

**CAMECO RESOURCES
CROW BUTTE OPERATION**



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

July 31, 2013

**CERTIFIED MAIL
RETURN RECEIPT REQUESTED**

Attn: Document Control Desk, Deputy Director
Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Programs
Mailstop T8-F5
U.S. Nuclear Regulatory Commission
Washington D.C. 20555-0001

Reply to a Notice of Violation
Inspection Report 040-08943/13-001
Source Materials License SUA-1534
Docket Number 040-08943

Dear Sir:

Please find below Crow Butte Resources, Inc. d/b/a Cameco Resources (CR) Crow Butte Operation (CBO) reply to the Notice of Violations issued by the Nuclear Regulatory Commission on July 3, 2013. This response is being provided in accordance with 10 CFR 2.201.

Violation

During the U.S. Nuclear Regulatory Commission (NRC) inspection conducted on June 4 through June 6, 2013, one violation of NRC requirements was identified.

10 CFR 20.130(a)(2) states, in part, that each licensee shall conduct operations so that the dose in any unrestricted area from external sources does not exceed 0.02 milliSievert (2 millirem) in any one hour.

Contrary to the above, on June 5, 2013, the licensee failed to maintain doses in an unrestricted area less than 0.02 milliSievert (2 millirem) in any one hour. Specifically, the inspector determined that the dose in an unrestricted area, adjacent to the Restoration Building, was 0.04 milliSievert (4 millirem) per hour, for over one consecutive hour. The

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inspectors used two NRC-issued survey meters, a Ludlum Model 19 micro Roentgen survey meter (NRC 033906, calibration due date on 12/28/2013), and a Ludlum Model 2401-EC survey meter (NRC 21176G, calibration due date of 12/28/2013) to perform these measurements. Measurements were taken at one foot from the Restoration Building four times within a sixty minute period and each measurement was 4 millirem per hour. The licensee also verified the dose reading with their own survey meter.

This incident has been reviewed internally by CBO using basic cause investigative techniques including hazard/barrier/effects analysis. The results of this review are included in the summary below.

1. Reason for the violation:

When the new reverse osmosis units, at the Restoration Building, were installed and placed into service (November 6, 2012), a gamma survey was performed outside the building to ensure that radiation limits were not exceeded. This survey was performed as a check only and was not documented. The results of the survey indicated that radiation levels outside the building were below the regulatory limits. No follow-up surveys were performed resulting in the increased radiation levels to go undetected.

2. The corrective steps that have been taken and the results achieved:

On June 5, 2013, when the 4 millirem per hour dose was identified, CBO immediately placed temporary fencing around the area to prevent unrestricted access to the area. On June 10, 2013, permanent fencing was installed and the restricted area boundary was extended to the outer boundary of the new fencing and signs were placed on all sides of the fencing stating "Restricted Area".

3. The corrective steps that will be taken to avoid further violations:

The Radiation Safety Officer performed a risk based assessment of all areas on site that have the greatest potential to exceed a 2 millirem per hour dose to the public. The areas were evaluated for their potential gamma dose rate and an initial gamma survey was performed and documented. The areas surveyed included the outside of the main processing plant, the restoration building, and all valve stations. Currently, the outside of all wellhouses and booster stations are surveyed monthly. Based on the survey results, a new monthly sampling schedule has been implemented. This schedule includes the outside of the main processing plant, the restoration building, the outside of all wellhouses, and the outside of all booster stations. Based on the assessment, the outside of the valve stations will be surveyed semiannually.

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During this assessment it was identified that a loaded trailer of yellowcake has the potential to exceed a dose rate of 2 millirem per hour while waiting shipment. As a preventative measure, the storage area for this trailer has been fenced with signs placed on all four sides stating "Restricted Area" and includes a gate that is kept secured at all times.

The Safety Environmental Review Panel met on July 15, 2013 and approved by SERP 13-04 the addition of the newly expanded restricted areas.

4. The date when full compliance will be achieved:

Full compliance was achieved on June 10, 2013.

If there are any further questions or concerns feel free to contact me at (308) 665-2215 ext. 114.

Sincerely,

Larry Teahon
Manager of Safety, Health, Environmental and Quality

cc: United States Nuclear Regulatory Commission
Regional Administrator, Region IV
Division of Materials Safety
1600 East Lamar Blvd.
Arlington, Texas 76011-4511

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CBO- File

ec: CR-Cheyenne