

Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant Cameco Corporation

Subject Environmental Assessment Screening Report
for the Cameco Key Lake Mill Services Project
and Approval for Construction of the Mill
Services Facilities

Hearing Date July 2, 2009

RECORD OF PROCEEDINGS

Applicant: Cameco Corporation

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

Purpose: Environmental Assessment Screening Report for the Mill Services Project and Approval for Construction of the Mill Services Facilities

Application received: June 19, 2008 and March 18, 2009

Date of hearing: July 2, 2009

Location: Canadian Nuclear Safety Commission (CNSC) Public Hearing Room, 280 Slater St., 14th. Floor, Ottawa, Ontario

Members present: M. Binder, Chair

Secretary: K. McGee

Recording Secretary: S. Dimitrijevic

Request: Approved

Table of Contents

Introduction	2
Issues.....	2
Hearing.....	2
Decision	2
Issue and Commission Findings	3
<i>Completeness of the Screening Report</i>	3
<i>Likelihood and Significance of Environmental Effects</i>	4
<i>Public Concern</i>	5
<i>Follow-up Program</i>	5
Conclusion	5

Introduction

1. Cameco Corporation (Cameco) has applied to the Canadian Nuclear Safety Commission¹ (CNSC) to seek an authorization to replace its old facilities (steam, acid and oxygen plants) at its Key Lake uranium milling operation in northern Saskatchewan. The replacement of the facilities, presented in the proposed Mill Services Project, requires approval by the Commission, as stated in Condition 3.1 of the current operating licence UMLOL-MILL-KEY.01/2013, issued to Cameco under subsection 24(2) of the *Nuclear Safety and Control Act*² (NSCA).
2. Before it can decide on the requested authorisation, the Commission must, in accordance with the requirements of the *Canadian Environmental Assessment Act*³ (CEAA), make a decision on an Environmental Assessment (EA) screening for the proposed project. The Commission is the sole responsible authority for the EA⁴ and there is no provincial EA requirement.
3. CNSC staff developed and the Commission approved project-specific EA Guidelines in October 2008, to direct the proponent in carrying out technical studies used to assess project impacts. Environment Canada provided input as a Federal Authority. The technical studies were delegated to the proponent, pursuant to section 17 of the CEAA.
4. Cameco has submitted environmental assessment information comprising all phases of the project (construction, operation and reclamation). Licensing documentation has only been submitted for the construction aspect. CNSC staff has reviewed the submitted information. Its comments on identified information gaps and Cameco's response to the comments were incorporated into an updated Environmental Assessment Study Report (EASR). The EASR was then used by CNSC staff for the preparation of the draft EA Screening Report (Screening Report).
5. Stakeholders were provided an opportunity to review the draft Screening Report prior to its finalization and submission to the Commission for its decision.
6. The draft Screening Report entitled "*Environmental Assessment Screening Report: Mill Services Project*" is presented in the CNSC staff's document CMD 09-H113 and contains recommendations that the Commission approve the construction of the mill services as a significant modification to the Key Lake facility under condition 3.1 of UMLOL-MILL-KEY.00/2013, consistent with paragraph 20(1)(a) of the CEAA.

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.

³ S.C. 1992, c. 37.

⁴ Responsible Authority in relation to an EA is determined in accordance with subsection 11(1) of the CEAA.

Issues

7. In considering the Screening Report, the Commission was required to decide:
 - a) whether the Screening 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 were adequately addressed;
 - b) whether the project, taking into account the mitigation measures identified in the Screening Report, is likely to cause significant adverse environmental effects;
 - c) whether the project will be referred to the federal Minister of the Environment for referral to a review panel or mediator (i.e., pursuant to paragraph 20(1)(c) of the CEAA); and
 - d) whether the Commission will proceed with its consideration of the application for a significant modification to the Key Lake facility under the NSCA (i.e., consistent with paragraph 20(1)(a) of the CEAA).

Hearing

8. Pursuant to section 22 of the NSCA, the President of the Commission established a Panel of the Commission (hereafter referred to as the Commission) to hear this matter.
9. In making its decision, the Commission considered information presented for a hearing held on July 2, 2009 in Ottawa, Ontario. The hearing was conducted in accordance with the Commission's process for determining matters under the CEAA. During the hearing, the Commission has considered written submissions from CNSC staff (CMD 09-H113) and from cameco (CMD 09-H113.1 and CMD 09-H113.1A).

Decision

10. Based on its consideration of the matter, as described in more details in the following sections of this *Record of Proceedings*, the Commission decides that:

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| <ol style="list-style-type: none">a) the Environmental Assessment Screening Report appended to CMD 09-H113 is complete. The scope of the project and assessment were appropriately determined in accordance with sections 15 and 16 of the <i>Canadian Environmental Assessment Act</i>, and all of the required assessment factors were addressed during the assessment.b) the project, taking into account the mitigation measures identified in the Environmental Assessment Screening Report, is not likely to cause significant adverse environmental effects; |
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- c) it will not refer the project to the federal Minister of the Environment for his referral to a federal Environmental Assessment review panel or mediator; and
- d) consistent with paragraph 20(1)(a) of the *Canadian Environmental Assessment Act*, the Commission will proceed to consider the application for a significant modification to the Key Lake facility under the provisions of the *Nuclear Safety and Control Act*.

