



Record of Decision

DEC 21-H105

In the Matter of

Applicant Cameco Fuel Manufacturing Inc.

Subject Application to Renew the Class IB Nuclear Fuel Facility Operating Licence FFOL-3641.00/2022 for the Cameco Fuel Manufacturing Inc. Facility

Date of Decision February 14, 2022

RECORD OF DECISION – DEC 21-H105

Applicant: Cameco Fuel Manufacturing Inc.

Address/Location: 200 Dorset Street East, Port Hope, Ontario L1A 3V4

Purpose: Application to Renew the Class IB Nuclear Fuel Facility Operating Licence FFOL-3641.00/2022 for the Cameco Fuel Manufacturing Inc. Facility

Application received: December 2, 2020

Hearing: Public Hearing in Writing – Notice of Hearing in Writing published on April 12, 2021

Date of decision: February 14, 2022

Panel of Commission: I. Maharaj

Licence: Renewed

Table of Contents

1.0	INTRODUCTION	1
2.0	DECISION.....	3
3.0	APPLICABILITY OF THE IMPACT ASSESSMENT ACT	4
4.0	ISSUES AND COMMISSION FINDINGS	4
4.1	Completeness of Application	5
4.2	CFM's Performance	6
4.2.1	Safety and Control Areas	6
4.2.2	Conclusions on CFM's Performance	12
4.3	Indigenous Engagement	13
4.4	Public Information.....	15
4.5	Financial Guarantee.....	16
4.6	Cost Recovery	16
4.7	Nuclear Liability Insurance	17
4.8	Licence Conditions, Licence Length and Delegation of Authority	17
5.0	CONCLUSION.....	18

1.0 INTRODUCTION

1. Cameco Corporation (Cameco), on behalf of Cameco Fuel Manufacturing Inc. (CFM)¹, has submitted an application to the Canadian Nuclear Safety Commission² (CNSC), under subsection 24(2) of the [Nuclear Safety and Control Act](#)³ (NSCA), for a 1-year renewal of the Class IB nuclear fuel facility operating licence for CFM's nuclear fuel manufacturing facility. CFM is a wholly owned subsidiary of Cameco. CFM's current licence authorizes CFM to operate its nuclear fuel facility (the CFM facility) to produce uranium dioxide (UO₂) fuel pellets and nuclear fuel bundles. The current licence, FFOL-3641.00/2022, was issued for a period of 10 years and is valid until February 28, 2022. The CFM facility is located in the Municipality of Port Hope, Ontario and on the traditional territory of the Wendat, Mississauga, Haudenosaunee, Anishinabek Nation, and the territory covered by the Williams Treaties First Nations.
2. The nuclear fuel facility in Port Hope has been in operation since the late 1950s. The facility was acquired by Cameco in 2006, when Cameco acquired 100% ownership of the facility's operator Zircatec Precision Industries Inc. (Zircatec). Zircatec was renamed Cameco Fuel Manufacturing Inc. in 2008. The manufacturing process at the CFM facility involves both uranium fuel pellet manufacturing and fuel bundle assembly. The finished fuel bundles are used as fuel for Canada Deuterium Uranium (CANDU) reactors.
3. Cameco is requesting a 1-year licence renewal to separate the CFM licence renewal activities from Cameco's Blind River Refinery licence renewal activities. The current licences for both facilities expire in February 2022. Shifting the licence renewal date for the CFM facility by 1 year will establish staggered licensing activities for Cameco's Fuel Services Division facilities in the future. Cameco intends to apply for a longer-term licence renewal for the CFM facility in 2022, should this 1-year licence renewal be granted.

Issue

4. The Commission is required to determine whether and what requirements the [Impact Assessment Act](#) (IAA) imposes in relation to the activities sought to be authorized in Cameco's licence renewal application.

¹Cameco Fuel Manufacturing Inc. (CFM) is a wholly owned subsidiary of Cameco Corporation (Cameco). CFM is part of Cameco's Fuel Services Division.

² 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.

³ Statutes of Canada (S.C.) 1997, c. 9

5. The Commission must determine, under paragraph 24(4)(a) and (b) of the NSCA, whether it is satisfied that:
 - a) CFM is qualified to carry on the activities that the renewed licence would authorize; and
 - b) in carrying on that activity, CFM 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.

