



Canadian Nuclear
Safety Commission

Commission canadienne
de sûreté nucléaire

Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant Cameco Corporation

Subject Application to Accept the Proposed
Environmental Assessment Report for the Key
Lake Extension Project

Hearing Date July 16, 2014

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Canada

RECORD OF PROCEEDINGS

Applicant: Cameco Corporation

Address/Location: 2121 – 11th Street West, Saskatoon, Saskatchewan,
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Purpose: Application to Accept the Proposed Environmental
Assessment Report for the Key Lake Extension Project

Application received: June 19, 2014

Date of hearing: July 16, 2014

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

Members present: M. Binder, Chair

Secretary: M. Leblanc

Recording Secretary: M. Hornof

Environmental Assessment Report: Accepted

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1.0 INTRODUCTION

1. Cameco Corporation (Cameco) has submitted a request to the Canadian Nuclear Safety Commission¹ (CNSC), under subsection 24(2) of the *Nuclear Safety and Control Act*² (NSCA), for acceptance of the proposed Environmental Assessment (EA) Report for its Key Lake Extension Project (Project) in Northern Saskatchewan, as well as staff's conclusions regarding the Project.
2. The current licence for Cameco's Key Lake operation, UMLOL-MILL-KEY.00/2023, expires on October 21, 2023. The authorization of the requested Project requires an amendment to the Licence Condition Handbook in accordance with licence condition 1.2 of the current licence.
3. The Key Lake operation is a uranium milling facility with three major components: milling facilities and utilities, supporting site infrastructure and various waste management facilities and systems. The proposed Project consists of increasing the level of tailings disposal within the existing Deilman Tailings Management Facility (DTMF) and increasing the licensed production rate for the Key Lake operation. The expansion would provide approximately 40 years of additional tailings management capacity at the anticipated mill production rate.
4. Under the *Canadian Environmental Assessment Act*³ (CEAA), 1992, the CNSC, as Responsible Authority, has to conduct a screening-level EA for the Project. The Project Specific Guidelines and Scoping Document for this Project was approved by the Commission on August 12, 2011. In 2012, CEAA 1992 was repealed and replaced by CEAA 2012. However, the Project was designated by the Minister of the Environment to be continued and will be completed under the former CEAA 1992.
5. Pursuant to section 16(2)(c) of the *Saskatchewan Environmental Assessment Act*, the Project required approval from the Saskatchewan Ministry of the Environment (SMOE). The SMOE prepared Technical Review Comments on Cameco's Environmental Impact Statement (EIS) and granted Ministerial approval of the Project on May 13, 2014.

Issue

6. In considering the proposed EA Report, the Commission was required to decide:
 - a) whether the proposed EA Report is complete; that is, whether all of the factors and instructions set out in the approved EA Guidelines and subsection 16(1) of the CEAA 1992 were adequately addressed; and

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 Statutes of Canada (S.C.) 1997, chapter (c.) 9.

³ Statutes of Canada (S.C.) 1992, chapter(c.) 37.

- b) whether the Project, taking into account the implementation of mitigation measures identified in the proposed EA Report, is likely to cause significant adverse environmental effects.

Hearing

- 7. Pursuant to section 22 of the NSCA, the President of the Commission established a Panel of the Commission to review the EA Report. The Commission, in making its decision, considered information presented for a hearing held on July 16, 2014 in Ottawa, Ontario. During the hearing, the Commission considered written submissions from Cameco (CMD 14-H108.1) and CNSC staff (CMD 14-H108).

2.0 DECISION

- 8. 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

- a) the Environmental Assessment Report appended to CMD 14-H108 is complete; that is, the scope of the Key Lake Extension Project and assessment were appropriately determined in accordance with section 15 and 16 of the *Canadian Environmental Assessment Act 1992*, and all of the required assessment factors were addressed during the assessment;
- b) the Key Lake Extension Project, taking into account the implementation of mitigation measures identified in the proposed Environmental Assessment Report, is not likely to cause significant adverse environmental effects;

3.0 ISSUES AND COMMISSION FINDINGS

Completeness of the Proposed Environmental Assessment Report

- 9. CNSC staff reported that the EA was performed in a step-wise manner, identifying Project-environment interactions that would result in a measurable change to the existing environment. The EA considered activities related to the normal operations and the effects of malfunctions and accidents that may occur. It also considered effects of the environment on the Project and cumulative environmental effects.
- 10. Based on its review of the proposed EA Report and the submitted information, the Commission concludes that the EA methods were acceptable and appropriate.