11. Further to this decision, the Commission also approves Cameco's application to construct the steam, acid and oxygen plants. Once the construction is completed, Cameco shall provide CNSC staff with an acceptable commissioning report for the facilities together with a description and schedule for new documentation and operator training needed for the safe operation of the new facilities.
12. The operation of the constructed facilities is subject to approval by the Commission, or a person authorized by the Commission, and will require the implementation of the follow-up program identified in the Screening Report (Section 9.0 and Table 3).

Issue and Commission Findings

13. In making its decision, the Commission addressed the four issues identified above, under four main areas: the completeness of the Screening Report, the significance of the environmental effects and likelihood to cause adverse environmental effects, the nature and level of public concern, and the follow-up program. The Commission's findings are summarized below.

Completeness of the Screening Report

14. In its consideration of the completeness of the Screening Report, the Commission considered whether the assessment had adequately addressed the scope of the project and assessment factors to be considered.
15. In its submission, CNSC staff stated that all activities described within the proposed project had been assessed to identify those project-environment interactions that could result in measurable changes to the environment. The assessment of environmental effects and their mitigation included the potential effects of the project under normal operation and under postulated malfunctions and accidents, as well as anticipated effects of the environment on the project. The assessment also included an evaluation of the potential for cumulative environmental effects.

16. Based on the information presented, the Commission is of the opinion that the applied assessment method was adequate and that the Screening Report is complete and compliant with the requirements of the CEEA.

Likelihood and Significance of Environmental Effects

17. With respect to effects of the project on the environment, CNSC staff reported that 66 potential interactions have been identified for the following environmental components: 24 for atmospheric, 7 for aquatic and 15 for terrestrial environments; 14 for human health, and 6 for potential effects of the environment on the project. Nine of these were recognized as interactions with residual effects. CNSC staff stated that none of the identified interactions, under normal operation, were expected to result in significant adverse effects.
18. With respect to the effects of the project under postulated malfunctions and accidents, CNSC staff identified accident scenarios and available means to prevent or mitigate possible effects. The identified scenarios included reduced quality of air, surface water, sediment, soil and vegetation from a spill event during transportation or plant operation. The magnitude of the effects is predicted to be moderate, as a spill of sulphur could potentially generate acidic conditions. The geographic extent of the effects would be limited to the area of release. The residual effect is not considered to be significant. It is predicted to be continuous but unlikely, reversible, and limited to the short term assuming some clean-up occurs.
19. Potential effects of the environment on the project considered in the Screening Report include forest fires, seismic activity, severe weather conditions and effects of climate change on the project. No residual effects were expected and mitigation measures were identified.
20. The cumulative effects assessment for the Mill Services project considered the effect of reduced air, soil, water and vegetation quality from SO₂ emissions at the Key Lake operation, in combination with other regional uranium mining/milling operations with sources of sulphur dioxide (e.g. Rabbit Lake, McClean Lake) and emissions from oil sands projects. As the new acid plant is anticipated to have 10% the emission rates of the existing plant, no adverse effects are anticipated in the future.
21. Based on the presented information and on the review of the Screening Report, the Commission concluded that the proposed project, taking into account the identified mitigation measures, is not likely to cause significant adverse environmental effects.

Public Concern

22. As required by section 55 of the CEAA, the CNSC established a public registry for the assessment that includes identification in the Canadian Environmental Assessment Registry (CEAR). Information about this EA has been posted both on the CEAR website and on the CNSC website. No comments were received on either the Guidelines, or on the draft EA Screening Report advertised during a May 1 to May 21, 2009 public review period.
23. CNSC staff reported that Cameco had presented the project to the Northern Saskatchewan Environment Quality Committee at meetings on March 19, 2007 and Dec 9, 2008. During the meetings, questions were raised about the type of land, the health of the trees, and the outcome of the current acid and oxygen plants, and the public expressed support for reduced emissions.
24. Based on the information provided, the Commission is of the view that there was sufficient opportunity for the public to be informed and to express its views on the project. The Commission is of the opinion that public concern does not warrant referral of the project to the Minister of the Environment for his referral to a review panel or mediation.

Follow-up Program

25. A follow-up program that verifies the effectiveness of mitigation measures and the accuracy of environmental predictions is optional for CEAA screening assessments. Such a program was considered appropriate for this project and its components include air quality, water quality and vegetation quality monitoring.
26. CNSC staff reported that the CNSC licensing and compliance program will be used as the mechanism for ensuring the final design and implementation of the follow-up program. The program results will be provided to the CNSC in a stand-alone report submitted annually. The CNSC, in accordance with the CEAA, will make the results of the follow-up program available on the CEAR.

Conclusion

27. The Commission has considered the information and submissions as presented in the material available for reference on the record.
28. The Commission adopts the “*Environmental Assessment Screening Report: Mill Services Project*” presented in the CNSC staff document CMD 09-H113, and accepts the conclusions of the Screening Report that the project, taking into account the mitigation measures, is not likely to cause significant adverse environmental effects.

29. Pursuant to paragraph 20(1)(a) of the CEAA, the Commission decides to proceed with the consideration of the application for a significant modification to the Key Lake facility, and approves the construction of the mill services at the Key Lake facility under condition 3.1 of UMLOL-MILL-KEY.00/2013.

30. The Commission decides that the operation of the new mill services remains to be approved and will require the implementation of the follow-up program identified in the Environmental Assessment Screening Report.



Michael Binder
President,
Canadian Nuclear Safety Commission

JUL 02 2009

Date