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 or treaty rights.⁴ As such, the Commission must determine what engagement and consultation steps and accommodation measures are called for, respecting Indigenous interests.

Panel

7. Pursuant to section 22 of the NSCA, the President of the Commission established Ms. Indra Maharaj as a Panel of the Commission to consider the licence renewal application. A [notice of hearing in writing and participant funding](#) was published on April 12, 2021. The Commission, in conducting a public hearing based on written materials, considered written submissions from Cameco ([CMD 21-H105.1](#)) and CNSC staff ([CMD 21-H105](#), [CMD 21-H105.A](#)). The Commission also considered written submissions from 7 intervenors (see Appendix A for a list of interventions).

CNSC Participant Funding Program

8. 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 peoples, members of the public and stakeholders in Commission proceedings. In [April 2021](#), up to \$30,000 in funding to participate in this licence renewal process was made available through the CNSC's PFP. 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 \$8,800 to one applicant. This applicant was required, by virtue of being awarded participant funding, to submit a written intervention respecting Cameco's application.

⁴ *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

2.0 DECISION

9. The Commission is satisfied that the application to renew the licence is not a project that is designated in the [*Physical Activities Regulations*](#)⁵ under the IAA nor a project carried out on federal lands.
10. The Commission is satisfied that CNSC's engagement with Indigenous Nations and communities who may have interest in the proposed licence renewal satisfies the Commission's engagement and consultation responsibilities with respect to this licensing action. The efforts made by CNSC staff are key to the important work of the Commission toward reconciliation and relationship building with Canada's Indigenous peoples.
11. Details of the Commission's rationale are provided in more detail in the following sections of this Record of Decision. Based on the consideration of the matter, the Commission is satisfied that CFM is qualified to carry out the authorized activities and that CFM 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 Fuel Manufacturing Inc. for its fuel manufacturing facility located in the Municipality of Port Hope, Ontario. The renewed licence, FFL-3641.00/2023 is valid until February 28, 2023.

12. The Commission renews the licence for a period of 1 year as recommended by CNSC staff in CMD 21-H105. The renewed licence contains no changes to the authorized activities or terms and conditions of the current licence, apart from the addition of new environmental release limits to Appendix A of the renewed licence, as described in section 4.2.1 of this Record of Decision.
13. The Commission accepts the revised financial guarantee in the form of an irrevocable letter of credit from a Canadian Bank in the amount of C\$10.8 million, as recommended by CNSC staff in CMD 21-H105. The Commission directs CFM to provide the original financial guarantee instrument within 90 days of the issuance of this decision.

⁵ SOR/2019-285

14. The Commission delegates its authority, for the purposes described in licence conditions (LCs):

- 1.4, General
- 2.4, Management Systems
- 6.2, Physical Design
- 8.2, Radiation Protection
- 12.2, Waste Management

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.

15. For the purposes described in LC 14.2 Safeguards, the Commission delegates its authority, to the following CNSC staff:

- Director, International Safeguards Division
- Director General, Directorate of Security and Safeguards
- Vice-President, Technical Support Branch.

3.0 APPLICABILITY OF THE IMPACT ASSESSMENT ACT

16. In coming to its decision, the Commission was first required to determine whether any requirements under the IAA applied to the project and whether an impact assessment of the proposal was required. CNSC staff's review of the application concluded that the proposed licence renewal is not captured in the IAA's *Physical Activities Regulations*, nor is it a project on federal lands. Based on the information provided for this hearing, the Commission is satisfied that an impact assessment under the IAA is not required.

4.0 ISSUES AND COMMISSION FINDINGS

17. In [December 2020](#), Cameco applied to the CNSC on behalf of CFM to renew the nuclear fuel facility licence for the CFM facility for a period of 1 year. CNSC staff reviewed the application and requested that Cameco provide additional information. In [March 2021](#), Cameco provided a supplemental submission with specific information regarding how CFM will continue to meet the requirements set out under the NSCA and associated regulations over the proposed licence term.

