

**CAMECO RESOURCES  
CROW BUTTE OPERATION**



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June 17, 2019

**CERTIFIED MAIL  
RETURN RECEIPT REQUESTED**

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

**Subject: Source Materials License SUA-1534  
Docket No. 40-8943  
SM8-28 Monitor Well Excursion - 60 Day Report**

Dear Document Control Desk:

On April 18, 2019, during routine biweekly water sampling of Cameco Resources, Crow Butte Operation (CBO) shallow monitor well SM8-28, the multiple parameter upper control limits (MCL) for conductivity and alkalinity were exceeded. As required by License Condition 11.1.5 of Source Materials License SUA-1534, a second sample was collected within 24 hours and analyzed for the three excursion indicator parameters. The results of the second sample exceeded the MCL's for conductivity and alkalinity.

The region around the CBO facility was subject to a major winter storm on March 14 and 15, 2019, in which the site received an estimated 18" of snowfall accompanied by up to 90 mph wind gusts. As a result, a significant amount of snowmelt impacted the area around the well. This was followed by a second significant winter storm on April 10 and 11, 2019. The snowmelt from this storm provided additional impact to this part of the well field. SM8-28 was placed on excursion status due to similar circumstances in 2010, 2011, 2015, 2016, and 2018. All of these excursions self-corrected as conditions normalized. This spring has continued to be unusually wet and cool, and the well continues to be on excursion status.

CBO investigated this excursion and was unable to identify a cause for this excursion beyond natural causes. This conclusion is bolstered by the fact that the well has been placed on excursion status five times in the past during similar wet spring conditions. There is no injection in the area around SM8-28, and there had not been any injection in this area for some time before the well

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was placed on excursion status. CBO will not commence any injection in this area until the well is removed from excursion status.

CBO will continue weekly sampling of SM8-28 until three consecutive weekly samples are below the exceeded UCLs in accordance with License Condition 11.1.5. Weekly sampling will continue for an additional three weeks after this goal has been achieved as required by CBO's NDEQ Class III UIC Permit. When this is completed, CBO will provide a final written report on the excursion to NRC. Graphs are attached to this report for the three excursion indicator parameters and water levels that cover the period from November 15, 2018 through June 12, 2019.

If you have any questions or require any further information, please do not hesitate to call me at (308) 665-2215 ext. 117.

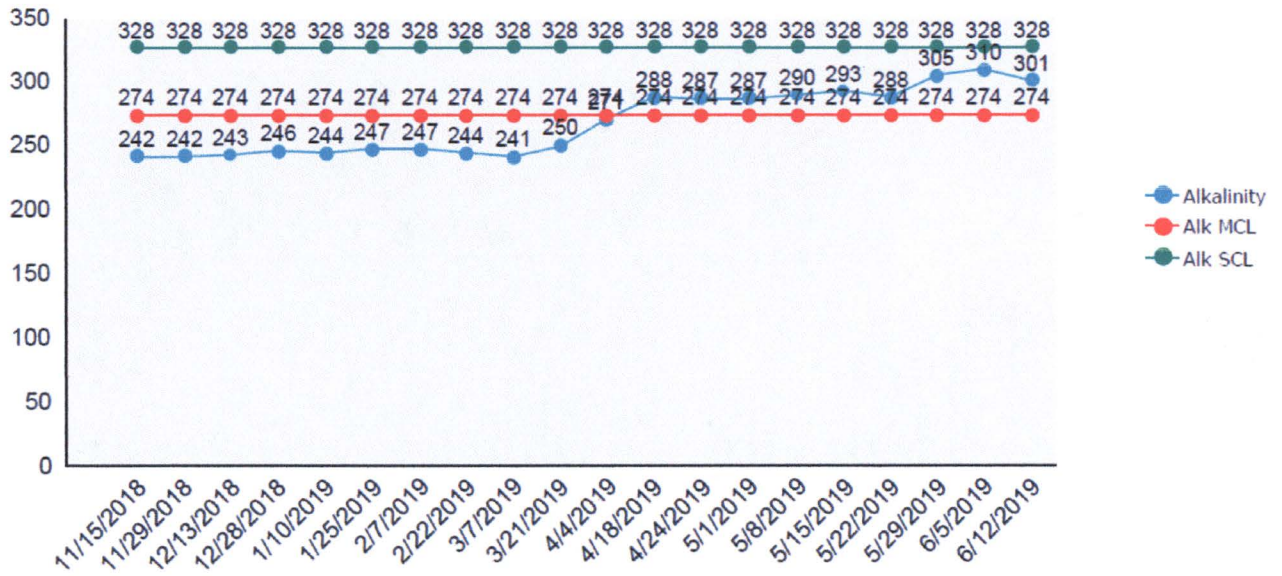
Sincerely,  
CAMECO RESOURCES  
CROW BUTTE OPERATION

