

# Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant Cameco Corporation

Subject Application to Amend the Class IB Nuclear Fuel  
Facility Operating Licence for the Blind River  
Refinery

Hearing  
Date April 12, 2007

## RECORD OF PROCEEDINGS

Applicant: Cameco Corporation

Address/Location: One Eldorado Place, Port Hope, Ontario, L1A 3V1

Purpose: Application to amend the Class IB Nuclear Fuel Facility Operating Licence for the Blind River Refinery

Application received: December 22, 2007

Date(s) of hearing: April 12, 2007

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

Members present: L. J. Keen, Chair  
A. R. Graham  
M. J. McDill

Secretary: K. McGee  
Recording Secretary: M. Young  
General Counsel: S. Maislin Dickson

| <b>Applicant Represented By</b>   |   | <b>Document Number</b> |
|---|---|------------------------|
| <ul style="list-style-type: none"><li>• R. Stean, Vice-President, Fuel Services</li><li>• C. Astles - Manager, Blind River Operations</li><li>• J. DeGraw - Superintendent, Quality, Compliance &amp; Licensing</li></ul> |   | CMD 07-H105.1          |
| <b>CNSC staff</b>   |   | <b>Document Number</b> |
| <ul style="list-style-type: none"><li>• B. Howden</li><li>• H. Rabski</li></ul>   | <ul style="list-style-type: none"><li>• D. Werry</li><li>• A. Ray</li></ul> | CMD 07-H105            |

**Licence:** Amended  
**Date of Decision:** April 12, 2007

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## **Introduction**

1. Cameco Corporation (Cameco) has applied to the Canadian Nuclear Safety Commission (CNSC<sup>1</sup>) for an amendment to its Class IB Nuclear Fuel Facility Operating Licence for its Blind River uranium refining facility, located near the town of Blind River, Ontario. The current fuel facility operating licence is FFOL-3632.0/2012.
2. The Blind River facility refines various milled uranium concentrates (yellowcake) received from various sources to produce uranium trioxide powder (UO<sub>3</sub>), an intermediate product of the fuel cycle. The primary recipient of the product is Cameco's Port Hope uranium conversion facility. The Blind River facility is currently licensed to produce up to 18,000 tonnes of uranium as uranium trioxide during any calendar year.
3. Cameco proposes to upgrade the hazardous waste incinerator at its Blind River facility with improved technology for incineration control, new pollution abatement equipment, and on-line monitoring equipment. The upgraded incinerator will handle the contaminated combustible waste from both Cameco's Blind River facility and Port Hope's uranium conversion facility.

## Issue

4. In considering the application, the Commission was required to decide, pursuant to subsection 24(4) of the *Nuclear Safety and Control Act*<sup>2</sup>:
  - a) if Cameco is qualified to carry on the activity that the amended licence 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.

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<sup>1</sup> In this *Record of Proceedings and Decision*, 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.

<sup>2</sup> S.C. 1997, c. 9.

### Public Hearing

5. The Commission, in making its decision, considered information presented for a public hearing held on April 12, 2007 in Ottawa, Ontario. The public hearing was conducted in accordance with the *Canadian Nuclear Safety Commission Rules of Procedure*<sup>3</sup>. During the public hearing, the Commission received written submissions from CNSC staff (CMD 07-H105) and Cameco (CMD 07-H105.1).

### **Decision**

6. 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 is qualified to carry on the activity that the amended licence will authorize. The Commission is also satisfied that Cameco, in carrying on that activity, will 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. Therefore,

the Commission, pursuant to section 24 of the *Nuclear Safety and Control Act*, amends the Class IB Nuclear Fuel Facility Operating Licence FFOL-3632.0/2012 issued to Cameco Corporation for its Blind River facility. The amended licence FFOL-3632.1/2012 is valid until February 29, 2012 unless suspended, amended, revoked or replaced.

7. The Commission includes in the licence the conditions recommended by CNSC staff, as set out in the draft licence attached to CMD 07-H105.

### **Issues and Commission Findings**

8. In making its licensing decision, the Commission considered a number of issues relating to Cameco's qualification to carry out the proposed activities and the adequacy of the proposed measures for protecting the environment, the health and safety of persons, national security and international obligations to which Canada has agreed.

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<sup>3</sup> S.O.R./2000-211.

