

Record of Proceedings, Including Reasons for Decision

In the Matter of

Applicant Cameco Corporation

Subject Application to Amend the Key Lake Operation
Uranium Mill Operating Licence

Hearing
Date January 25, 2007

RECORD OF PROCEEDINGS

Applicant: Cameco Corporation

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

Purpose: Application to Amend the Key Lake Operation Uranium Mill Operating Licence

Application received: January 8, 2007

Date(s) of hearing: January 25, 2007

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

Members present: L.J. Keen, Chair
C. Barnes
J.A. Dosman

Legal Counsel: J. Lavoie
Secretary: K. McGee
Recording Secretary: S. Dimitrijevic

| Applicant Represented By | Document Number |
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| Intervenors | |
| See Appendix A | |

Licence: Amended
Date of Decision: January 25, 2007

Table of Contents

| | |
|--|-----------|
| Introduction | 1 |
| Decision | 2 |
| <i>Issues and Commission Findings</i> | 3 |
| Licence Amendment | 3 |
| <i>Canadian Environmental Assessment Act</i> | 5 |
| <i>Conclusions on the Proposed Licence Amendment</i> | 6 |
| Mid-term Performance Report | 7 |
| <i>Operations</i> | 7 |
| <i>Conclusion on Operations</i> | 9 |
| <i>Radiation Protection</i> | 9 |
| <i>Environmental Protection</i> | 10 |
| <i>Non-Radiological Health and Safety</i> | 10 |
| <i>Emergency Preparedness</i> | 11 |
| <i>Quality Assurance</i> | 11 |
| <i>Nuclear Security</i> | 11 |
| <i>Safeguards</i> | 12 |
| <i>Decommissioning Plan and Financial Assurance</i> | 12 |
| <i>Cost Recovery</i> | 13 |
| <i>Public Information Program</i> | 13 |
| Conclusion | 13 |

Introduction

1. Cameco Corporation (Cameco) has applied to the Canadian Nuclear Safety Commission (CNSC¹) to seek an amendment to the Key Lake Uranium Mill Operating Licence. Cameco is currently authorized by the CNSC to operate a uranium mill at Key Lake, Saskatchewan, and to maintain the facilities necessary to support this operation. The current licence UMLOL-MILL-KEY.00/2008 is valid from November 1, 2004 to October 31, 2008.
2. The application for the licence amendment has been strongly recommended by CNSC staff following its assessment of Key Lake mill effluent discharge releases of selenium (Se) and molybdenum (Mo) and its assessment of all program areas during preparation of the requested interim report. The amendment would allow the addition of a licence condition to refer to a specific action plan for the control and reduction of the selenium and molybdenum releases in the mill effluent.
3. CNSC staff has also recommended revisions to certain current licence conditions with respect to the waste rock management plan and to the reporting of inventory and transport of fissionable and fertile substances.
4. This *Record of Proceedings* describes the Commission's consideration of the information and submissions of the applicant, CNSC staff and intervenors with respect to the licence amendment, as well as the Commission's findings on the interim performance report submitted by CNSC staff. Cameco has also submitted a mid-term performance assessment in parallel to the CNSC staff's interim report to the Commission.

Issues

5. In considering the application, pursuant to subsection 24 (4) of the *Nuclear Safety and Control Act*² (NSCA), the Commission was required to decide:
 - a) whether Cameco is qualified to carry on the activity that the amended licence would authorize; and
 - b) whether, 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.

¹ In this *Record of Proceedings*, 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.

Hearing

6. The Commission, in making its decision, considered information presented for a public hearing held on January 25, 2007 in Ottawa, Ontario. The public hearing was conducted in accordance with the *Canadian Nuclear Safety Commission Rules of Procedure*³. During the public hearing, the Commission received written submissions and heard oral presentations from CNSC staff (CMD 07-H5 and CMD 07-H5.A) and Cameco Corporation (CMD 07-H5.1, CMD 07-H5.1A and CMD 07-H5.1B). The Commission also considered oral and written submissions from five intervenors (see Appendix A for a list of interventions).

Decision

7. 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 Uranium Mill Operating Licence UMLOL-MILL-KEY.00/2008 for the Key Lake Operation, issued to Cameco Corporation, Saskatoon, Saskatchewan.

