



Record of Decision

DEC 21-H9

In the Matter of

Applicant Cameco Corporation

Subject Application to Renew the Class IB Fuel Facility
Licence for Cameco Corporation's Blind River
Refinery

Public Hearing
Date November 24, 2021

Record of
Decision Date February 16, 2022

RECORD OF DECISION – DEC 21-H9

Applicant: Cameco Corporation

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

Purpose: Application to Renew the Class IB Fuel Facility Licence for Cameco Corporation’s Blind River Refinery

Application received: September 30, 2020

Date of public hearing: November 24, 2021

Location: Virtual Hearing

Members present: R. Velshi, President
S. Demeter
I. Maharaj

Secretary: M.A. Leblanc
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See appendix A		
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Licence: Renewed

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1.0 INTRODUCTION

1. Cameco Corporation (Cameco) has applied to the Canadian Nuclear Safety Commission¹ for the renewal of the Class IB fuel facility licence for its Blind River Refinery (BRR) facility located south of the Mississauga First Nation and approximately 5 kilometres to the west of the Town of Blind River in Ontario. The current licence, FFOL-3632.00/2022, expires on February 28, 2022. Cameco requested a renewal of the licence for a period of 10 years.
2. The BRR is a Class IB nuclear facility under the [Class I Nuclear Facilities Regulations](#).² The BRR facility refines uranium concentrates, commonly referred to as yellowcake, from uranium mines worldwide to produce uranium trioxide (UO₃), an intermediate product of the nuclear fuel cycle.
3. Cameco's current licence authorizes the production of UO₃ from uranium ore concentrates. In its application, Cameco requested that its licensing basis retain a production increase of up to 24,000 tonnes of uranium as UO₃. The Commission previously [authorized](#) the production increase in 2012.³ The production increase is subject to the submission of a final commissioning report that is acceptable to the Commission or a person authorized by the Commission.

Issues

4. In considering Cameco's application to renew the licence for the BRR, the Commission considered whether and what requirements the [Impact Assessment Act](#) (IAA)⁴ imposes in relation to the renewal application. Satisfying any such requirements can be a prerequisite to licensing.
5. Pursuant to paragraph 24(4)(a) and (b) of the [Nuclear Safety and Control Act](#) (NSCA), the Commission is required to decide:
 1. whether Cameco is qualified to carry on the activity that the licence would authorize; and
 2. whether in carrying on that activity, 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.

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 SOR/2000-204

³ *Record of Proceedings, Including Reasons for Decision*, Public Hearing Dates November 3, 2011 and January 19, 2012.

⁴ S.C. 2019, c. 28, s. 1

6. As an agent of the Crown, the Commission recognizes its role in fulfilling its constitutional obligations and upholding the honour of the Crown, along with advancing reconciliation with Canada's Indigenous peoples. The Commission's responsibilities include the duty to consult and, where appropriate, accommodate Indigenous interests where the Crown contemplates conduct which may adversely impact Aboriginal and treaty rights.⁵ As such, the Commission must determine what engagement and consultation steps and accommodation measures are called for, respecting Indigenous interests.

Public Hearing

7. On March 8, 2021, a [Notice of Public Hearing and Participant Funding](#) was published for this matter.
8. Pursuant to section 22 of the NSCA, the President of the Commission established a Panel of the Commission over which she would preside, including Commission Members Dr. S. Demeter and Ms. I. Maharaj, to decide on the application. The Commission, in making its decision, considered information presented for a public hearing held virtually on November 24, 2021. The public hearing was conducted in accordance with the [Canadian Nuclear Safety Commission Rules of Procedure](#) (the Rules). During the public hearing, the Commission considered written submissions and heard oral presentations from Cameco ([CMD 21-H9.1](#), [CMD 21-H9.1A](#)) and CNSC staff ([CMD 21-H9](#), [CMD 21-H9.A](#)). The Commission also considered oral and written submissions from 50 intervenors.⁶ The hearing was webcast live via the CNSC website, and video archives are available on the [CNSC's website](#).

Participant Funding Program

9. Pursuant to paragraph 21(1)(b.1) of the NSCA, the Commission has established a [Participant Funding Program](#) (PFP) to facilitate the participation of Indigenous Nations and communities, members of the public and stakeholders in Commission proceedings. In [March 2021](#), up to \$75,000 in funding to participate in this licence renewal process was made available through the CNSC's PFP to review Cameco's licence renewal application and associated documents, and to provide the Commission with value-added information through topic-specific interventions. A Funding Review Committee (FRC), independent of the CNSC, reviewed the funding applications received and made recommendations on the allocation of funds. Based on the recommendations from the FRC, the CNSC awarded a total of up to \$52,528 to two applicants:

- Northwatch – up to \$15,567.55

⁵ *Haida Nation v. British Columbia (Minister of Forests)*, 2004 SCC 73; *Taku River Tlingit First Nation v. British Columbia (Project Assessment Director)*, 2004 SCC 74

⁶ See Appendix A for a list of interventions

- Mississauga First Nation – up to \$36,960

Mandate of the Commission

10. Some intervenors provided the Commission with information about the economic impact of the BRR facility. The Commission notes that, as the regulatory authority over nuclear matters in Canada, it has no economic mandate and will not base its decisions on the economic impact of a facility. It is the health, safety and security of the public, the protection of the environment, national security, and the implementation of the international obligations to which Canada has agreed that guide its decisions, in accordance with the NSCA.

2.0 DECISION

11. Based on its consideration of this matter, as described in more detail in the following sections of this *Record of Decision*, the Commission concludes the following:
 - The Commission is satisfied that an impact assessment under the [Impact Assessment Act](#) (IAA) is not required;
 - The Commission is satisfied that CNSC staff's engagement efforts with Indigenous Nations and communities has satisfied the Commission's obligations with respect to the duty to consult;
 - Cameco is qualified to carry on the activities that the licence renewal will authorize; and
 - Cameco, in carrying on these activities, 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*, renews the nuclear fuel facility licence issued to Cameco Corporation for its Blind River Refinery located in Blind River, Ontario. The renewed licence, FFL-3632.00/2032, is valid from March 1, 2022 to February 28, 2032.

12. The Commission includes in the licence, the conditions as recommended by CNSC staff in CMD 21-H9. The Commission also delegates authority for the purposes of licence conditions 3.2 and 15.1, as recommended by CNSC staff. Licence condition 15.1 imposes a hold point before Cameco can increase its annual production capacity at the BRR from 18,000 of uranium as UO₃ to 24,000 tonnes.

13. The Commission finds the financial guarantee amount of C\$57.5 million to be acceptable, and the financial guarantee instrument of a letter of credit to be appropriate. The Commission directs Cameco to provide an original financial guarantee instrument that conforms with CNSC [REGDOC-3.3.1, *Financial guarantees for decommissioning of nuclear facilities*](#) within 90 days of the issuance of this decision.
14. With this decision, the Commission directs CNSC staff to report on the performance of Cameco and BRR facility, as part of the [Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities and Research Reactors in Canada](#). CNSC staff shall present this report at a public proceeding of the Commission, where members of the public will be able to participate. The Commission directs CNSC staff to include a summary of the urinalysis results relative to renal toxicity versus radiation toxicity in assessments of future licence renewal applications and Regulatory Oversight Reports for uranium processing facilities. The Commission also directs CNSC staff to inform the Commission on an annual basis of any changes made to the Licence Conditions Handbook (LCH). CNSC staff may bring any matter to the Commission's attention as required.
15. The Commission expects Cameco and CNSC staff to continue their evident efforts to build meaningful long-term relationships with Indigenous Nations and communities.

3.0 APPLICABILITY OF THE *IMPACT ASSESSMENT ACT*

16. The IAA came into force on August 28, 2019. Pursuant to the IAA and the [Physical Activities Regulations](#) made under it, impact assessments are to be conducted in respect of projects identified as having the greatest potential for adverse environmental effects in areas of federal jurisdiction. A licence renewal is not a project designated under the *Physical Activities Regulations*. The Commission is satisfied there is no requirement under the IAA for an impact assessment to be completed. The Commission is also satisfied that there are no other applicable requirements of the IAA to be addressed in this matter.⁷
17. The Commission is satisfied with and approved the requested production increase at the previous licence renewal for the BRR in 2012 under the requirements of the [Canadian Environmental Assessment Act](#) (CEAA). CNSC staff submitted that the conclusions of the [2008 Environmental Assessment \(EA\) Screening Report](#), which determined that the requested production increase from 18,000 tonnes of uranium as UO₃ annually to 24,000 tonnes was unlikely to cause significant adverse environmental effects, remain valid. Thus, Cameco's existing environmental protection program will remain sufficient to monitor releases from BRR, and the revised release limits and action levels remain appropriate and protective of the

⁷ The IAA can impose other requirements on federal authorities in respect of authorizing projects that are not designated as requiring an impact assessment, including projects that are to be carried out on federal lands, or projects outside of Canada. This licence renewal does not engage any such applicable IAA requirements.

health and safety of the public and the environment.

18. On the question of updates to EA since 2012, CNSC staff explained that EAs are a planning tool with no expiry date and therefore remain valid over time. CNSC staff added that, in addition to the EA, CNSC staff use tools such as environmental risk assessments to continue to evaluate the interactions between a facility and the environment. CNSC staff reported that Cameco had updated its safety analysis report to reflect the production increase, and that Cameco updated its 2012 licence renewal submission to include the technical changes to the facility that would be required for the production increase.
19. Based on the information provided, the Commission concludes that there are no applicable requirements of the IAA to be addressed in regard to this licence renewal. The environmental assessment for the previously-approved production increase remains valid. Environmental protection is further discussed in section 4.2.9 of this decision.