*Qualifications and Protection Measures*

9. CNSC staff stated that Cameco proposes to upgrade the hazardous waste incinerator in order to meet 2007 Canada-wide standards and provincial emission requirements. CNSC staff further stated that as part of the upgrade, Cameco would include a provision to install an oil injection system to supplement the natural gas fuel and provide for the incineration of slightly enriched uranium contaminated used oil, which subsequently recovers uranium to the incinerator ash. CNSC staff noted that materials will be shipped from Port Hope to Blind River by road transport, and no new wastes will be generated by the project.
10. CNSC staff stated that the project, which was subject to an environmental assessment (EA), as discussed in the following section of this *Record of Proceedings*, is not likely to cause significant adverse environmental effects. CNSC staff stated that, based on experience with the operation of the existing incinerator, there is not expected to be a measurable increase in the radiation dose to workers as a result of this project. CNSC staff added that radiation doses to the public are expected to be very small (less than 0.01 millisieverts per year), and there are no predicted effects on biota.
11. CNSC staff explained that its assessment of the proposed design and current operation indicated that the Maximum Discharge Rate and Action Level for the incinerator uranium emission needed to be modified to reflect the capability of the emission collection equipment. CNSC staff proposed several revised licence conditions to ensure that the limits are met and do not exceed the historical operation of the incinerator.
12. CNSC staff stated that Cameco received the required Provincial and Federal approvals to proceed with the project, including a Certificate of Approval from the Ontario Ministry of the Environment (MOE), a Provincial Technical Standards & Safety Authority approval, and an approval of fire safety-related changes to meet *National Fire Code* requirements. CNSC staff noted that Cameco has several additional responsibilities and requirements under the MOE's Certificate of Approval, including emissions limits.
13. The Commission asked when the Certificate of Approval came into effect. Cameco responded that the requirements for the new standards of the Certificate of Approval were brought into effect on December 31, 2006. Cameco noted that the incinerator has been shut down since that time and the contaminated combustible materials are being stored, awaiting the incinerator approval.
14. The Commission sought an explanation for the proposed reduction of the limit for the Maximum Discharge Rate of uranium for the incinerator stack from 1200 grams per hour (g/h) to 10 g/h. CNSC staff responded that the reason for the reduction was to meet the constraints of the emissions limits in the Certificate of Approval, as well as meet the conditions outlined in the EA Screening Report.

15. The Commission sought clarification concerning the Action Level for the incinerator stack. CNSC staff stated that the modifications to the incinerator stack led to a proposed action level of 5 g/h.
16. The Commission notes that the decrease in Maximum Discharge Rate and Action Level is an important, positive change as it will result in a reduction in emissions.
17. The Commission asked Cameco what the timeframe would be before the new incinerator could be operational, pending Commission approval. Cameco responded that all of the equipment is on site and it would take approximately one month to become operational.
18. The Commission asked Cameco how long it would take to address the backlog inventory of materials stored since December 31, 2006. Cameco responded that it expects that the incineration of the backlog inventory will be completed within one month of operation.
19. The Commission inquired about the daily operation of the incinerator (11 to 12 hours per day) and the amount of material that will be processed. Cameco responded that the feed rate of the incinerator is at a design rate of 309 kg/h, which will not change.
20. The Commission asked about Cameco's current standing in regards to its decommissioning plan and financial guarantee. CNSC staff responded that currently, there is an approved Preliminary Decommissioning Plan (PDP) for the facility and a financial guarantee is being revised. CNSC staff stated that it will update the Commission with information about the revised financial guarantee within the next several months. Cameco assured the Commission that there will not be any issues with the financial guarantee.
21. Based on the above information, the Commission is of the opinion that Cameco is qualified to carry out the proposed activities and the proposed measures are adequate for protecting the environment, the health and safety of persons, national security and international obligations to which Canada has agreed.

### ***Application of the Canadian Environmental Assessment Act***

22. Before making a licensing decision, the Commission must be satisfied that all applicable requirements of the *Canadian Environmental Assessment Act*<sup>4</sup> (CEAA) have been fulfilled. The proposed modification to the operation of the Blind River incinerator was subject to an environmental assessment (EA) screening conducted pursuant to the CEAA.

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<sup>4</sup> S.C. 1992, c. 37.

23. A hearing<sup>5</sup> was held on December 7, 2006 in regards to the EA process for the project. The Commission determined that the project, taking into account mitigation measures, is not likely to cause significant adverse environmental effects.
24. Therefore, the Commission is satisfied that all applicable requirements of the CEAA have been fulfilled.

### **Conclusion**

25. The Commission has considered the information and submissions of Cameco and CNSC staff as presented in the material available for reference on the record.
26. The Commission is satisfied that the applicant meets the requirements of subsection 24(4) of the *Nuclear Safety and Control Act*. That is, the Commission is of the opinion that Cameco is qualified to carry on the activity that the amended licence will authorize and that Cameco will 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.
27. The Commission therefore amends, pursuant to section 24 of the *Nuclear Safety and Control Act*, the Class IB Nuclear Fuel Facility Operating Licence FFOL-3632.0/2012 issued to Cameco Corporation for its Blind River facility, located near the town of Blind River, Ontario. The amended licence FFOL-3632.1/2012 is valid until February 29, 2012 unless suspended, amended, revoked or replaced.
28. The Commission includes in the licence the conditions recommended by CNSC staff as set out in the draft licence attached to CMD 07-H105.

Linda J. Keen,  
President  
Canadian Nuclear Safety Commission

Date of decision: April 12, 2007

Date of release of Reasons for Decision: May 25, 2007

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<sup>5</sup> Refer to the Record of Proceedings on the matter of the *Screening Environmental Assessment for the Proposed Modification to the Operation of the Blind River Refinery Incinerator Blind River, Ontario*, hearing date December 7, 2007.