8. The Commission amends the to include the conditions recommended by CNSC staff, as set out in the draft licence attached to CMD 07-H5 and in CMD 07-H5.A, with the following modification to licence condition 5.4 :

Licence condition 5.4 is replaced with:

- 5.4. The licensee shall implement Phase I and Phase II of the Action Plan dated December 15, 2006 and entitled *Key Lake Operation - Action Plan for Selenium and Molybdenum*, for the limitation of risk to the environment from the releases of selenium and molybdenum to the environment from the Key Lake mill effluent treatment system.

The licensee shall seek the approval of the Commission or a person authorized by the Commission to implement Phase III of the Action Plan.

³ S.O.R./2000-211.

9. The Commission also revises reference 2 in Appendix B of the Licence, as recommended by CNSC staff in CMD 07-H5.A.
10. With this decision, the Commission requests CNSC staff to present to the Commission an interim status report on the performance of the facility regarding the reduction of molybdenum and selenium discharge. The status report is to be presented at a Commission proceeding following the *Commissioning of the Phase I* of the Action Plan and before Cameco's *Decision to Go Forward* and *Engineering Design* activities of the Phase II of the Action Plan.

Issues and Commission Findings

11. In making its decision regarding the licence amendment under section 24 of the NSCA, the Commission considered a number of issues relating to Cameco's qualifications 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.
12. The current operating licence includes the Commission's request that CNSC staff prepare an interim status report on the facility and present it to the Commission following the mid-point of the licence term. Following this request CNSC staff submitted the report as part of CMD 07-H5. The report comprised a follow-up from the last licensing hearing accompanied by CNSC staff's assessment of program areas.
13. The findings of the Commission, based on the Commission's consideration of all the information and submissions available for reference on the record for the hearing, are summarized in the following sections.

Licence Amendment

14. The Commission considered the information provided by CNSC staff in the context of requested amendments to the licence conditions, particularly those regarding molybdenum and selenium levels in mill effluents and waste rock management.
15. Based on its study of cumulative effects of the present operations, CNSC staff concluded that the release of the effluent to the David Creek system was causing an unreasonable risk to the environment, and that Cameco had not taken all reasonable precautions to protect the environment in accordance with subsections 12(1)(c) and 12(1)(f) of the *General Nuclear Safety and Control Regulations*⁴.

⁴ S.O.R./2000-202.

16. CNSC staff addressed the issues of reduced storage capacity due to sloughing and elevated concentrations of molybdenum and selenium in the mill effluent and their environmental impact in the evaluation of this program area. CNSC staff thus informed the Commission on a causal link that had been found between abnormal fish development and current selenium level in the drainage system. The concentration of selenium accumulated in the sediments and animals had been found to pose an unreasonable environmental risk and could be a public health risk, according to CNSC staff.
17. CNSC staff stated that ecologically-based water quality performance objectives were necessary for selenium and molybdenum to establish regulatory performance targets in order to increase the likelihood that operational controls will limit the risk to the environment to an acceptable level. The licensee, however, was initially of the opinion that regulatory limits were not the necessary regulatory instrument to achieve environmental improvements in Key Lake mill effluents. Consequently, CNSC staff requested Cameco to submit an action plan for the limitation of risk to the environment from the release of selenium and molybdenum from the Key Lake mill effluent system. In response to this request, Cameco had proposed a three-phased action plan acceptable to CNSC staff.
18. CNSC staff concluded that Cameco's Action Plan entitled *Key Lake Operation - Action Plan for Selenium and Molybdenum* would meet the intent of the condition 5.4 of the current operating licence regarding the reduction of the molybdenum in the mill effluent. To ensure the implementation of this plan, CNSC staff recommended the Commission to approve the amendment of the licence condition regarding the limits to the environmental risk caused by release of the molybdenum and selenium.
19. Northern Saskatchewan Environmental Quality Committee (NSEQC), Saskatchewan Environment, J.V. Penna, M.H. Penna and E. Knight, in their interventions, expressed concerns with discharge limits and elevated concentrations of molybdenum and selenium.
20. The Commission sought information from Cameco with respect to its confidence in the success of its plan to reduce molybdenum and selenium concentrations in the drainage system. Cameco responded that the results of bench and pilot-plant tests justify its confidence that significant reduction of contaminant levels could be achieved. The existing process, which represents the Phase I of the proposed Action Plan, was efficient in reducing molybdenum and selenium concentrations. Pilot plant testing showed that the constructed circuit could remove about 85% of molybdenum and up to 60% of selenium.
21. The Commission further inquired about accumulation of contaminants in sediments, cumulative effects and the degree of expected improvement after implementation of the Action Plan. Cameco responded that, according to its ecological risk modelling, it could expect the stabilizing or reduction of selenium and molybdenum levels. In response to the Commission's further questioning on the proposed monitoring frequency of three years, CNSC staff explained that in an accumulation situation, such as this one, and taking into account the nature of the contaminants, short term effects of any kind were not to be expected. CNSC staff concluded that the proposed monitoring frequency was realistic.

