

Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant Cameco Corporation

Subject Application to Amend the Uranium Mill
Operating Licence for the Key Lake Operation to
Allow Uranium Production Flexibility

Hearing
Date June 9, 2009

RECORD OF PROCEEDINGS

Applicant: Cameco Corporation

Address/Location: 2121-11th Street West
Saskatoon, Saskatchewan
S7M 1J3

Purpose: Application to amend the Uranium Mill Operating Licence for the Key Lake Operation to allow uranium production flexibility

Application received: March 23, 2009

Date of hearing: June 9, 2009

Location: Canadian Nuclear Safety Commission (CNSC) 280 Slater St.,
Ottawa, Ontario

Members present: M. Binder, Chair

Secretary: K. McGee
Recording Secretary: M. Young

Licence: Amended

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Introduction

1. Cameco Corporation (Cameco) has applied to the Canadian Nuclear Safety Commission¹ (CNSC) for an amendment to the Uranium Mill Operating Licence for its Key Lake Operation uranium mill located in northern Saskatchewan, approximately 570 kilometres north of Saskatoon, Saskatchewan. The current licence, UMLOL-MILL-KEY.00/2013, expires on October 31, 2013.
2. Cameco is seeking to amend its licence to provide a level of production flexibility. Cameco is requesting that the maximum annual uranium production limit of 7.2 million kilograms be changed to a maximum average annual production limit. This change would not result in an increase to the maximum production limit over the licence period. The proposed change is expected to reduce the overall risks associated with the environmental protection, health and safety of the Key Lake Operation.

Issue

3. In considering the application, the Commission was required to decide, pursuant to subsection 24(4) of the *Nuclear Safety and Control Act*² (NSCA):
 - a) if Cameco is qualified to carry on the activity that the amended licences would authorize; and
 - b) if in carrying on that activity, Cameco would make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.

Hearing

4. The Commission, in making its decision, considered information presented for a hearing held on June 9, 2009 in Ottawa, Ontario. During the hearing, the Commission considered written submissions from CNSC staff (CMD 09-H111) and Cameco (CMD 09-H111.1).

Decision

5. Based on its consideration of the matter, as described in more detail in the following sections of this *Record of Proceedings*, the Commission concludes that Cameco has met the conditions of subsection 24(4) of the NSCA. Therefore,

¹ The *Canadian Nuclear Safety Commission* is referred to as the “CNSC” when referring to the organization and its staff in general, and as the “Commission” when referring to the tribunal component.

² S.C. 1997, c. 9.

the Commission, pursuant to section 24 of the *Nuclear Safety and Control Act*, amends the Uranium Mill Operating Licence UMLOL-MILL-KEY.00/2013 issued to Cameco Corporation for its Key Lake Operation located in northern Saskatchewan. The amended licence, UMLOL-MILL-KEY.01/2013, remains valid until October 31, 2013.

6. The Commission includes in the licence the conditions as recommended by CNSC staff in CMD 09-H111.

Issues and Commission Findings

Qualifications and Protection Measures

7. Cameco's production flexibility proposal is based on the following considerations:
 - a) the *average annual production* must not exceed 7.2 million kilograms of uranium. The *average annual production* will be calculated as the sum of each year's uranium production since the beginning of 2003 divided by the number of years;
 - b) in any calendar year beginning in 2009, the *allowable annual production* shall be the sum of 7.2 million kilograms of uranium plus the *cumulative production deficiency* minus the *cumulative production recovery*, to a *maximum allowable annual production* amount of 7.85 million kilograms of uranium, where:
 - i) the *cumulative production deficiency* is calculated as the sum of all annual production shortfall amounts below 7.2 million kilograms of uranium for all years since and including 2003; and
 - ii) the *cumulative production recovery* is the sum of all annual production increase amounts greater than 7.2 million kilograms of uranium for all years since and including 2003.
8. Cameco noted that the maximum allowable annual production amount of 7.85 million kilograms of uranium was determined using the current steady state production capacity at the Key Lake Operation, assuming eleven months of production and one month of maintenance shutdown.
9. CNSC staff stated that it assessed Cameco's proposal and determined that the implementation of the proposal would not increase the net production of the Key Lake Operation, and as such, would not have any additional impacts to the environment or to the health and safety of workers or the public from that which was previously assessed. CNSC staff stated that Cameco's proposal is low-risk and effectively administrative in nature.