Walt Nelson  
SHEQ Coordinator

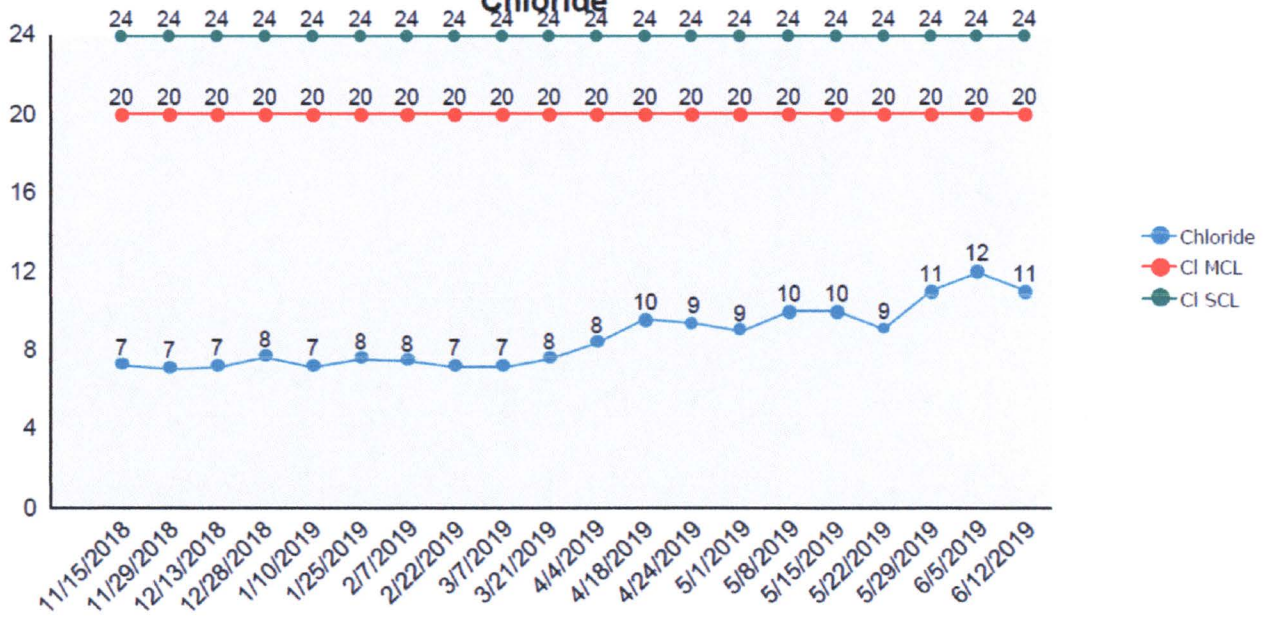
Enclosures: As Stated

cc: NRC - Deputy Director  
CBO - File  
cc: CBO

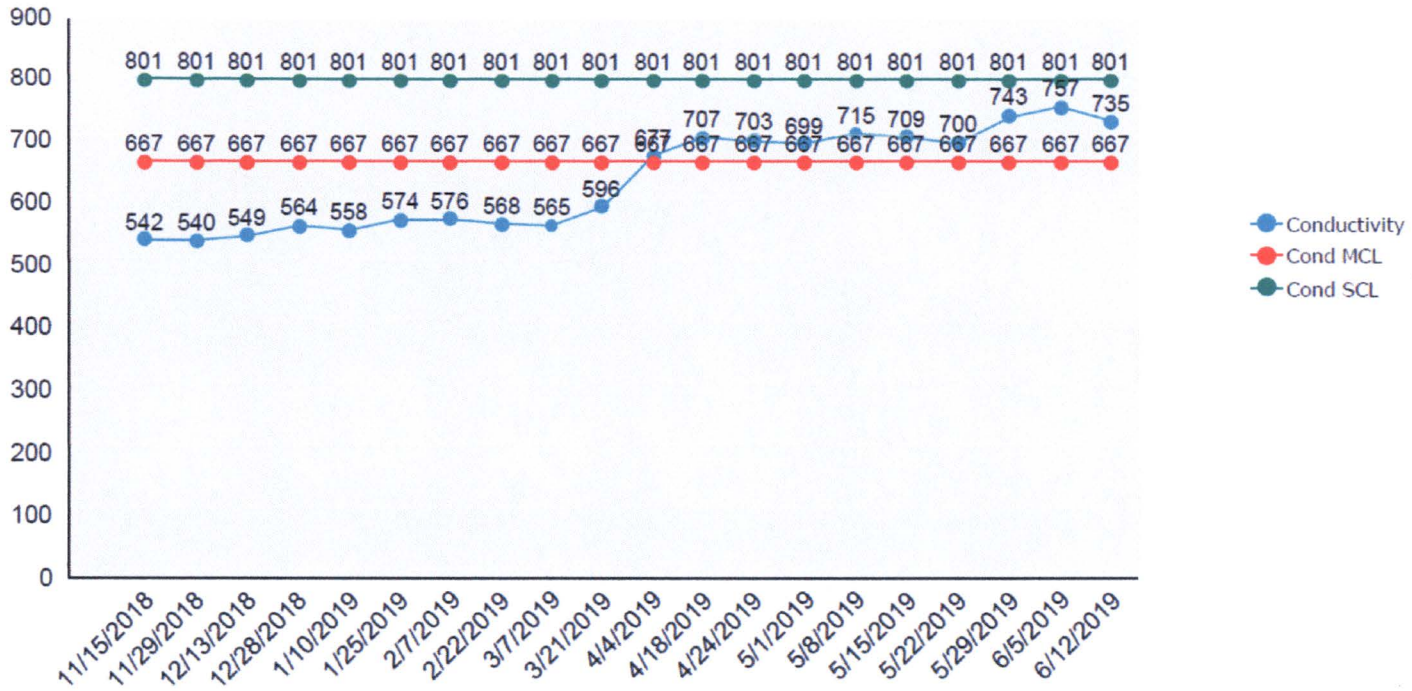
### Alkalinity



### Chloride



### Conductivity



### Water Level