4.0 ISSUES AND COMMISSION FINDINGS

20. In making its licensing decision, the Commission considered a number of issues and submissions relating to Cameco's qualification to carry out the licensed activities. The Commission also considered 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.
21. The decision focuses on the issues that are most relevant to this renewal matter, specifically:
 - Completeness of the licence application
 - Relevant safety and control areas
 - Indigenous consultation and engagement
 - Other matters of regulatory importance
 - Licence length and conditions

4.1 Completeness of the Licence Application

22. Cameco submitted a licence renewal application for the BRR facility on [September 30, 2020](#). In its consideration of this matter, the Commission examined the completeness of the application and the adequacy of the information submitted by Cameco, as required by the NSCA, the [General Nuclear Safety and Control Regulations](#)⁸ (GNSCR), the [Class I Nuclear Facilities Regulations](#)⁹ and other applicable regulations made under the NSCA, including the [Nuclear Security](#)

⁸ SOR/2000-202.

⁹ SOR/2000-204.

[Regulations](#)¹⁰ the [Radiation Protection Regulations](#)¹¹, and the [Nuclear Non-Proliferation Import and Export Control Regulations](#)¹².

23. The GNSCR call on an applicant for a licence renewal to provide information regarding any changes in information to the CNSC as part of its application. Section 5 provides:
- An application for the renewal of a licence shall contain
- (a) the information required to be contained in an application for that licence by the applicable regulations made under the Act; and
- (b) a statement identifying the changes in the information that was previously submitted.
24. Cameco's application provides clause-by-clause responses to the requirements set out in the GNSCR and other regulations under the NSCA, describing how Cameco would continue to meet them over the proposed licence term. CNSC staff reported its advice that Cameco's application included all the required information.
25. In its intervention, Northwatch ([CMD 21-H9.51](#)) submitted its view that Cameco's application was not complete by virtue of not providing the name, quantity, form and volume of any radioactive waste or hazardous waste that may result from the activity to be licensed, under paragraph 3(1)(j) of the GNSCR. CNSC staff indicated in Appendix C.2 of its CMD that Cameco provided the information required to address this paragraph in sections 4.4 and 4.11 of its application, as well as in supporting documents, including the Facility Licencing Manual and Safety Analysis Report. The Commission is satisfied that this information provided by Cameco is complete, sufficient and adequate to satisfy the licence renewal application requirements.
26. The Commission concludes that Cameco's licence renewal application is complete and complies with the regulatory requirements respecting an application for licence renewal. Cameco's application and supporting documents identify how Cameco will meet regulatory requirements and CNSC staff's assessment demonstrates to the Commission how Cameco has adequately addressed the licence renewal application requirements. The Commission notes that Cameco's application is for the renewal of an existing licence to continue operating a Class IB facility, with no substantive changes to the licensing basis, and that section 7 of the GNSCR provides that "An application ... for the renewal... of a licence may incorporate by reference any information that is included in a valid, expired or revoked licence."

4.2 Safety and Control Areas

27. The Commission examined CNSC staff's assessment of Cameco's performance in all [14 safety and control areas](#) (SCAs) for the purpose of evaluating this application.

¹⁰ SOR/2000-209.

¹¹ SOR/2000-203.

¹² SOR/2000-210.

Throughout the current licence period, CNSC staff rated Cameco's performance in all applicable SCAs as "satisfactory."

4.2.1 *Management System*

28. The Commission examined Cameco's management system, which covers the framework that establishes the processes and programs required to ensure that the BRR facility achieves its safety objectives, continuously monitors its performance against these objectives, and fosters a healthy safety culture.
29. Cameco's application includes information about the organizational structures of its BRR facility, audits of compliance with all applicable federal and provincial environmental legislation, annual management reviews of the site management system and safety culture assessments. Regarding safety culture, Cameco committed to fully implement CNSC [REGDOC 2.1.2 Safety Culture](#), prior to June 1, 2022.
30. CNSC staff reported that it regularly assesses the compliance of Cameco's BRR documents and programs through desktop reviews and planned compliance verification inspections. From those assessments, CNSC staff determined that BRR continues to maintain and implement a documented management system in accordance with CNSC regulatory requirements, including the requirements of Canadian Standards Association (CSA) Group standard N286-12.¹³
31. The Commission finds that the information provided by Cameco and CNSC staff analysis demonstrate that Cameco has acceptable programs in place to ensure that the BRR facility achieves its safety objectives and fosters a healthy safety culture, and that Cameco's management system meets the requirements of CSA N286-12. The Commission expects Cameco to fully implement CNSC REGDOC 2.1.2 by June 1, 2022. The Commission concludes that Cameco has appropriate organization and management structures in place to carry on the licensed activities.

4.2.2 *Human Performance Management*

32. The Commission assessed Cameco's human performance management programs. Human performance management encompass activities that ensure that BRR facility staff are sufficient in number in all relevant job areas and have the necessary knowledge, skills, procedures and tools in place to safely carry out their duties.
33. Cameco submitted that it has formalized and/or strengthened a variety of tools to develop and reinforce behaviours that support human performance over the current licence period, including change control processes and work instructions and operating documents. Cameco also reported that it continues to develop and

¹³ CSA N286-12, *Management System Requirements for Nuclear Facilities*, CSA group, 2012.

implement human performance tools in accordance with its continual improvement processes and with applicable CSA Group standards and CNSC REGDOCs.

34. Cameco submitted that its training program meets the requirements of [REGDOC 2.2.2 Personnel Training, Version 2](#). Cameco also reported that it continues to enhance its BRR training program by addressing opportunities identified through routine audits and inspections.
35. Cameco informed the Commission that it has a defined minimum complement of workers for UO₃ operations to ensure qualified personnel are available to carry out licensed activities in a safe manner. Cameco stated that it has defined maximum hours of work in a shift cycle for all employees onsite, in accordance with the requirements of Part II of the [Canada Labour Code](#).¹⁴
36. CNSC staff submitted that Cameco has an established systematic approach to training (SAT) based training system which includes the processes, procedures, work instructions, personnel responsibilities, and records to ensure that workers are trained and qualified to carry out the licensed activities. CNSC staff reported that its inspections confirmed that BRR's training system processes and procedures comply with REGDOC-2.2.2. CNSC staff also reported that all non-compliances related to training identified during its inspections were classified as low safety significance, and that all enforcement actions associated with these inspections had been closed to CNSC staff's satisfaction.
37. CNSC staff further reported that Cameco maintains a minimum complement of qualified emergency response team members at the BRR to respond to emergency situations with the requirements for the qualification of the ERT members defined through BRR's SAT and the emergency response plan.
38. On the basis of the evidence presented by Cameco and CNSC staff, the Commission concludes that Cameco has appropriate human performance management programs in place for the conduct of the requested licensed activities. The Commission is satisfied that Cameco's employees are appropriately trained and qualified in accordance with CNSC requirements, including CNSC REGDOC-2.2.2.

4.2.3 Operating Performance

39. The Commission examined Cameco's operating performance at the BRR facility. This includes an overall review of the conduct of the licensed activities and the activities that enable effective performance, as well as improvement plans and significant future activities at BRR facility.
40. CNSC staff indicated that it reviews procedural-level documents as part of ongoing compliance verification activities to ensure that procedures are maintained to reflect

¹⁴ R.S.C., 1985, c. L-2

actual practices, as well as to verify procedural adherence by BRR personnel. CNSC staff submitted that Cameco adequately maintains these procedures for the BRR.

Conduct of Licensed Activity

41. Cameco reported that it monitors, measures and tracks operating parameters at the BRR to ensure that the facility is operated as intended. Cameco also reported that it achieved its annual production targets for UO₃ operations while operating in a manner that complies with applicable legislation.
42. CNSC staff submitted that Cameco has operated the BRR in compliance with CNSC regulatory requirements. CNSC staff's assessment was based on compliance verification activities at the BRR, including onsite inspections and reviews of documents, annual compliance reports, and event reports. CNSC staff noted that non-compliances identified during inspections or desktop reviews were addressed by Cameco in a timely manner and in accordance with corrective action plans that were reviewed and accepted by CNSC staff.
43. In relation to the intervention from Northwatch, which requested information regarding Cameco's production levels, the Commission asked whether information on BRR's production levels was publicly available. A Cameco representative told the Commission that, as a publicly-traded company, Cameco's production levels are confidential for commercial reasons. Cameco reports its production levels to the CNSC to demonstrate compliance with the production limit. CNSC staff confirmed that Cameco's production remained below 18,000 tonnes per year over the current licensing period. The Commission agrees that, while some information is not made public, it is submitted to and reviewed by CNSC staff for compliance and verification purposes and more particularly in the context of the licence renewal application.
44. In 2012 the Commission authorized a production increase to allow the BRR to operate at an annual production capacity of 24,000 tonnes of uranium as UO₃, pending the completion and reporting of specified facility modifications to the Commission or a person authorized by the Commission. CNSC staff confirmed that Cameco had not undertaken the work related to this increase.
45. As to the reason why Cameco had not yet proceeded with increasing its production level, a Cameco representative stated that the [Fukushima event in 2011](#) affected Cameco's business market but explained that Cameco wants to be ready to expand production should the opportunity arise.

Reporting and Trending

46. Cameco submitted that it reports unplanned events as required by the NSCA, its licence and regulations, and [REGDOC 3.1.2 Reporting Requirements, Volume 1:](#)

Non-Power Reactor Class 1 Nuclear Facilities and Uranium Mines and Mills.

Cameco reported 33 incidents during the current licence period, related to transportation, plant operations, health and safety, radiation protection and environmental performance. Cameco submitted that the majority of the reported events were minor in nature, and that it investigated each incident and took corrective actions as appropriate.

47. Cameco provided information regarding an event first reported to the Commission in [June 2012](#), where an employee received a uranium uptake as a result of attempting to open a drum of uranium concentrate that had become pressurized. Cameco conducted a full investigation into this event, implemented corrective actions and submitted a full report to CNSC staff.
48. CNSC staff submitted that it reviewed all reported events, including transportation incidents and radiation protection action level¹⁵ exceedances. CNSC staff gave details about the 2012 pressurized drum event, as well as an outdoor fire in the BRR yard area in April 2020. CNSC staff confirmed that it reviews corrective actions and verifies their implementation through compliance inspections. CNSC staff stated that it is satisfied with Cameco's implementation of corrective actions for the reported events.