22. Considering the proposed Action Plan, the Commission expressed the view that the environmental issues of the Key Lake operation need to be understood in a broader context. Keeping in mind that the issues encompass long-term processes, and the licence periods are comparably short, the Commission expressed its uneasiness with the timelines for the proposed activities. The Commission also pointed out that different projects, involving other facilities and covered under different licences, were interconnected with the Key Lake operation and that their realization could be affected by the Key Lake development. The Commission asked Cameco and CNSC staff for their comments with respect to these issues.
23. Cameco responded that, in its view, it was dealing with an evolutionary process and it was oriented primarily towards realization of the program, so it did not consider a change to the licence period. Cameco expects that the commissioning of Phase I of the Action Plan should be completed during this licence period.
24. CNSC staff responded in terms of realistic timelines for completion of the Action Plan and stated that enough evidence should be collected through implementation of Phase I and in time for preparation of Commission Member Documents for the next licence hearing. The Commission requested that CNSC staff follow the situation closely.
25. Cameco informed the Commission on its waste rock management facilities and noted the mitigation measures taken to stabilize the slopes and reduce the magnitude of sloughing.
26. With respect to waste rock management, CNSC staff reported that Cameco had provided an action plan for the management of waste rock and a schedule for the evaluation of management options, acceptable to CNSC staff. As Cameco has met the intent of the existing licence condition, CNSC staff recommended that the licence condition be revised to reflect the requirement for implementation of the preferred waste rock management plan.
27. The Commission closely examined the slope instability issue during the hearing and inquired about the history of the problem, technical issues and recent estimates about hydrodynamic containment that could be lost in 2007 if the water levels were not controlled. Cameco responded that the facility had been constructed based on the knowledge available at the time and that standard industry factors of safety had been used in the pit slope design. Cameco also stated that loose sand was not exposed at the time of construction.

Canadian Environmental Assessment Act

28. Before making a licensing decision, the Commission must be satisfied that all applicable requirements of the *Canadian Environmental Assessment Act*⁵ (CEAA) have been fulfilled.

⁵ S.C. 1992, c.37.

29. CNSC staff stated that the proposed amendment to the Key Lake operating licence is a trigger under the *Law List Regulations*⁶ of the CEAA. CNSC staff also stated that the proposal involves undertakings in relation to a physical work, namely the continued operation of the Key Lake mill; and thus there is a project as defined in section 2 of the CEAA.
30. In the Federal Court of Appeal's decision in the Inter-Church case, it was recognized that new environmental threats would not transform a project into a new proposal and also acknowledged that it would be the Board's (AECB, now the CNSC) responsibility to evaluate these effects in the context of its licensing responsibilities. CNSC staff thus submitted that the evaluation and assessment of new environmental threats at Key Lake and consideration of measures for mitigation of these effects under the NSCA would be entirely consistent with the Federal Court of Appeal's decision. CNSC staff was of the opinion that the implementation of adaptive management measures to address selenium and molybdenum levels in effluent would not transform the McArthur River Operation (and milling at Key Lake) into a new proposal. CNSC staff concluded that subsection 74(1) of the CEAA is interpreted as applying to the current Cameco project and accordingly no further environmental assessment of the proposed project is required.
31. The Commission accepts the CNSC staff's determination that an environmental assessment is not required pursuant to the CEAA prior to the Commission making a decision on the current application for amendment of the licence.

