



Directorate of Nuclear Cycle
and Facilities Regulation

March 10, 2015

File No.: 4.04.03
e-Doc 4682486

Mr. Jack Richards, General Manager
McClellan Lake Operation
AREVA Resources Canada Inc.
817 - 45th Street West
P.O. Box 9204
Saskatoon, SK S7K 3X5

Subject: Key Lake Mill - Recent events involving the unplanned release of calcined yellowcake into the work environment.

Dear Mr. Richards,

On January 14, 2015, Cameco Corporation reported an event at the Key Lake Mill involving the unplanned release of calcined yellowcake (uranium dust) from the calciner into the ammonium sulphate dryer and on the floor beneath it. On February 16, 2015, a second event occurred at Key Lake involving the unplanned release of calcined yellowcake found on the floor of the yellowcake building below the calciner exhaust duct.

In both events, workers were exposed to uranium calcine product resulting in weekly action level exceedances. The resulting exposures for both events were well below regulatory limits.

While CNSC staff are satisfied with the immediate actions taken by Cameco, we are concerned by the similarities between the events and want to ensure that such events are effectively prevented or mitigated through a lessons learned approach at all operating uranium mills.

Pursuant to my authority as a person authorized by the Commission for the purposes of subsection 12(2) of the *General Nuclear Safety and Control Regulations*, I request that all operating uranium mill facilities complete the following actions by April 30, 2015:

- review initial lessons learned from the recent Key Lake events and re-examine your facility's safety case for the design and operation of the yellowcake dryer/calciner and ancillary facilities, with the focus on:
 - the design and operational features that help prevent an unplanned release of yellowcake into the work environment

- the equipment, processes and procedures that help in monitoring and identifying any weakening of containment systems that might lead to the unplanned release of yellowcake into the work environment
- the radiation monitoring equipment and procedures that will quickly identify any unplanned releases of yellowcake into the work environment
- a report on corrective actions and implementation schedules for short-term and long-term measures to address any significant gaps

Please note that, in accordance with subsection 12(2) of the *General Nuclear Safety and Control Regulations*, you are required to file a report by March 20, 2015, with the Commission that contains the following information:

- (a) confirmation that the request will or will not be carried out or will be carried out in part;
- (b) any action that you have taken to carry out the request or any part of it;
- (c) any reasons why the request or any part of it will not be carried out;
- (d) any proposed alternative means to achieve the objectives of the request; and
- (e) any proposed alternative period within which you propose to carry out the request.

If you have any questions related to this matter, please do not hesitate to contact Mr. Jean LeClair, Director of the Uranium Mines and Mills Division, either by telephone at 613-995-3596 or by email at Jean.LeClair@cnscccsn.gc.ca.

Yours truly,



Dave Newland
Acting Director General
Directorate of Nuclear Cycle Facilities Regulation

c.c.: L. Mooney, K. Nagy - Cameco,
R. Jammal, J. LeClair - CNSC,
UMMD Records