Conclusion on Operating Performance

49. Taking into consideration all of the evidence submitted on Cameco's operating performance, the Commission concludes that Cameco remains qualified to carry out the activities under the proposed licence. The evidence presented demonstrates that Cameco has operated the BRR in accordance with regulatory requirements over the current licence period and that its programs and procedures meet regulatory requirements. Cameco's overall performance supported by the satisfactory analysis of its compliance with the regulatory requirements in relation to its operating performance provides a reasonable basis for the Commission's conclusion that Cameco will continue to ensure that appropriate operation performance-related programs are in place at the BRR to provide for the protection of the health and safety of persons and the environment.

4.2.4 Safety Analysis

50. The Commission assessed safety analysis at the BRR facility, which supports the overall safety case for the BRR facility. Safety analysis includes a systematic evaluation of the potential hazards associated with the conduct of the licensed activity or the operation of a facility and considers the effectiveness of preventive measures

¹⁵ The *Radiation Protection Regulations* define an action level as a specific dose of radiation or other parameter that, if reached, may indicate a loss of control of part of a licensee's radiation protection program and triggers a requirement for specific action to be taken.

and strategies in reducing the effects of such hazards.

51. Cameco reported that safety analyses for the BRR facility are reviewed at least every five years and that, during the current licence period, it updated the BRR's safety analysis report and submitted it to CNSC staff in 2012, 2016 and 2020. Cameco indicated that it assesses risk and safety measures in all areas of the BRR facility using a hazards and operability methodology, and other risk analyses including a site-specific spill prevention and contingency plan under [Ontario Regulation 224/07: *Spill Prevention and Contingency Plans*](#).¹⁶ Cameco added that it periodically reviews and updates other risk assessments at the frequency prescribed in their respective standards or REGDOCs. Cameco submitted that these assessments support the conclusions of the safety analysis report that facility hazards are managed in a manner that is protective of people and the environment.
52. CNSC staff confirmed that Cameco's safety analysis report for the BRR effectively identifies facility hazards, and structures, systems and components relied upon for safety to control or mitigate these hazards. CNSC staff also confirmed that Cameco's fire hazard analysis reports demonstrate compliance with the [National Building Code of Canada](#) and the [National Fire Code of Canada](#).
53. The Commission is satisfied that the information provided by Cameco and CNSC staff demonstrates that Cameco's safety analysis program for the BRR facility meets regulatory requirements, including the *National Building Code of Canada* and the *National Fire Code of Canada*, and is adequate for the operation of the facility and the activities under the proposed licence. The Commission is satisfied that Cameco's systematic evaluation of the potential hazards and preparedness for reducing the effects of such hazards demonstrate that Cameco has adequate measures and strategies in place at the BRR facility to ensure the protection of workers, members of the public and the environment.

4.2.5 Physical Design

54. The design basis is the range of conditions, according to established criteria, that the facility must withstand without exceeding authorized limits for the planned operation of safety systems. The Commission considered the physical design of facilities at the BRR facility, including the activities to design systems, structures and components to meet and maintain the design basis of the facility.
55. Cameco explained that it evaluates any changes to the physical design of equipment, processes or to the BRR facility through a design control procedure to identify impacts and potential impacts to the environment and health and safety. Cameco added that for some changes, third party review and/or CNSC notification is also required.

¹⁶ R.S.O. 1990, c. E.19

56. Cameco reported that its pressure boundary program met the requirements of CSA B51-14 *Boiler, pressure vessel and pressure piping code*,¹⁷ allowing it to perform activities associated with repairs, replacements and modifications to pressure retaining items, components, and systems including installation of new systems. Cameco added that it maintains an agreement with an authorized inspection agency for the registration, inspection and other activities related to pressure systems.
57. CNSC staff reported that it verified and confirmed, through compliance inspections in 2017 and 2019, that Cameco has implemented and maintained an adequate physical design program with appropriate change control. CNSC staff submitted that Cameco's physical design measures meet regulatory requirements, including CSA B51-14, and that Cameco has adequate resources in place to safely manage and implement design changes that are within the licensing basis.
58. The Commission concludes that Cameco continues to implement and maintain an effective design program at the BRR facility, and that the design of the BRR facility is adequate for the requested licence period. The information provided demonstrates that Cameco has adequate resources in place to safely manage and implement design changes that are within the licensing basis and that Cameco meets regulatory requirements, including CSA B51-14.

4.2.6 *Fitness for Service*

59. The Commission considered the measures in place to maintain the fitness for service of the BRR facility. Fitness for Service covers activities that are performed to ensure that systems, structures and components at the BRR facility continue to effectively fulfill their intended purpose.
60. Cameco explained that its fitness for service programs and procedures include a preventative maintenance program, an in-service inspection program, and an operational reliability program. Cameco also tests and reviews systems to ensure that the BRR facility can continue to be operated safely.
61. Cameco reported that it conducts in-house and third-party testing for fire protection systems at the BRR facility and that it tracks corrective actions to completion. Cameco added that it completed the reviews of fire protection systems in accordance with CSA N393-13 (R2018) *Fire protection for facilities that process, handle, or store nuclear substances*.¹⁸
62. CNSC staff assessed Cameco's governing documents for the conduct of maintenance and verified their implementation through compliance activities. CNSC staff submitted that Cameco's fitness for service program for the BRR meets regulatory

¹⁷ CSA B51-14 *Boiler, pressure vessel and pressure piping code*, CSA group, 2014.

¹⁸ CSA N393-13 (R2018) *Fire protection for facilities that process, handle, or store nuclear substances*, CSA Group, 2018.

requirements, including CSA N393-13 (R2018).

63. The Commission is satisfied that the information provided demonstrates that Cameco has appropriate programs in place to ensure that the equipment at the BRR will remain fit for service throughout the proposed licence period. The information provided demonstrates that Cameco reviews its fire protection systems in accordance with CSA N393-13.

4.2.7 Radiation Protection

64. As part of its evaluation of the adequacy of the measures for protecting the health and safety of persons, the Commission considered the past performance of Cameco in radiation protection. The Commission considered the information provided by Cameco and CNSC staff to assess whether the BRR facility radiation protection program satisfies the requirements of the [*Radiation Protection Regulations*](#). The Commission also considered whether Cameco's radiation protection program ensures that radiation doses to persons and contamination are monitored, controlled and kept as low as reasonably achievable (ALARA), with social and economic factors taken into consideration.

Worker Dose Control

65. According to CNSC staff, radiological exposures associated with work activities at the BRR facility are due to alpha, beta and gamma radiation emitted by natural uranium. Exposures to workers can result from beta or gamma radiation sources outside the body, or alpha, beta or gamma radiation absorbed into the body as a result of inhalation, ingestion or absorption through the skin of uranium product. CNSC staff also reported that the primary radiological hazard is the dose to the lungs from intakes of insoluble forms of uranium if uranium compounds are absorbed into the body.
66. Cameco listed its programs and controls in place to manage radiation hazards and to ensure that dose to workers and the public remains ALARA. Cameco indicated that it created an ALARA committee with representation from employees and management to look at ways of reducing employee exposure.
67. Cameco provided the Commission with detailed information regarding the average and maximum effective doses to workers at the BRR facility and reported that there were fifteen reported radiation protection action level exceedances during the current licence period. Cameco added that the annual effective dose to Nuclear Energy Workers (NEWs) remains well below the regulatory limits.¹⁹ Cameco further added that it conducts investigations for all events and takes corrective actions as

¹⁹ The regulatory dose limit is 1 mSv in one calendar year for members of the public, and 50 mSv in any one year and 100 mSv in a five-year dosimetry period for nuclear energy workers.

appropriate.

68. On the issue of trends of total effective doses received by Cameco workers, CNSC staff presented radiation dose statistics, including the trend of total effective doses received by NEWs over the current licence period, as well as trends for average and maximum doses. The Commission noted that the maximum annual effective dose received by a NEW during the current licence period was 12.1 mSv, received in 2013. CNSC staff explained that the variability over the current licence period (from 3.3 mSv to 12.1 mSv) was attributed to factors including production levels and operating days at BRR, as well as individual NEWs' work activities.
69. CNSC staff reported that measures are in place at the BRR facility to minimize the potential for intakes of uranium products by workers, and that radiological monitoring programs confirm the effectiveness of contamination control. CNSC staff added that airborne contamination monitoring provides timely notification of changing conditions.
70. On the question of the reportable radiation exposure incidents that occurred at the BRR between 2012 and 2014, a Cameco representative explained that some of the events were non-personal exposures related to dosimeters that were lost and exposed in the facility, and that others due to events, such as the drum pressurization event. The Cameco representative further added that, in response to the events, Cameco implemented corrective actions and updated its training program.
71. Based on the information provided for this hearing including the total effective doses received by Cameco workers over the licence period, the Commission is satisfied that Cameco is adequately controlling doses to workers at the BRR facility.

Control of Dose to the Public

72. The Commission considered the effectiveness of Cameco's programs to prevent uncontrolled releases of contaminants or radioactive materials from the BRR facility site. Cameco submitted that gamma radiation from the facility is the main component of the estimated public dose, as the dose to the public from air and water emissions is typically <0.001 mSv for each. Cameco reported that the dose to the public has not exceeded 1% of the public dose limit of 1 mSv/year over the licence period.
73. The Commission asked Cameco to clarify its rationale for having a gamma radiation action level of 0.25 mSv per hour at the north fence line of the BRR facility but not on the other sides. The Cameco representative explained that the north fence line is the only part of the fence line to which the public has access, and where there is the possibility for a member of the public to spend an extended time adjacent to the facility. The Cameco representative added that the areas surrounding the other sides are controlled by Cameco security.