Conclusions on the Proposed Licence Amendment

32. The Commission is of the opinion that the CNSC staff initiative to revise licence conditions by implementing regulatory limits was justified. The Commission expects significant improvements with respect to environmental impacts of molybdenum and selenium releases.
33. The Commission considered environmental issues in the context of other operational activities of the Key Lake operation and expresses its concerns about Cameco's failure to make a realistic prediction regarding levels of contamination and dynamics of reduction of storage capacity due to sloughing. With respect to the contamination reduction and intended production increase, the Commission is of the opinion that the activities planned by Cameco lead rather towards dispersion of contamination by rerouting it to different watersheds instead of reduction of contaminant concentration at the mill effluent.
34. Based on the above information and considerations, the Commission approves Phase I and Phase II of the Action Plan entitled *Key Lake Operation - Action Plan for Selenium and Molybdenum*, submitted by Cameco. However, the Commission does not approve, at this time, Phase III of the submitted Action Plan. Thus, the Commission includes the licence condition as proposed by CNSC staff with the modification that only Phases I and II of the

⁶ S.O.R./94-636.

Action Plan can be implemented. The licensee will need to seek prior authorization from the Commission or a person authorized by the Commission before implementing Phase III.

35. The Commission expresses its concerns that the planning of other projects and their proposed timetables might become an issue if they are dependent on Key Lake's availability.
36. The Commission also accepts the CNSC staff recommendation to amend the proposed licence condition 2.3 to the operating licence requiring Cameco to maintain and implement an action plan that would summarize the results of studies completed to date, update contaminant transport modeling predictions, discuss alternatives and preferred waste-rock management approach and identify a schedule for implementation of the preferred waste rock management approach.

Mid-term Performance Report

Operations

37. CNSC staff informed the Commission on the performance of the facility and significant issues associated with the operation of the Key Lake Operation from June 1, 2004 to September 30, 2006. The report comprised information on sloughing in the Deilmann Tailing Management Facility (DTMF), increased concentration of molybdenum and selenium accumulated in drainage sediments and aquatic biota, waste rock management and radioactive dust occurrence, ground water contamination, frequency of incidents and Cameco's plans for production increase and recycling.
38. CNSC staff reported that it had carried out twelve compliance inspections of various aspects of the mill facility. Action Notices arising from these inspections were addressed by Cameco in a satisfactory manner. CNSC staff concluded that Cameco's Mill Operations program and implementation meet requirements.
39. With respect to sloughing, CNSC staff reported that the sloughing mechanism is now better understood and that Cameco had implemented several mitigation measures to stabilize the slopes and reduce the magnitude of sloughing.
40. With respect to waste rock management, Cameco stated that it was committed to consumption of the Deilman waste material by 2013. At the current consumption rate, the remaining stockpile would be consumed by 2009. However, the present strategy to increase production and treat this waste as a diluent for the high-grade McArthur River ore would lead to increased toxicity and to imbalance between production and consumption of this waste. Consequently, the result would be the accumulation of inventory in both McArthur River and Key Lake facilities. Cameco believes that the best-identified alternative for managing this mineralized waste inventories would be to install a gravity concentration circuit in the Key Lake grinding area and separate high-density minerals from low-density ones.

