

**CAMECO RESOURCES
CROW BUTTE OPERATION**



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

(308) 665-2215
(308) 665-2341 – FAX

January 4, 2023

ELECTRONIC DELIVERY

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

Annual Report of Changes, Tests, or Experiments
License No. SUA-1534
Docket No. 40-8943

ATTN: Document Control Desk:

Crow Butte Resources, Inc. (CBR) d/b/a Cameco Resources – Crow Butte Operation (CBO) is providing this annual report summarizing the changes, tests or experiments made under License Condition 9.4 of SUA-1534 during calendar year 2023. This report is made in accordance with the reporting requirements contained in License Condition 9.4 (E).

CBR's second renewal of its source material license was received November 5, 2014. The renewed license contained Performance Based License Conditions (PBLC). In a PBLC, CBR is allowed to make changes or conduct tests and experiments under certain conditions. These changes, tests, and experiments must be reviewed and approved by the CBR Safety and Environmental Review Panel (SERP). During 2023, the CBR SERP did not approve any changes.

The following materials are attached to provide the required summary information and documentation required by License Condition 9.4 (E).

- No SERP evaluations were performed or approved during 2023. Crow Butte is currently focused on restoration activities associated with Mine Units 7 and 8.

By letter dated October 19, 2009, in the response to violation of 10 CFR 40.42 (h)(1) and 10 CFR 40.42 (i), CBO submitted a request for an alternate decommissioning (groundwater restoration) schedule for mine units 2 through 5. CBO also indicated in this request that an annual review of the groundwater decommissioning schedule would be added to the

**CAMECO RESOURCES
CROW BUTTE OPERATION**



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

(308) 665-2215
(308) 665-2341 – FAX

Annual Summary of Changes list. By letter dated August 7, 2023, CBO requested an alternate decommissioning schedule for the full site.

Mine Unit 2 was returned to stability monitoring during the first quarter of 2022 and is ongoing. CBO plans to submit a request for alternate concentration limits (ACL) in Mine Units 2, 3, 4, and 5 during the third quarter of 2024.

While ensuring stability trends in MU3, well P246 (WH7 MU3) exceeded the restoration value for uranium. The value for uranium went from .09 (9/26/14) to 4.04 (3/29/17). Based on a discussion with Nebraska Department of Environmental and Energy (NDEE), MU3 was returned to IX / RO treatment on September 15, 2017 in order to spot treat the well. This treatment has been completed and Mine Unit 3 has been returned to stability monitoring, with the first stability samples collected in September 2018. The mine unit currently remains in stability monitoring. CBO has collected coring data from MU3 and anticipates submitting an ACL request for the affected constituents during the third quarter of 2024.

Similar to the situation in Mine Unit 2, Mine Unit 4 was removed from stability monitoring and treatment activities resumed in September 2020. The mine unit was returned to stability monitoring in the first quarter of 2022. CBO plans to submit a request for alternate concentration limits (ACL) in Mine Units 2, 3, 4, and 5 during the third quarter of 2024.

CBO initiated stability monitoring in Mine Unit 5 late in August 2018 where the mine unit remains. CBO plans to submit a request for alternate concentration limits (ACL) in Mine Units 2, 3, 4, and 5 during the third quarter of 2024.

CBO initiated stability monitoring in Mine Unit 6 during the first quarter of 2023 as projected. If an ACL is required, CBO will begin work on the ACL after stability monitoring is completed.

On November 6, 2018, CBO ceased mining in Mine Unit 7 and initiated restoration activities in this mine unit. Treatment activities continue in Mine Unit 7 and are projected to continue through the third quarter of 2029 at which point the Mine Unit will enter stability monitoring. If an ACL is required, CBO will begin work on the ACL after stability monitoring is completed.

On March 29, 2021, CBO received approval of the Mine Unit 8 restoration plan. Restoration activities were initiated, and treatment is ongoing in Mine Unit 8. Stability monitoring is projected to be initiated during the fourth quarter of 2029. If an ACL is required, CBO will begin work on the ACL after stability monitoring is completed.

**CAMECO RESOURCES
CROW BUTTE OPERATION**



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

(308) 665-2215
(308) 665-2341 – FAX

The remaining mine units (9-11) are currently in standby mode. A Gant chart demonstrating the projected restoration schedule for Mine Units 2-8 as well as the planned schedule for Mine Unit 9-11 is attached at the end of this report.

If you have any questions or require further information, please do not hesitate to contact me at (308) 665-2215 ext. 121.

Sincerely,
CAMECO RESOURCES
CROW BUTTE OPERATION

A handwritten signature in black ink, appearing to read 'Casey Yada', with a long horizontal flourish extending to the right.

Casey Yada
SHEQ Coordinator

Enclosures: As Stated

cc: Deputy Director, Division of Decommissioning
Tom Lancaster

CBO – File

cc: CR – Electronic File



Restoration Gant Chart