74. With respect to the value of the fence line action level, a Cameco representative explained that Cameco reviewed its fence line gamma action levels across its Ontario facilities and identified that BRR had been using a different calculation than the other facilities. The Cameco representative stated that 0.25 mSv/h reflects the actual dose received at that location.
75. Based on the low releases of contaminants or radioactive materials from the BRR facility site over the current licence period, the Commission is satisfied that Cameco is adequately controlling radiological doses to the public, and that doses are well below the regulatory limit.

Conclusion on Radiation Protection

76. The Commission concludes that, given the mitigation measures and safety programs that are in place and will be in place to control radiation hazards, Cameco provides for, and will continue to provide for, the adequate protection of the health and safety of persons and the environment throughout the proposed licence period. The Commission is satisfied that the total effective doses received by Cameco workers and the releases of contaminants or radioactive materials from the BRR facility site over the current licence period were below the regulatory limits. The Commission is satisfied that Cameco's radiation protection program at the BRR facility meets the requirements of the *Radiation Protection Regulations*.

4.2.8 Conventional Health and Safety

77. The Commission examined the implementation of a conventional health and safety program at the BRR facility, which covers the management of workplace safety hazards. The conventional health and safety program is mandated by provincial statutes for all employers and employees to minimize risk to the health and safety of workers posed by conventional (non-radiological) hazards in the workplace. This program includes compliance with applicable labour codes and conventional safety training.
78. Cameco provided the Commission with detailed information regarding its conventional health and safety program, reporting that it complied with regulations made pursuant to the NSCA and Part II of the [*Canada Labour Code*](#). Cameco added that its BRR facility had no lost time injuries during the current licencing period and achieved 15 years without a lost time accident in June 2021. Cameco also indicated that it would maintain and enhance its safety program where opportunities are identified during the upcoming licence period.
79. CNSC staff confirmed that Cameco did not experience a lost time injury at the BRR facility in the current licence period, and that Cameco continues to meet regulatory expectations. CNSC staff submitted that it routinely verifies Cameco's conventional

health and safety program at the BRR. CNSC staff observes workers' compliance with requirements related to workplace safety, proper use of PPE, use of signage and barriers, and general housekeeping. CNSC staff reported that all findings from its inspections were of low safety significance, that all enforcement actions associated with these inspections are closed to CNSC staff's satisfaction.

80. One hazard at the BRR is the potential for chemical damage to the kidney from intakes of fast clearing uranium compounds. Asked for information on Cameco's reporting of uranium in urine concentrations, CNSC staff stated that Cameco provides information on analysed urine samples and the number that exceed Cameco's threshold levels, including action levels, in its annual compliance reports. CNSC staff stated that CNSC [REGDOC 2.7.2, Dosimetry, Volume 1, Ascertaining Occupational Dose](#) has guidance on the toxicity of uranium compounds and that workers have been protected. Noting that this information is not included in CNSC staff's Regulatory Oversight Reports, the Commission directs CNSC staff to include a summary of the urinalysis results relative to renal toxicity versus radiation toxicity in assessments of future licence renewal applications and Regulatory Oversight Reports for uranium processing facilities.
81. Cameco also provided information regarding its response to the ongoing COVID-19 pandemic. A Cameco representative reported that, as of November 15, 2021, all workers at the BRR were required to be fully vaccinated.
82. The Commission concludes that Cameco's conventional health and safety program at the BRR facility satisfies regulatory requirements. The Commission is satisfied that the evidence provided demonstrates that the health and safety of workers and the public was adequately protected during the operation of the facility for the current licence period and that the health and safety of persons will continue be adequately protected during throughout the proposed licence period. The Commission is satisfied that Cameco did not experience a lost time injury at the BRR facility in the current licence period.

4.2.9 Environmental Protection

83. The Commission examined information provided by Cameco on its environmental protection programs at the BRR facility. Programs are intended to identify, control and monitor all releases of radioactive and hazardous substances, and aim to minimize the effects on the environment which may result from the licensed activities. These programs include effluent and emissions control, environmental monitoring and estimated doses to the public.
84. The Commission assessed the information presented regarding Cameco's environmental protection programs at the BRR facility, as well as its environmental sampling programs. The information presented by Cameco included information on air emissions and ambient air monitoring, as well as liquid effluent, surface water and

groundwater sampling and uranium in soil concentration.

85. CNSC staff assessment demonstrates that Cameco has implemented and maintained an effective environmental protection program that protects the environment and the public in accordance with [CNSC regulatory requirements](#). CNSC staff confirmed that Cameco's implementation of the environmental protection program at the BRR facility meets CNSC's regulatory requirements, and that releases to the environment from the BRR facility during the current licence period were well below licence limits. CNSC staff stated that it verified Cameco's performance with respect to environmental protection through inspections and document reviews. CNSC staff reported that all findings from these inspections were of low safety significance and that it closed all enforcement actions associated with these inspections to CNSC staff's satisfaction.
86. In its submission, CNSC staff confirmed that its review and evaluation of hazardous discharges from the BRR facility to the environment during the current licence period determined that there was a negligible risk to the public during this period.
87. With respect to requirements for an environmental risk assessment (ERA), CNSC staff submitted that Cameco updated its ERA for the BRR in 2020. The ERA demonstrates that risks to human health and the environment attributable to the operation of the BRR facility are negligible. CNSC staff confirmed that the conclusions of the previous ERA in 2016 remain valid and that no new risks have emerged since the 2016 ERA.

Air Emissions and Ambient Air Monitoring

88. Cameco reported that air emission data at the BRR facility shows that emissions continue to be well below the emissions limits. No action levels or licence limits were exceeded during the current licensing period. Cameco added that its ambient air monitoring and terrestrial monitoring programs support the stack monitoring program, with results being a small fraction of the applicable federal and provincial objectives, guidelines and criteria.
89. CNSC staff explained to the Commission that Cameco had established exposure-based release limits for its air and liquid release points at the BRR facility, to ensure that releases stay below levels to meet human health or environmental quality criteria. CNSC staff assessed and accepted these revised release limits as they are protective of the health and safety of the public and the environment. CNSC staff confirmed that results from monitoring show that uranium in ambient air and liquid releases has consistently remained low throughout the current licence period.

Water Effluent and Groundwater Monitoring

90. Cameco has committed to update its groundwater monitoring program for the BRR in order to comply with CSA Group standard N288.7-15, *Groundwater protection programs at Class I nuclear facilities and uranium mines and mills*.²⁰ This will bring the BRR facility in full compliance with CNSC [REGDOC-2.9.1, *Environmental Protection: Environmental Principles, Assessments and Protection Measures*](#) (2020). Cameco stated that its implementation of CSA N288.7-15 would incorporate recommendations from a qualified third-party assessment conducted in 2020, which found that Cameco's current groundwater monitoring program meets the majority of the requirements of CSA N288.7-15. The Commission notes Cameco's commitment and expects CNSC staff to verify Cameco's implementation of the standard. The Commission expects an update on this matter in the next Regulatory Oversight Report.
91. CNSC staff reported that, although monitoring wells around the BRR are not used for drinking water, the results of Cameco's groundwater monitoring program showed levels that were below the Ontario [Full Depth Generic Site Condition Standards in a Potable Groundwater Condition](#) value of 20 micrograms per litre ($\mu\text{g/L}$) uranium, with 1 exception in 2018 (27 $\mu\text{g/L}$ in 1 of the monitoring wells).
92. In relation to Northwatch's intervention ([CMD 21-H9.51](#)) and the concern regarding nitrate concentrations around BRR's effluent diffuser in Lake Huron, the Commission asked for clarification regarding the Canadian Council of Ministers of the Environment (CCME) [long-term effluent guideline for nitrate emissions](#),²¹ and whether nitrate concentrations in effluent at the BRR facility exceed applicable CCME guidelines. An Environment and Climate Change Canada representative explained that the CCME long-term effluent guideline takes an initial dilution zone into account, and does not apply to releases at the point of discharge. The Environment and Climate Change Canada representative reported that Cameco meets the Canadian Water Quality Guidelines for the Protection of Aquatic Life in its effluent discharges.

Soil Monitoring

93. CNSC staff stated that Cameco's monitoring data for uranium in soil are in the background range for Ontario, up to 2.5 micrograms per gram ($\mu\text{g/g}$), and below the respective concentrations detected in previous years. CNSC staff added that this indicates that uranium soil concentrations did not increase in the area surrounding the facility. CNSC staff noted that these levels are below the most restrictive soil quality guideline set by the CCME for residential and parkland land use and stated that no adverse effects to human and environmental receptors are expected.

²⁰ CSA N288.7-15, *Groundwater protection programs at Class I nuclear facilities and uranium mines and mills*, CSA Group, 2015.

²¹ Nitrate is considerably less toxic than ammonia or nitrite, but nonetheless, nitrate can produce toxic effects.

94. In relation to Northwatch's intervention and environmental sampling intervals, the Commission enquired whether the Ontario Ministry of the Environment, Conservation and Parks (MECP) had done environmental sampling near the BRR facility since 2012. An MECP representative reported that the MECP had changed its plans for sampling at the BRR from every 5 years to every 10 years due to the low emissions and because there has been no measurable increase in uranium concentrations over the years. The MECP representative added that the MECP plans to conduct its next sampling campaign at the BRR in 2022.