41. CNSC staff concluded that waste management issues were either under control or being addressed by Cameco and that the waste management sub-program meets requirements. However, due to the licensee's slow reaction to address several new issues and the need for CNSC staff to intervene and to ensure prompt action, the implementation of the program was deemed below requirements.
42. In addition to the concerns of the Commission, J.V. Penna, M.H. Penna and E. Knight, in their interventions, expressed their concerns about the decreased capacity for tailing disposal and about adverse effects of low permeability of the tailing.
43. Cameco responded that it had proposed to increase the discharge capacity of its reverse osmosis plant in order to mitigate effects of reduced containment of contaminants caused by sloughing events. In conjunction with this proposal, Cameco submitted an environmental risk assessment of potential impact of increased discharge on the McDonald Creek drainage. CNSC staff noted that it was currently reviewing this assessment.
44. CNSC staff reported on the intention of Cameco to increase production and to transfer and mill recyclable by-products from Cameco's Blind River and Port Hope operations.
45. The Commission sought information on the potential impact of intended expansion of the operation, transfer and milling of material from other Cameco sites on environmental safety and future operations of the Key Lake facility, given the reduced storage capacity due to sloughing. Cameco responded that they were focused on technical issues in order to address these concerns. One of them is maintaining low water levels by dewatering peripheral clean water areas and the other is pumping from Deilman Pit to Gaertner Pit and to the reverse osmosis plant. The proposed increase of discharge capacity of reverse osmosis plant, noted in paragraph 32 of this *Record of Proceedings*, is part of Cameco's effort to mitigate effects of significantly reduced containment of contaminants caused by sloughing events.
46. With respect to packaging and transport, CNSC staff informed the Commission that all of the Action Notices issued as a result of numerous inspections have been addressed and closed. CNSC staff concluded that this program and its implementation met requirements.
47. With respect to fire protection, Cameco informed the Commission that the work undertaken following earlier third-party reviews did not fulfil all aspects of the licence condition. Consequently, a consultant is currently developing a logbook that would provide a clear framework for work planning purposes and ongoing compliance in this area.
48. CNSC staff reported that it was reviewing a progress report on corrections requested after the February 2005 assessment with respect to fire protection compliance. CNSC staff has not yet completed the assessment of the Key Lake Operation's Fire Protection program, but several deficiencies have been identified thus far. Therefore, CNSC staff concluded that the program and implementation did not yet meet requirements.

Conclusion on Operations

49. The Commission considered the information provided with respect to Cameco's Key Lake facility operation performance. The Commission is of the view that Cameco appears to react to CNSC's compliance activities rather than proactively take measures to demonstrate its qualification to carry necessary activities in the areas that do not meet regulatory requirements. The Commission is of the view that licensees should not be waiting for regulatory compliance action to prompt the correction of deficiencies, or to implement program improvements.

Radiation Protection

50. Cameco informed the Commission that its radiation protection program is subject to corporate standards documented in the *Radiation Protection Program Manual* issued in December 2005. The company further informed the Commission that the radiation doses for all Key Lake Operation workers had remained stable and well below regulatory limits.
51. CNSC staff's review of worker dose data for the period 2004-2006 indicated that radiation doses were adequately controlled and that no workers at the facility received an effective dose in excess of regulatory limits. Seventeen Action Levels have been reached during this period, all of them during the maintenance or upgrade operations.
52. Cameco also reported that rebuilding of the mill product packing area had resulted in a substantial reduction of long-lived radioactive dust incident occurrences. CNSC staff concurred and added that the improvements with respect to high levels of radioactive dust, associated with increase maintenance activity in the calciner and yellowcake packing areas, have resulted in lower workers doses even with prolonged exposure to dust.
53. CNSC staff reported to the Commission that the changes made to Cameco's radiation protection program have improved the program's ability to ensure that radiation exposure and doses are as low as reasonably achievable (ALARA). CNSC staff concluded that both program and implementation meet requirements.
54. E. Knight, in her intervention, inquired whether there was an ongoing radiological health study of people in the area and would the workers that have been in contact with radioactive dust be monitored for long-term effects. Cameco restated that the workers' doses were very low. CNSC staff concurred with Cameco's statement and added that the reviewed dust exposures reveal doses of the order of 2mSv, which do not require further lung counting.

Environmental Protection

55. In its submission, Cameco provided details on environmental impacts of the sloughing issues and increased concentrations of molybdenum and selenium in the mill effluent.
56. In evaluating this program area, CNSC staff concluded that the environmental protection program meets requirements, but that Cameco's implementation of this program was below requirements. The issue of molybdenum and selenium levels in the drainage system and initial difference in opinions regarding the implementation of regulatory measures for limiting molybdenum and selenium levels, as opposed to the assumed sufficiency of a benevolent approach already noted in the paragraph 17 of this *Record of Proceedings*, were cited as the principal reasons for the below requirement rating for program implementation.
57. J.V. Penna, M.H. Penna and E. Knight, in their interventions, expressed their concerns regarding radiation hazards related to the transportation of bulk radioactive waste and dust releases.
58. CNSC staff reported that Cameco had addressed the problem of high level of radioactive dust which occurred frequently at the beginning of the licence period. As a result of infrastructural improvements, enhanced worker protection, extensive maintenance and housecleaning efforts, radioactive dust levels have significantly decreased so that only one action level exceedance has been reported in 2006, compared with fifteen in the precedent year.
59. With respect to the issues of elevated levels of ammonia and organics in the ground water beneath the mill, reported during the last licence renewal hearing, Cameco has modeled the groundwater plume to identify the best location for installation of a system of recovery wells and installed the wells. The commissioning of the system is due in 2007.
60. With respect to the groundwater contaminated by elevated concentrations of ammonia and organic residues, CNSC staff reported that the sources of contamination had been located and sealed. CNSC staff also reported that Cameco had modeled the groundwater plume to identify the best location for the installation of recovery wells.

