTTE OPERATION

Bob Tiensvold
Restoration Manager

cc: NRC Deputy Director
Marty Link – NDEQ Water Quality Division Administrator
CBO - File
ec: Nancy Harris – NDEQ Program Coordinator
Kory Winters – NDEQ Field Office
CR – Casper Office