CNSC Independent Environmental Monitoring Program

95. CNSC staff submitted details of its [*Independent Environmental Monitoring Program*](#) (IEMP) with respect to the BRR facility. The CNSC IEMP is independent from licensees and takes samples in publicly accessible areas in the vicinity of nuclear facilities. CNSC staff collected soil, water and air samples in the Blind River area in 2013, 2014, 2017, 2018 and 2020. CNSC staff reported that the results of the IEMP are below applicable guidelines, with no expected health impacts.
96. Regarding the levels of uranium in soil, the Commission enquired whether the depth at which the soil samples are taken was sufficient to pick up historical contamination. CNSC staff explained its IEMP sampling methodology and objectives and stated that it was sampling from the top 5 centimetres of soil, as well as from a depth of 5 to 15 centimetres. CNSC staff also explained that the accumulation of uranium in soil due to the deposition from airborne emissions is a very slow process and that CNSC staff had sufficient evidence demonstrating that the current operations at BRR do result in an accumulation of uranium in soil.
97. CNSC staff noted that the CNSC has increasingly involved the Mississauga First Nation (MFN) in the IEMP in recent years. CNSC staff reported that sampling locations were determined based on discussions with the MFN. An MFN representative described their personal involvement in past CNSC IEMP campaigns. In response to comments that the MFN wanted more involvement in the IEMP, CNSC staff stated that it would continue to increase its engagement with and include the participation of Indigenous Nations and communities in the IEMP.
98. On the question of additional independent environmental monitoring raised by MFN, CNSC staff confirmed that they are open to discussions with the MFN on third-party monitoring distinct from the CNSC's monitoring.

Conclusion on Environmental Protection

99. The Commission concludes that, based on the results and information provided, and given the mitigation measures and programs that are in place to control hazards, Cameco will provide adequate protection to the health and safety of persons and the

environment throughout the proposed licence period. The Commission is satisfied that Cameco's environmental protection programs for the BRR facility meet, or are being updated to meet, the specifications of the most recent version of CNSC REGDOC-2.9.1, and that releases to the environment from the BRR facility during the current licence period were well below licence limits. The Commission is also satisfied that the measures implemented at the BRR facility are adequate for the purposes of environmental protection of aquatic species under the NSCA. The Commission is satisfied that the proposed exposure-based release limits are appropriate and protective of human health and the environment.

4.2.10 Emergency Management and Fire Protection

100. The Commission considered Cameco's emergency management and fire protection programs, which cover the measures for preparedness and response capabilities implemented by Cameco in the event of emergencies and non-routine conditions at the BRR facility. These measures include nuclear emergency management, conventional emergency response, and fire protection and response.
101. Cameco submitted that, during the current licensing period, [REGDOC 2.10.1 Nuclear Emergency Preparedness and Response](#) and CSA N393-13 *Fire Protection for facilities that process, handle or store nuclear substances* were published. Cameco revised its programs to incorporate the requirements of these documents.

Conventional Emergency Management

102. With respect to Cameco's conventional emergency (non-nuclear) management programs at the BRR facility, Cameco submitted that it maintains qualified emergency response personnel onsite, 24-hours a day when the facility is operating, to immediately respond to incidents at the facility. Cameco added that, in off-shift hours, additional emergency response personnel can be recalled to the site if required. Cameco reported that it conducts internal drills and training exercises on an annual basis to test the effectiveness the emergency response for the site, including off-shift hazmat drills, held since 2014. Cameco also conducts full-scale emergency response exercises that include local emergency services every 3 years.
103. CNSC staff reported that Cameco continues to effectively implement an emergency preparedness program that meets CNSC regulatory requirements, and which protects workers, the public and the environment from emergency or non-routine conditions at the BRR. CNSC staff submitted specific information on the emergency response inspections it conducted during the current licence period. CNSC staff reported that its inspection findings had a low safety significance, and that Cameco implemented appropriate corrective actions as a result of the inspections.

104. On the topic of flooding, an Environment and Climate Change Canada representative told the Commission that Cameco's flood risk assessment for the BRR facility is conservative and adequate. CNSC staff explained that Cameco's worst-case scenario assessment indicates that the area where the BRR is located could be flooded to some extent under probable maximum flood conditions, as well as under probable maximum flood conditions combined with a cascading dam failure along the Mississauga River. CNSC staff analysis showed that Cameco's flood assessment and mitigation measures, including a berm, are appropriate to meet and withstand risks associated with floods.

Fire Protection

105. The Commission examined the adequacy of the Cameco's fire protection program at the BRR. Cameco submitted information regarding its compliance with the requirements of the [*National Fire Code of Canada, 2005*](#), the [*National Building Code of Canada, 2005*](#) and CSA N393-13 *Fire protection for facilities that process, handle, or store nuclear substances*.
106. Cameco reported that the BRR facility experienced a fire in its yard on April 24, 2020, when containers of contaminated combustible materials designated for the BRR's incinerator ignited. Cameco stated that members of its site emergency response team extinguished the fire, with assistance from the local fire department. There was no effect on the environment, the health and safety of persons, or national or international security as a result of the fire.
107. Regarding the 2020 fire, CNSC staff confirmed that Cameco's emergency response team effectively worked along with the Blind River Fire Department and Mississauga First Nations Fire Department to extinguish the fire. CNSC staff reported that Cameco appropriately identified and implemented corrective actions to prevent or mitigate a recurrence of this type of event.
108. CNSC staff reported that, during the current licence period, Cameco submitted annual third-party review reports of inspection, testing and maintenance for fire protection, in accordance with CNSC regulatory requirements that demonstrate how Cameco meets and complies with the required codes and standards.

Conclusion on Emergency Management and Fire Protection

109. Taking into consideration all of the evidence submitted by Cameco and CNSC staff, the Commission is satisfied that Cameco has qualified emergency response personnel onsite, and that Cameco's emergency preparedness program do meet CNSC regulatory requirements, such as the *National Fire Code of Canada, 2005*, the *National Building Code of Canada, 2005* and CSA N393-13. The Commission concludes that the information presented demonstrates that Cameco's nuclear and

conventional emergency management preparedness programs and the fire protection measures in place, and that will be in place during the proposed licence period, are adequate to protect the health and safety of persons and the environment.

4.2.11 Waste Management

110. The Commission assessed Cameco's site-wide waste management program for the BRR. Waste management covers waste-related programs that form part of a facility's operations up to the point where the waste is removed from the licensed site for storage, treatment, or disposal at another licensed location, and includes waste minimization, segregation, characterization, and storage programs.
111. Cameco submitted that its waste management program meets the requirements for management of radioactive waste in solid, liquid or gaseous states as defined by CSA N292.3-14 *Management of low and intermediate level radioactive waste*,²² CSA N292.0-14 *General principles for the management of radioactive waste and irradiated fuel*²³ and for hazardous waste as defined by [Ontario Regulation 347 General – Waste Management](#)²⁴. Cameco indicated that it has reduced its inventory of stored wastes at BRR through several projects by either disposing of or decontaminating and releasing stored waste as clean scrap metal.
112. The CNSC published [REGDOC 2.11.1 Waste Management, Volume 1: Management of Radioactive Waste](#) and [REGDOC 2.11.2 Decommissioning](#) in January 2021. Cameco indicated that it has an established process to review new standards and REGDOCs, and stated that it would identify and address any gaps in the waste management program for the incorporation of the new REGDOCs.
113. CNSC staff submitted that Cameco continues to maintain and implement a documented waste management program in accordance with CNSC regulatory requirements. CNSC staff reported that it conducted compliance inspections with respect to waste management during the current licence period, and that all enforcement actions associated with these inspections were closed to CNSC staff's satisfaction.
114. In its intervention, Northwatch expressed concerns regarding Cameco's incinerator. Northwatch expressed concerns regarding Cameco's plans to use the incinerator for waste that would be generated by decommissioning Cameco's southern Ontario facilities.²⁵ The Northwatch representative told the Commission that Northwatch is of the view that radioactive waste should be dealt with as close to the point of generation as possible. Northwatch also suggested that the BRR incinerator ought to be separately licensed as a waste facility.

²² N292.3-14 *Management of low and intermediate level radioactive waste*, CSA Group, 2014.

²³ N292.0-14 *General principles for the management of radioactive waste and irradiated fuel*, CSA Group 2014.

²⁴ R.R.O. 1990, Reg. 347

²⁵ Cameco's southern Ontario facilities include [Port Hope Conversion Facility](#) and [Cameco Fuel Manufacturing Inc.](#)

115. The intervention from S. G. Baron and J. Morningstar ([CMD 21-H9.43](#)) also raised concerns regarding the BRR incinerator and suggested that its inclusion as part of the operation of the BRR facility was being hidden. This intervention also questioned the CNSC's regulatory oversight of the incinerator.
116. A Cameco representative noted that the Commission [approved an EA for the incinerator in 2006](#),²⁶ and that the EA included the transport of waste material from the Port Hope area to the BRR. The Cameco representative stated that the operation of the incinerator for this purpose has been part of Cameco's licensing basis for the BRR since [2007](#).²⁷ The Cameco representative also reported that although Cameco's preliminary decommissioning plan (PDP) includes provision for receiving waste from Cameco's southern Ontario facilities, the future decommissioning of these facilities would require a separate detailed decommissioning plan and CNSC licensing process.
117. Taking into consideration all of the evidence submitted, the Commission is satisfied of the adequacy of the programs and measures that Cameco has in place for the management of waste and finds that Cameco will continue to manage waste in accordance with regulatory requirements during the proposed licence period. The Commission is satisfied that Cameco's performance with respect to waste management has met CNSC regulatory requirements, including CSA N292.3-14, over the current licence period. The Commission expects CNSC staff to provide it with updates regarding Cameco's implementation of REGDOCs 2.11.1 and 2.11.2 as part of future Regulatory Oversight Reports.
118. The Commission notes that as the *Class I Nuclear Facilities Regulations* provide for the management of waste in the context of a Class IB facility, it is not necessary to separately licence the BRR incinerator. The Commission is satisfied that the operation of the BRR incinerator was assessed in Cameco's licence application and CNSC staff's submissions. The Commission is of the view that the regulation of the BRR incinerator under Cameco's Class IB licence for the BRR facility is appropriate under the legislative scheme. The Commission notes that a release limit for the incinerator is specifically identified in Appendix A of Cameco's current licence, and that Table 8 in CNSC staff's CMD includes air emissions monitoring results against the licence limit for 2012 –20. All results were well below the limit.