Non-Radiological Health and Safety

61. Cameco noted that conventional safety was good during this licence period and that lost-time injury, medical aid frequencies and severity rate of workers at the Key Lake facility compared favourably to the Saskatchewan mining industry.
62. CNSC staff reported to the Commission that the Key Lake operation continues to have a high frequency of incidents relative to other Saskatchewan uranium mining and milling operations. Some of the recent ones were attributed to the aging infrastructure and Cameco is in the process of upgrading it.

63. During this review period, nine compliance inspections were conducted by CNSC and Saskatchewan Labour. The both organisations indicated that the level of compliance was normal. CNSC staff concluded that the Occupational Health and Safety program meets requirements.

Emergency Preparedness

64. Cameco noted that the company had continued to carry out emergency response exercises at the Key Lake facility, including on-site exercises and ore slurry transportation incident exercises.
65. Based on the existing emergency preparedness program, training, availability of emergency response personnel and equipment and level of risk, CNSC staff concluded that the program and its implementation in this area meet requirements.

Quality Assurance

66. Cameco informed the Commission about quality assurance and safety policy consolidation during this licencing period. The new policy and related programs were referred to as the Integrated Safety, Health, Environment and Quality Management System. It is based on BSI OHSAS 18001:1999 system, similar to the ISO 14001 standard for environmental management. Cameco noted that the site program conforms to the corporate one.
67. In its report, CNSC staff recognized significant advancement with respect to Quality Management System (QMS) and Environmental Management System (EMS) as well as some resolution of non-conformance issues identified during the 2004 evaluation. However, CNSC staff had found deficiencies and issues remained to be resolved concerning site-based and corporate-based program issues, outdated QMS Manual and some other site-based program documents. There were also three Action Notices from the 2004 evaluation still open as well as two Action Notices from the EMS audit. The enumerated deficiencies led CNSC staff to conclude that, in spite of the noted improvements, the Key Lake's Quality Management Program and its implementation are still below requirements.

Nuclear Security

68. CNSC staff informed the Commission that it is actively overseeing the physical protection program. However, this program area was not evaluated and rated for this review period.

Safeguards

69. CNSC staff reported that the licensee has in place satisfactory procedure to facilitate the prompt access of IAEA inspectors upon request and that during this review period, no access requests from IAEA were received. CNSC staff concluded that the program and its implementation in this area meet requirements.

Decommissioning Plan and Financial Assurance

70. CNSC staff informed the Commission that a financial guarantee for decommissioning is in place in the form of Irrevocable Letters of Credit for the total sum of \$ 45.46 million. These letters of credit are in good standing and have an annual self-renewing date. The amount of the guarantee is based on Preliminary Decommissioning Cost Estimates from March 2003. The next scheduled revision will be in 2008, in time for the licence renewal.
71. Northern Saskatchewan Environmental Quality Committee (NSEQC), in its intervention, expressed concerns with respect to the growing number of unused facilities and aging infrastructure which could be associated with a large number of incidents. The NSEQC encouraged the CNSC to implement regulatory change that would allow for the decommissioning of unused facilities, while the operator could continue with other use of the site. According to the NSEQC, such an approach could be beneficial since the site would be maintained to a current operating state rather than to a historic state, and decommissioning performance could be monitored while the site is still operational.
72. The Commission sought further information from Cameco about the possibility of decommissioning unused resources. In response, Cameco agreed that a major overhaul of equipment and facilities was needed. Cameco informed the Commission about their newly formed Key Lake Revitalization Project. Cameco stated that the biggest improvements were needed for the back end of the mill, dealing with the concentrated uranium solution, the solvent extraction plant, yellow cake precipitation circuit and water treatment facilities.
73. CNSC staff stated that cessation of operation and remediation of unused facilities was clearly within the context of an operating licence. CNSC staff pointed out the Cluff Lake project as an example of a successful and safe closure of the operation areas.
74. The Commission expressed satisfaction that the discussion on decommissioning was initiated, noting, at the same time, that the Commission differentiates between rehabilitation and revitalization, and a larger plan that includes decommissioning and puts it in the context of an integral approach to dealing with issues, avoiding thus decisions narrowly focused on particular issues.