10. CNSC staff further stated that it assessed the potential impact on Selenium releases to the environment. CNSC staff stated that any potential increase in loadings would be small and would not represent a significant additional environmental risk. CNSC staff further noted that when averaged over a number of years, an approximate zero net increase in loadings is the overall result.
11. Cameco stated that its proposal would manage operational and maintenance issues related to mid-winter shutdowns. Cameco explained that if the Key Lake Operation reaches the uranium production limit of 7.2 million kilograms prior to the calendar year end (December 31), Cameco must then cease production, and any such stoppage and re-start of a mill during a time of extreme weather conditions creates an increased risk to the health and safety of workers and to the environment. Cameco stated that its proposal would allow for the flexibility to plan mill shutdowns, re-starts and maintenance work during periods of favourable weather conditions, which would reduce the risk to the environment and to the health and safety of workers.
12. CNSC staff concurred that the proposal would allow Cameco to plan more favourable shutdown and maintenance schedules without creating an increased risk for a production loss, while at the same time mitigating a decrease in potential impacts to the environment and to the health and safety of their workers and the public. CNSC staff stated that the concept of production flexibility provides a positive change.
13. Cameco further stated that the proposal would also allow Cameco to recoup production shortfalls, including those accumulated since 2003. Cameco explained that 2003 was chosen because the Key Lake Operation reached its production limit of 7.2 million kilograms of uranium for the first time in 2002, and in 2003, a groundwater inflow at the McArthur River mine caused a significant annual production deficiency at the Key Lake Operation. Cameco stated that the proposed amendment would only provide for increased levels of production flexibility to offset deficiencies from previous years and is not a sustained increase in production rate. Cameco stated that no significant changes to the cumulative environmental loadings or impacts assessed in the 1995 Environmental Impact Statement for the Key Lake Operation are anticipated.
14. CNSC staff agreed that Cameco's proposed amendment retroactive to 2003 would only provide for increased levels of production flexibility to offset deficiencies from previous years, and is not a sustained increase in production rate. CNSC staff further agreed that no significant changes to the cumulative environmental loadings or impacts assessed in the 1995 Environmental Impact Statement are anticipated. CNSC staff noted that potential impacts may be reduced through the optimization of operational controls, improved production planning, improved maintenance scheduling and by the reduction of difficult mill shutdowns and start-ups.
15. CNSC staff stated that Cameco currently has adequate programs, procedures, codes of practice, site monitoring and processes in place to effectively control any potential risks, and no additional controls or mitigation measures are anticipated to be required as a result of the proposal.

16. CNSC staff stated that acceptance of the application is not expected to result in any changes to the currently approved Preliminary Decommissioning Plan and Preliminary Decommissioning Cost Estimates dated August 2008.
17. CNSC staff stated that, in carrying on the activities as requested, Cameco will continue to make adequate provision for the protection of the environment, the health and safety of persons and the maintenance of national security and measures required to implement international obligations to which Canada has agreed.

Application of the *Canadian Environmental Assessment Act*

18. Before making a licensing decision, the Commission must be satisfied that all applicable requirements of the *Canadian Environmental Assessment Act*³ (CEAA) have been fulfilled.
19. CNSC staff reported that it had completed an Environmental Assessment (EA) determination. CNSC staff stated that there was no requirement for an EA pursuant to subsection 5(1) of the CEAA as the proposed amendment does not constitute a "project" as defined in section 2 of the CEAA.
20. The Commission is satisfied that all applicable requirements of the CEAA have been fulfilled.



Michael Binder
President,
Canadian Nuclear Safety Commission

JUN 0 9 2009

Date

³ S.C. 1992, c. 37.