4.2.12 Security

119. The Commission examined Cameco's security program at the BRR facility, which must comply with the applicable provisions of the [General Nuclear Safety and](#)

²⁶ CNSC Record of Proceedings, Including Reasons for Decision, *Screening Environmental Assessment for the Proposed Modification to the Operation of the Blind River Refinery Incinerator Blind River, Ontario*, Date of decision: December 7, 2006.

²⁷ CNSC Record of Proceedings, Including Reasons for Decision, *Application to Amend the Class IB Nuclear Fuel Facility Operating Licence for the Blind River Refinery*, Date of decision: April 12, 2007.

[Control Regulations](#) and the [Nuclear Security Regulations](#).

120. Cameco provided the Commission with information on its Security Plan, which identifies the systems and processes in place to meet security program objectives in accordance with [REGDOC 2.12.3 Security of Nuclear Substances: Sealed Sources and Category I, II and III Nuclear Material, Version 2](#) and other regulatory requirements.
121. CNSC staff confirmed that Cameco has implemented and maintained a security program that meets regulatory requirements under the GNSCR and Part 2 of the [Nuclear Security Regulations](#) to prevent the loss, unauthorized removal and sabotage of nuclear substances, nuclear materials, prescribed equipment or information. CNSC staff reported that it conducted focused security inspections in 2016 and 2017, and classified all findings from these inspections as low safety significance. CNSC staff further reported that all enforcement actions associated with these inspections had been closed to CNSC staff's satisfaction.
122. The Commission is satisfied that the evidence provided demonstrates that Cameco has adequate programs and measures in place to provide for the physical security of the BRR facility during the proposed licence period. The evidence shows that Cameco's performance with respect to maintaining security at the BRR facility has been acceptable over the current licence period and that Cameco meets CNSC regulatory requirements, including the REGDOC 2.12.3.

4.2.13 Safeguards and Non-Proliferation

123. The Commission examined the adequacy of Cameco's safeguards program at the BRR facility. The CNSC's regulatory mandate includes ensuring conformity with measures required to implement Canada's international obligations under the [Treaty on the Non-Proliferation of Nuclear Weapons](#) (NPT). Pursuant to the NPT, Canada has entered into a Comprehensive Safeguards Agreement and an Additional Protocol (safeguards agreements) with the IAEA. The objective of these safeguards agreements is for the IAEA to provide credible assurance on an annual basis to Canada and to the international community that all declared nuclear material is in peaceful, non-explosive uses and that there is no undeclared nuclear material or activity in this country.
124. Cameco submitted that it complies with CNSC [REGDOC 2.13.1 Safeguards and Nuclear Material Accountancy](#), and maintains a natural uranium inventory system in which receipts and shipments are recorded. Cameco added that it distributes monthly inventory reports to the CNSC that include safeguarded natural uranium as well as the inventory of non-safeguarded material.
125. CNSC staff reported that Cameco meets regulatory requirements for information and documentation under the Safeguards and Non-Proliferation SCA as it pertains to the

BRR facility, in accordance with REGDOC-2.13.1. CNSC staff confirmed that Cameco granted adequate access and assistance to the IAEA for safeguards activities and submitted the required information.

126. The Commission is satisfied that the evidence provided demonstrates that Cameco has adequate programs in place to provide for the implementation of measures in the area of safeguards and non-proliferation at the BRR and is of the opinion that Cameco will continue to do so during the proposed licence period. The Commission is satisfied that Cameco has provided for the implementation of measures that are necessary for maintaining national security, and for implementing international agreements to which Canada has agreed, including CNSC REGDOC 2.13.1.

4.2.14 Packaging and Transport

127. The Commission examined Cameco's packaging and transport program at the BRR facility. Packaging and transport covers the safe packaging and transport of nuclear substances and radiation devices to and from the licensed facility. Cameco must adhere to the [*Packaging and Transport of Nuclear Substances Regulations, 2015*](#) (PTNSR, 2015) and Transport Canada's [*Transportation of Dangerous Goods Regulations*](#) (TDG Regulations) for all shipments.
128. Cameco provided the Commission with information on the BRR facility packaging and transport activities, noting that the UO₃ produced was packaged in purpose-built totes and transported by road to the Port Hope Conversion Facility. Cameco added that it maintains corporate standards and site procedures that cover the safe packaging and transport of nuclear substances to and from licensed facilities and stated that those activities were performed in accordance with the TDGR and the PTNSR. In its submission, CNSC staff confirmed that Cameco's packaging and transport program meets all applicable regulatory requirements, and that Cameco has ensured that radioactive materials are appropriately consigned and offered for transport.
129. Cameco indicated that the BRR receives scrap uranium material and contaminated combustible material transported by road from Cameco's fuel services facilities in Port Hope. Cameco added that uranium bearing materials that cannot be processed at the BRR refinery are transported by road or rail to appropriately permitted facilities in Canada and the United States.
130. Between 2012 and 2020, Cameco reported fourteen minor transportation events related to the BRR. Cameco stated that these events included receipt of damaged drums and minor traffic accidents. Cameco reported that no environmental impacts occurred as a result of the events, and that Cameco investigated each event and put corrective actions in place. CNSC staff stated that Cameco had submitted the required event reports for transportation events to the CNSC in accordance with regulatory requirements, and that CNSC staff found them to be satisfactory. CNSC staff noted that every licensee must report traffic accidents involving regulated shipments even

when the packages are not directly affected.

131. The Commission is satisfied that the evidence provided demonstrates that Cameco has adequate programs and measures in place to meet regulatory requirements regarding packaging and transport and is of the opinion that Cameco will continue to meet these requirements over the proposed licence period. The Commission is satisfied that the evidence demonstrates that Cameco's performance with respect to packaging and transport has met CNSC regulatory requirements, including the PTNSR, 2015, over the licence period, and that Cameco has reported events in accordance with regulatory requirements.

4.2.15 Conclusion on Safety and Control Areas

132. Based on the evidence provided, the Commission is satisfied that Cameco has adequate programs and measures in place with respect to the 14 SCAs to ensure that the health and safety of workers, the public and the environment will be protected over the proposed 10-year licence term. The Commission is further satisfied that Cameco has measures in place to provide for the maintenance of national security and to implement international obligations to which Canada has agreed.

4.3 Indigenous Engagement and Consultation

133. The Commission considered the information provided by CNSC staff and Cameco regarding Indigenous consultation and engagement activities in respect of this application. Indigenous consultation refers to the common law duty to consult with Indigenous Nations and communities pursuant to section 35 of the [*Constitution Act, 1982*](#).²⁸
134. The common law duty to consult with Indigenous Nations and communities is engaged when the Crown contemplates action that may adversely affect established or potential Indigenous and/or treaty rights. The CNSC, as an agent of the Crown and as Canada's nuclear regulator, recognizes and understands the importance of building relationships and engaging with Canada's Indigenous Nations and communities. The CNSC ensures that its licensing decisions under the NSCA uphold the honour of the Crown and consider Indigenous Nations and communities' potential or established Indigenous and/or treaty rights pursuant to section 35 of the *Constitution Act, 1982*.
135. The duty to consult is engaged wherever the Crown has "knowledge, real or constructive, of the potential existence of an Aboriginal right or title and contemplates conduct that might adversely affect it".²⁹ Licensing decisions of the Commission, where Indigenous interests may be adversely impacted, can engage the duty to consult, and the Commission must be satisfied that it has met the duty prior to

²⁸ Schedule B to the Canada Act 1982 (UK), 1982, c 11.

²⁹ *Haida Nation v. British Columbia (Minister of Forests)*, 2004 SCC 73 at para 35

making the relevant licensing decision.

Indigenous engagement by CNSC staff

136. With respect to the BRR, CNSC staff reported having engaged with interested Indigenous Nations and communities over the current licence period, including discussing topics of interest and addressing concerns.
137. CNSC staff submitted that it encouraged Indigenous Nations and communities' participation in this hearing process and provided information about the availability of participant funding to facilitate participation and details on how to participate. CNSC staff also submitted that it had sent letters of notification in January 2021, and made follow-up telephone calls and emails in March 2021, to the following identified Indigenous Nations and communities who may have an interest in Cameco's licence renewal for the BRR licence:
- Mississauga First Nation
 - Sagamok Anishnawbek
 - Serpent River First Nation
 - Thessalon First Nation
 - Métis Nation of Ontario Region 4 (Historic Sault Ste. Marie Métis Council and North Channel Métis Council)
138. CNSC staff stated that it started the engagement process in November 2020, notifying MFN and all interested Indigenous Nations and communities about Cameco's application, and conducted a number of follow up activities. CNSC staff reported that it encouraged all of the identified Indigenous Nations and communities to participate in the regulatory review process and in the public hearing to advise the Commission directly of any concerns they may have in relation to this licence renewal application.