Cost Recovery

75. CNSC staff informed the Commission that the applicant was in good standing with the CNSC with respect to the payment of licensing fees for the Key Lake Operation.

Public Information Program

76. Cameco informed the Commission about its public information activities and consultations intended to provide information to a broad array of individuals and organizations, but focused primarily on the residents and impact communities.
77. CNSC staff reported that, during the review period, media coverage of the Key Lake mine had been minimal with little coverage of the licence application issues. CNSC staff concluded that Cameco's public information program and implementation meet requirements.
78. NSEQC, in its intervention, commented on the communication efforts of the CNSC staff and Cameco and stated that although both organisations understand the importance of communication at a corporate level, the actual implementation was sometimes lacking. NSEQC pointed out the importance of presenting information on the Key Lake matters in an appropriate perspective for better comprehension by the local residents and respecting their views.
79. The Commission sought more information from NSEQC on how communication efforts by Cameco and CNSC staff could be more effective. In response, NSEQC noted that faster communication and full reports instead of fractional information would improve the situation.
80. The Commission appreciated the opportunity to receive information from the NSEQC.

Conclusion

81. The Commission has considered the information and submissions of the applicant, CNSC staff and intervenors as presented in the material available for reference on the record.
82. The Commission is satisfied 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.
83. The Commission therefore amends, pursuant to section 24 of the *Nuclear Safety and Control Act*, Uranium Mill Operating Licence for the Key Lake Operation, held by Cameco Corporation, Saskatoon, Saskatchewan.

84. The Commission includes in the licence the conditions recommended by CNSC staff and revises reference 2 in the Appendix B of the Licence, as set out in the draft licence attached to CMD 07-H5 and CMD 07-H5. A and with the modifications to licence condition 5.4 as described in paragraph 8 of this Record of Proceedings.
85. The Commission also requests CNSC staff to present to the Commission a status report on the performance of the licensee with respect to the activities carried out under the Action Plan referenced in licence condition 5.4. The status report is to be presented at a proceeding following the *Commissioning of the Phase I* of the Action Plan and before Cameco's *Decision to Go Forward* and *Engineering Design* activities of the Phase II of the Action Plan.
86. With respect to the mid-term status report, the Commission has considered the CNSC staff's report on the performance of Cameco in the operation of its Key Lake uranium mill. The Commission is of the view that Cameco's performance has been acceptable in respect of its compliance with the regulatory requirements and conditions of its licence during the approximate first half of the current licence period.
87. However, the Commission is of the view that Cameco appears to react to CNSC's compliance actions rather than proactively take measures to demonstrate its qualification to carry necessary activities in the areas that do not meet expectations.
88. The Commission expects that Cameco's performance will improve during the next half of the licence period, including significant improvements with respect to environmental impacts of molybdenum and selenium releases.

Linda J. Keen,
President,
Canadian Nuclear Safety Commission

Date of decision: January 25, 2007

Date of release of Reasons for Decision: March 20, 2007

Appendix A – Intervenors

| Intervenors | Document Number |
|--|-----------------|
| North Saskatchewan Environmental Quality Committee represented by J. Lafleur | CMD 07-H5.2 |
| Saskatchewan Environment represented by T. Moulding and R. Kidd | CMD 07-H5.3 |
| J.V. Penna and M. H. Penna | CMD 07-H5.4 |
| L. Murphy | CMD 07-H5.5 |
| E. Knight | CMD 07-H5.6 |