Effects of the Project on the Environment

11. In the proposed EA Report, CNSC staff identified that most interactions between the proposed Project and the environment are not expected to result in measurable effects. Interactions expected to result in measurable effects were further analyzed to consider application of mitigation measures, if appropriate. Taking into consideration the implementation of appropriate mitigation measures, potential residual effects were identified.
12. CNSC staff reported that for non-radiological Contaminants of Potential Concern, a human health risk assessment (HHRA) concluded that the magnitude of residual effects on the health of members of the public is low.
13. CNSC staff reported that the HHRA further indicated that for the operational period, the dose to potential receptors was conservatively calculated to be up to 0.02 mSv/year. In the post-decommissioning period, the Project-related doses to potential receptors were calculated to be up to 0.2 mSv/year.
14. CNSC staff reported a summary of seven key EA findings for environmental components and associated sub-components. These were predicted to not have residual adverse environmental effects from the Project, provided that Cameco successfully implements the mitigation measures outlined in the proposed EA Report.
15. Based on its review of the proposed EA Report and the above-noted information, the Commission concludes that the proposed project, taking into account the identified mitigation measures, is not likely to cause significant adverse environmental effects.

Effects of the Environment on the Project

16. CSNC staff reported that they considered a number of natural hazards that have the potential to affect the proposed Project. CNSC staff further reported that Cameco has effective design and operational measures in place to prevent or reduce potential effects from these hazards. CNSC staff concluded that these natural hazards are not likely to cause adverse effects on the Project or the environment.
17. Based on the above information, the Commission concludes that the environment is not likely to cause significant adverse effects on the Project.

Effects of Malfunctions and Accidents

18. CNSC staff identified three credible malfunction and accident scenarios for detailed assessment. The environmental effects of these scenarios were assessed.

19. CNSC staff concluded that, provided that Cameco successfully implements the mitigation measures outlined in the EA report, the effects from the proposed Project for malfunctions and accidents are not significant.
20. Based on the above information, the Commission concludes that accident and malfunction events are not likely to cause significant adverse effects on the environment.

Cumulative Effects

21. CNSC staff reported to the Commission that they considered the residual effects of the proposed Project together with other past, proposed, and existing projects and activities in the area that may cause environmental effects that would overlap with the effects caused by the proposed Project. Section 4.5 of the proposed EA Report discusses the potential cumulative effects identified for the proposed Project for the atmospheric, aquatic, terrestrial and human environments. CNSC staff reported that no significant cumulative effects were expected from the Project.
22. Based on the above information, the Commission concludes that significant adverse cumulative effects are not expected to occur as a result of the Project.

EA Follow-Up

23. CNSC staff reported that EA follow-ups are optional for CEAA 1992 screening EAs. This Project is occurring on currently licensed facilities and, therefore, an EA follow-up program was not considered appropriate by CNSC staff since existing monitoring programs are in place.
24. Based on its review of the proposed EA Report and on the above-noted information, the Commission is satisfied that the monitoring programs in place will be adequate and a follow-up program is not necessary.

Public and Aboriginal Consultation

25. CNSC staff reported that a public review period for the draft EA Report, the EIS and the Technical Review Comments was held from January 27 to February 28, 2014. Public participation was encouraged by Cameco, the CNSC and the SMOE through radio and newspaper advertisements as well as mail-outs to a number of First Nations and Métis groups, Northern Saskatchewan communities and interest groups. During the 30-day review period, two requests for information on the approval process and availability of participant funding were received. A total of three written submissions were received, with comments addressed in the proposed EA Report.

26. CNSC staff reported that research resulted in identification of 17 interested First Nations and Métis groups and organizations. These groups and organizations were then informed of the proposed Project, the regulatory review process and participation opportunities. CNSC staff further reported that, throughout the EA process, CNSC staff attended Cameco-led meetings with the Aboriginal leadership and community members from English River First Nation, Lac La Ronge Indian Band and Métis Locals Pinehouse and Patuanak to provide information of the Project. No Project-specific issues were raised.
27. CNSC staff concluded that, based on the information received to date, there are no adverse impacts that the proposed Project may have on potential or established Aboriginal and/or treaty rights.
28. Based on the information provided in the EA Report and during the hearing, the Commission concludes that there was sufficient opportunity for public and Aboriginal consultation on this Project. The Commission is satisfied that the consultation process followed for the Project is adequate.

4.0 CONCLUSION

29. The Commission concludes that the proposed EA Report is complete and meets all of the applicable requirements of CEAA 1992. The Commission accepts the proposed EA Report.
30. The Commission concludes that the Key Lake Extension Project, taking into account the appropriate mitigation measures identified in the EA Report, is not likely to cause significant adverse environmental effects.



Michael Binder
President,
Canadian Nuclear Safety Commission

JUL 16 2014

Date