Indigenous Engagement by Cameco

139. The Commission examined the information submitted by Cameco regarding its ongoing engagement with Indigenous Nations and communities respecting the BRR. Cameco reported engaging with the identified Indigenous Nations and communities having established or asserted rights and/or interests in the vicinity of the BRR, including:
- Mississauga First Nation
 - Serpent River First Nation
 - Thessalon First Nation
 - Sagamok Anishnawbek Nation
 - Métis Nation of Ontario Region 4

Submissions by Indigenous Nations and Communities, and Individuals

140. The Commission received interventions from the Mississauga First Nation (MFN) ([CMD 21-H9.50](#) and [CMD 21-H9.50A](#)), and from Sarah Gabrielle Baron and Joan Morningstar from the Mississaugi Indian Reserve No. 8 band ([CMD 21-H9.43](#)).
141. The MFN expressed that it wants community members to be involved in environmental studies, which would not only be based on western science, but also on Traditional Knowledge (TK). The MFN made 27 recommendations including for the CNSC to affirm its commitment to reconciliation, fully adopting [United Nations Declaration on the Rights of Indigenous Peoples](#) (UNDRIP), and supporting Treaty relationships based on the principles of mutual recognition and shared responsibilities as recommended by the Truth and Reconciliation Commission of Canada's Calls to Action. The MFN's CMD summarizes the MFN's objectives, specific topics, values and principles, and perspectives in the ongoing process.
142. With respect to the matter of Cameco's application to renew its licence for the BRR, the MFN submitted that its primary concern was for CNSC to ensure that its regulation and oversight of nuclear facilities do not infringe upon MFN's Indigenous and treaty rights.
143. In response to the Commission's enquiry about the Memorandum of Agreement between the MFN and Cameco, a Cameco representative provided that Cameco signed the agreement in 2010. An MFN representative told the Commission that the Memorandum of Agreement did not specifically have a follow-up process or a responsibility process to follow through concerns raised at meetings. The Cameco representative recognized that there is an opportunity for Cameco to improve its level of dialogue and transparency with MFN.
144. The Commission enquired about whether MFN have had information sessions where community members' concerns had been raised in relation to Cameco's application, and whether that information was communicated to Cameco or CNSC staff. The MFN representative reported that the COVID-19 pandemic has limited MFN's ability to engage with communities. The MFN representative added that the main concerns for discussion are related to land use, environmental impacts, and health studies related to the BRR.
145. Asked for its views on the level of consultation for Cameco's licence renewal application, an MFN representative expressed the view that any licence renewal should trigger deep consultation because of the land upon which the BRR facility rests, the proximity to the community and the impacts that the facility has on the community.
146. CNSC staff told the Commission that it had not heard any specific concerns or issues with regards to the BRR licence renewal after conducting early engagement and virtual community sessions with MFN and all identified Indigenous Nations and

communities. Asked about the difference between the views previously expressed to CNSC staff and the concerns raised in MFN's submission for the hearing, CNSC staff stated that it did not learn about the specific concerns outlined in MFN's intervention until the intervention was received. A Cameco representative stated that Cameco and MFN had several meetings over the licence term, including informal and formalized meetings with the Chief and Council to discuss issues, without having those concerns raised.

147. In relation to the concerns raised in the intervention from S. G. Baron and J. Morningstar (CMD 21-H9.43), the Commission asked for clarification on the following topics:
- a historical uranium contamination event
 - cancer rates in the vicinity of the BRR
 - disturbance of human remains during the construction of the BRR
148. Asked about a contamination event that occurred in the area surrounding the BRR facility, a Cameco representative reported that records showed that the event in question took place in 1990, with the release of approximately 178 kilograms of uranium, caused by an operator error that allowed the bypassing of a collection facility. The Cameco representative added that corrective actions were put in place to prevent recurrence. CNSC staff reported that the exposure to the community from this event was less than one percent of the public dose limit and that no impact on health was expected as a result of the event.
149. With respect to the intervenors' concerns regarding cancer incidence rates in the vicinity of the BRR, CNSC staff reported that, in terms of health impacts from nuclear facilities, studies carried out over several decades have repeatedly demonstrated that people who live near these facilities are as healthy as the general population. CNSC staff also reported that it has not observed and does not expect to observe health effects attributable to the operation of BRR, based on exposure and health data.
150. Regarding the intervenors' assertion about the disturbance of human remains during the construction of the BRR, a Cameco representative explained that the site was constructed and initially operated by a Crown corporation, Eldorado. The Cameco representative noted that although Cameco had heard verbal accounts from a former employee that remains may have been discovered during construction – with construction stopping and the area being turned over to appropriate federal authorities – Cameco had not found any records to corroborate this. The Cameco representative further noted that Cameco had found references to archeological discoveries of artefacts and remains in an area adjacent to the BRR site, in the Town of Blind River, during the same timeframe as the construction of the BRR. The Cameco representative stated that Cameco would be open to working with the MFN to further pursue this matter.

151. The intervenors also sought the repatriation of human remains, invoking Article 12 of the UNDRIP, which states:

1. Indigenous peoples have the right to manifest, practise, develop and teach their spiritual and religious traditions, customs and ceremonies; the right to maintain, protect, and have access in privacy to their religious and cultural sites; the right to the use and control of their ceremonial objects; and the right to the repatriation of their human remains.
2. States shall seek to enable the access and/or repatriation of ceremonial objects and human remains in their possession through fair, transparent and effective mechanisms developed in conjunction with indigenous peoples concerned.

152. The Commission acknowledges the concerns raised by S. G. Baron and J. Morningstar, and recognizes the commitment made by Cameco to work with MFN to further pursue this matter. The Commission does not have any information on the alleged disturbance of potential human remains, nor is it in possession of any human remains or ceremonial objects.

4.3.1 Conclusion on Indigenous Consultation and Engagement

153. The Commission acknowledges the current efforts and commitments made by Cameco in relation to Indigenous engagement and CNSC staff's efforts in this regard on behalf of the Commission. Based on the information presented on the record for this hearing, and having heard the submissions of all hearing participants, the Commission is satisfied that this licence renewal will not result in changes to BRR operations that would cause adverse impacts to any potential or established Indigenous and/or treaty rights. The Commission is also of the opinion that the engagement activities taken by the CNSC staff on its behalf in respect of the review of the BRR licence amendment application have been adequate.

154. The Commission is satisfied with CNSC staff's efforts to engage with Indigenous Nations and communities who may have interest in the BRR, as described. The efforts made by CNSC staff in this regard are key to the important work of the Commission toward reconciliation and relationship-building with Canada's Indigenous Nations and communities.

155. The Commission greatly values and appreciates the input and perspectives of the MFN and S. G. Baron and J. Morningstar in relation to this matter. The Commission expects CNSC staff to continue to build meaningful long-term relationships with Indigenous Nations and communities as part of the CNSC's reconciliation efforts.

156. The Commission does not have any information on the alleged disturbance of potential human remains and is not in possession of any human remains or ceremonial objects. The Commission notes the commitment made by Cameco and expects it to continue to work with MFN to further pursue and resolve this matter.

4.4 Other Matters of Regulatory Importance

4.4.1 Public Engagement

157. The Commission assessed Cameco's public information and disclosure program (PIDP) for the BRR. A public information program is a regulatory requirement for licence applicants and licensed operators of Class I nuclear facilities.
158. The Commission assessed how Cameco's PIDP met the specifications of CNSC [REGDOC-3.2.1, Public Information and Disclosure](#). Cameco's PIDP includes activities such as:
- technical reports or summaries available on the dedicated community website;
 - development and deployment of videos to help highlight various aspects of BRR operations and/or community activities;
 - print material available for all visitors to Cameco facilities and made available at off-site information sessions; and
 - social media.
159. Cameco submitted that, for more than a decade, it has retained outside expertise to measure public opinion around Blind River to help determine the effectiveness of its PIDP. Cameco reported that the results of this public opinion research, carried out during the current licensing period, confirm that Cameco's public information program is seen as effective and appropriate by over 95%, of Blind River area residents. A Cameco representative told the Commission that Cameco was working to ensure that there is adequate representation of the MFN in the survey.
160. CNSC staff submitted that the BRR PIDP meets the specifications of REGDOC-3.2.1. CNSC staff reported that during the current 10-year licence period, Cameco has been successful in meeting its public disclosure and reporting obligations for the BRR. CNSC staff added that Cameco has made improvements to its website, adopted social media platforms and documented areas of community engagement such as tours, media, government and stakeholder relations, and community events.
161. The Commission is satisfied that the evidence provided by Cameco and CNSC staff demonstrates that Cameco's PIDP for the BRR meets regulatory requirements, including CNSC REGDOC-3.2.1, and is of the opinion that Cameco will continue to communicate to the public information about the health, safety and security of persons and the environment and other issues related to the BRR facility. The Commission encourages Cameco to continue creating, maintaining and improving its

dialogue with the neighbouring communities.

4.4.2 Decommissioning Plans and Financial Guarantee

162. The Commission requires that Cameco have operational plans for the decommissioning and long-term management of waste produced during the lifespan of the BRR. In order to ensure that adequate resources are available for safe and secure future decommissioning of the BRR site, the Commission requires that an adequate financial guarantee for the realization of the planned activities be put in place and maintained in a form acceptable to the Commission throughout the licence period.
163. Cameco currently has a preliminary decommissioning plan (PDP) in place. According to Cameco's updated PDP, Cameco has estimated the cost for decommissioning of BRR to be C\$57.5 million. The proposed amount includes 20% contingency and an escalation of 2-3% for 5 years to account for inflation until the next review period. The proposed amount of C\$57.5 million is an increase of C\$9.5 million from the current financial guarantee of C\$48 million. Cameco explained that the increase is due to updated unit rates, labour rates and disposal costs. The financial guarantee is reviewed on a 5-year basis.
164. On the question raised by Northwatch of the obligation to consult with the public and Indigenous Nations and communities when preparing PDPs, CNSC staff stated that there is no requirement for consultation on PDPs. CNSC staff noted, however, that licensees are required to post a summary of their PDPs on their public websites. CNSC staff added that, at the time of decommissioning, licensees' detailed decommissioning plans must contain a summary report of any public and Indigenous engagement undertaken in its preparation.
165. CNSC staff assessed the cost estimate of the BRR decommissioning against the criteria set out in CNSC regulatory guide [G-206, *Financial Guarantees Guide for the Decommissioning of Licensed Activities*](#), and considered the proposed amount to be adequate for decommissioning of the BRR facility. Cameco is proposing to continue to use a letter of credit as its financial guarantee instrument. CNSC staff confirmed that a letter of credit is an acceptable financial instrument for the financial guarantees as identified in G-206. CNSC staff noted that requirements and guidance for establishing a financial guarantee for decommissioning are now provided in CNSC [REGDOC-3.3.1, *Financial guarantees for decommissioning of nuclear facilities*](#), which was published in January 2021 and supersedes G-206. Even though G-206 was in effect when reviewing the financial guarantee for BRR, CNSC staff expect Cameco to implement REGDOC-3.3.1 for its next revision of the financial guarantee for the BRR.
166. Asked to clarify the difference between the specifications of G-206 and REGDOC-3.3.1, CNSC staff stated that the criteria for a financial guarantee letter of

credit are the same in G-206 as in REGDOC 3.3.1, with additional guidance in REGDOC-3.3.1 for terms and conditions of a letter of credit.

167. The Commission concludes that the preliminary decommissioning plan and related financial guarantee for decommissioning the BRR are acceptable for the purpose of this licence renewal. The Commission is satisfied that the evidence provided by Cameco and CNSC staff demonstrates that Cameco's PDP meets CNSC requirements. The Commission finds the financial guarantee amount of C\$57.5 million to be acceptable, and the financial guarantee instrument of a letter of credit to be appropriate. The Commission directs Cameco to provide the original financial guarantee instrument that conforms with CNSC REGDOC-3.3.1 in the form of a letter of credit, within 90 days of the issuance of this decision. As financial guarantees remain a matter for Commission acceptance, the Commission will consider any future updates to the financial guarantee as applicable.

4.4.3 Cost Recovery

168. The Commission examined Cameco's standing under the [Cost Recovery Fees Regulations](#) (CRFR) requirements for the BRR. Paragraph 24(2)(c) of the NSCA requires that a licence application be accompanied by the prescribed fee, as set out by the CRFR and based on the activities to be licensed. CNSC staff reported that Cameco is in good standing with respect to meeting CRFR requirements for the BRR. The Commission is satisfied that Cameco has satisfied the requirements of the CRFR for the purpose of this licence renewal.

4.4.4 Nuclear Liability Insurance

169. CNSC staff reported that the [Nuclear Liability and Compensation Act](#) (NLCA) does not apply with respect to BRR. The BRR processes only natural uranium, which is excluded from the definition of nuclear material under the NLCA. As a result, Cameco's operations at the BRR do not meet the criteria to be designated as a nuclear installation and are not under the purview of the NLCA. Based on this information, the Commission is satisfied that the NLCA does not apply with respect to the BRR.

4.5 Licence Length and Conditions

170. The Commission considered Cameco's application for the renewal of the current licence for the BRR for a period of 10 years. Cameco's current licence, FFOL-3632.00/2022, expires on February 28, 2022.

4.5.1 Licence Length

171. Cameco is requesting a 10-year term for the renewed licence. CNSC staff recommended the renewal of the licence for a period of 10 years, until 2032, submitting that Cameco is qualified to carry on the licensed activities authorized by the licence. CNSC staff noted that Cameco's performance has been consistent and adequate over the current licence period, and that reporting processes are in place to monitor performance over the proposed licensing period.
172. Based on the information examined by the Commission during the course of this hearing, the Commission is satisfied that a 10-year licence term is appropriate. The Commission is satisfied that a 10-year licence is merited on the basis of Cameco's mature programs, which have demonstrated a consistent and adequate performance and oversight by the licensee. by the evidence provided, Opportunities for public involvement during the renewed 10-year licence period will be provided through periodic reporting to the Commission.

4.5.2 Licence Conditions

173. CNSC staff's CMD includes a proposed draft licence with a format that incorporates the CNSC's standardized licence conditions applicable to BRR as a Class IB uranium processing facility. CNSC staff proposed removing packaging and transport licensing activities from Part IV of Cameco's licence, noting that these activities are not licensed activities as per the NSCA and PTNSR 2015, and do not apply to the BRR activities.
174. Cameco is requesting approval to retain the authorization [granted by the Commission in 2012](#)³⁰ for a production increase allowing BRR to operate at an annual production capacity of 24,000 tonnes of uranium as UO₃, subject to the submission of a final commissioning report that is acceptable to the Commission or a person authorized by the Commission. CNSC staff proposes a facility-specific licence condition for the submission of Cameco's final commissioning report, Licence condition 15.1, which states:

The licensee shall submit a final commissioning report related to the increase in annual production capacity as described in paragraph (i) and (iv) of Part IV of this licence that is acceptable to the Commission or a person authorized by the Commission prior to commercial production at the increased production capacity.

175. The Commission accepts the licence conditions as recommended by CNSC staff. The Commission is satisfied that the proposed changes to the licence to update the licence format and reflect the licensed activities are appropriate.

³⁰ CNSC Record of Proceedings, Including Reasons for Decision, *Application to Renew its Nuclear Fuel Facility Operating Licence for Blind River Refinery*, Date of decision: April 13, 2012.

4.5.3 Delegation of Authority

176. In order to provide adequate regulatory oversight of changes that are administrative in nature, and that do not require a licence amendment nor Commission approval, CNSC staff recommended that the Commission delegate authority for certain approval or consent, as contemplated in licence conditions that contain the phrase “a person authorized by the Commission,” to the following CNSC staff:

- Director, Nuclear Processing Facilities Division
- Director General, Directorate of Nuclear Cycle and Facilities Regulation
- Executive Vice-President and Chief Regulatory Operations Officer, Regulatory Operations Branch

177. The Commission delegates its authority for the purposes of licence conditions 3.2 and 15.1 as recommended. The Commission is satisfied that this approach is reasonable and since it is consistent with the current licence, has worked well.

4.5.4 Conclusion on Licence Length and Conditions

178. Based on the information examined by the Commission during the course of this hearing, the Commission is satisfied that a 10-year licence is appropriate for the BRR facility. The Commission accepts the licence conditions as recommended by CNSC staff. The Commission accepts the standardized licence conditions applicable to BRR as a uranium processing facility and removes packaging and transport licencing activities from Part IV of Cameco’s proposed licence. The Commission accepts CNSC staff’s recommendation regarding the delegation of authority the purposes of licence conditions 3.2 and 15.1.


179. With this decision, Cameco remains authorized to increase the production capacity of the BRR from 18,000 tonnes of uranium as UO₃ annually to 24,000 tonnes. Licence condition 15.1 imposes a hold point requiring that Cameco submit a final commissioning report that is acceptable to the Commission or a person authorized by the Commission, prior to increasing its production capacity.

5.0 CONCLUSION

180. The Commission is satisfied that the application submitted by the Cameco is complete. The Commission has also considered the information and submissions of Cameco, CNSC staff and all participants as set out in the material available for reference on the record, as well as the oral and written interventions provided or made by participants at the hearing.

181. The Commission is of the opinion that Cameco is qualified to carry on the activity that the proposed licence will authorize and that it 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.
182. Therefore, the Commission, pursuant to section 24 of the *Nuclear Safety and Control Act*, renews the nuclear fuel facility licence issued to Cameco Corporation for its Blind River Refinery located in Blind River, Ontario. The renewed licence, FFL-3632.00/2032, is valid from March 1, 2022 to February 28, 2032.

Velshi,
Rumina



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February 16, 2022

Rumina Velshi
President,
Canadian Nuclear Safety Commission

Date

Appendix A – Intervenors

Intervenors – Oral Presentations	Document Number
Town of Blind River, represented by S. Hagman	CMD 21-H9.5
Stephane Lemieux	CMD 21-H9.6
Bruce Power, represented by J. Scongack	CMD 21-H9.41
Sarah Gabrielle Baron and Joan Morningstar	CMD 21-H9.43 CMD 21-H9.43A
Chris Astles	CMD 21-H9.45
Canadian Nuclear Association, represented by S. Coupland	CMD 21-H9.46
Janice Brown, Karin Pilon and Cindy MacDonald	CMD 21-H9.47
St. Joseph’s Foundation of Elliot Lake, represented by W. Elliott	CMD 21-H9.48
Mississauga First Nation, represented by L. Mayer, P. Pitawanakwat, B. Niganobe and K. Blaise	CMD 21-H9.50 CMD 21-H9.50A CMD 21-H9.50B
Northwatch, represented by B. Lloyd	CMD 21-H9.51 CMD 21-H9.51A
Intervenors – Written Submission	Document Number
Blind River Curling Club	CMD 21-H9.2
Rotary Club of Blind River	CMD 21-H9.3
Township of North Shore	CMD 21-H9.4
Pauline Roy	CMD 21-H9.7
Milltown Motors Ltd.	CMD 21-H9.8
Leroy Construction	CMD 21-H9.9
Stephanie MacLeod	CMD 21-H9.10
Fraser Copeland	CMD 21-H9.11
Kris Olsen	CMD 21-H9.12
Trevor Funk	CMD 21-H9.13
Eric Richer	CMD 21-H9.14
Jamie McLean	CMD 21-H9.15
Mark Blondin	CMD 21-H9.16
Andrew Ludgate	CMD 21-H9.17
Kelly James	CMD 21-H9.18
Mike Stortini	CMD 21-H9.19
Danny Bacon	CMD 21-H9.20
Claude Grimard	CMD 21-H9.21
Lee Hannon	CMD 21-H9.22
Curt King	CMD 21-H9.23
Dawson Kluding	CMD 21-H9.24
Chris Zagar	CMD 21-H9.25
Lisa Roy-Sidock	CMD 21-H9.26

Margaret (Marnie) Morin	CMD 21-H9.27
Jordan Coventry	CMD 21-H9.28
Robert Penner	CMD 21-H9.29
William Park	CMD 21-H9.30
Ontario Tech University	CMD 21-H9.31
Dale Parviainen	CMD 21-H9.32
Stephanie Smith	CMD 21-H9.33
École secondaire catholique Jeunesse-Nord	CMD 21-H9.34
Laurene Machinski	CMD 21-H9.35
Jeffrey Bissaillion	CMD 21-H9.36
Ryan Hagger	CMD 21-H9.37
Ryne Boyer-Denis	CMD 21-H9.38
Collette and Crystal Piche	CMD 21-H9.39
Huron Pines Golf and Country Club	CMD 21-H9.40
Stephane Belanger	CMD 21-H9.42
Shawna Mathieu	CMD 21-H9.44
W.C. Eaket Secondary School	CMD 21-H9.49