18. The Commission considered a number of issues and submissions relating to CFM's qualification to carry out the licensed activities over the proposed licence period as well as the adequacy of CFM's proposed measures for protecting the environment, the health and safety of persons, national security and international obligations to which Canada has agreed.
19. In making its decision, the Commission sent questions to CNSC staff through [CMD 21-H105Q](#). The Commission sought information from CNSC staff regarding specific concerns raised in the interventions by the Curve Lake First Nation and the Port Hope Community Health Concerns Committee. The Commission is satisfied with the completeness of the responses provided by CNSC staff ([CMD 21-H105.B](#)).
20. These reasons are focused on the issues that are most relevant to the short-term renewal application, namely:
 - The completeness of the licence application
 - CFM's performance over the current licence term
 - Indigenous consultation and engagement
 - Other matters of regulatory importance
 - Licence length and licence conditions
 - Delegation of authority

4.1 Completeness of Application

21. In order to be complete, the licence application submitted by Cameco must meet the requirements of the NSCA, the [General Nuclear Safety and Control Regulations](#) (GNSCR), and other applicable regulations made under the NSCA. 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 of the GNSCR 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.

The application and supplemental submission included reasoning for its application, information on the safety and control measures CFM has implemented at the CFM facility to satisfy the requirements of its current licence, and information on how those measures would continue to be implemented under a future licence, if granted. CNSC staff reported that Cameco provided all relevant information for the licence renewal in its application and supplemental submission. The Commission is satisfied with the completeness of Cameco's licence renewal application.

4.2 CFM's Performance

22. In its consideration of CFM's past performance at the CFM facility, the Commission examined CFM's performance with respect to the CNSC's [safety and control area](#) (SCA) framework. Cameco submitted detailed information on CFM's performance in all 14 SCAs. CNSC staff submitted specific information related to the following SCAs, which CNSC staff deemed most representative of CFM's overall safety performance at the CFM facility:

- Radiation Protection
- Environmental Protection
- Conventional Health and Safety

The Commission focused its assessment on these three SCAs. The Commission notes that CNSC staff did not report any notable safety events or regulatory concerns related to the remaining SCAs.

4.2.1 Safety and Control Areas

23. The Commission is satisfied that the information submitted by Cameco with respect to all 14 SCAs demonstrates that CFM has adequate programs in place at the CFM facility to ensure that the health and safety of workers, the public and the environment will be protected over the proposed 1-year licence term. CNSC staff rated CFM as "satisfactory" in all SCAs throughout the current licence period. A rating of "satisfactory" means that CFM's compliance with the SCA meets regulatory requirements and that any deviation from expectations is minor, with appropriate improvements planned. CNSC staff based its SCA ratings for CFM on risk-informed regulatory oversight activities including, but not limited to, onsite and remote inspections.
24. CNSC staff conducted over 25 inspections at the CFM facility over the current licence period. CNSC staff reported that most inspection findings were of low safety significance, but that a number of medium safety significance findings were identified during the first half of the current licence term. CNSC staff submitted that CFM has implemented appropriate corrective actions to address these findings. CFM is currently addressing the findings from the most recent inspection. The Commission is satisfied that CFM has implemented appropriate corrective actions in response to CNSC regulatory findings over the current licence term and expects CNSC staff to verify the implementation of the most recent corrective actions.
25. The intervention by Curve Lake First Nation ([CMD 21-H105.5](#)) requested further information regarding CNSC staff's medium safety significance inspection findings over the current licence term. In its response to the Commission's question concerning these inspection findings (CMD 21-H105.B), CNSC staff explained that the ranking of

safety significance as low, medium, or high, refers to the degree to which performance deviated from meeting regulatory requirements, and the magnitude of potential impacts to the health, safety and security of persons and the environment if not addressed by the licensee. CNSC staff specified that it issued 52 enforcement actions for medium safety significance inspection findings over the current licence term, all of which occurred during the first half of the licence term. CNSC staff performed a preliminary review of the findings and concluded that the majority did not meet the threshold for medium safety significance and should have been classified as low safety significance. CNSC staff provided specific examples of such findings in CMD 21-H105.B. CNSC staff reaffirmed its view that CFM has implemented appropriate corrective actions to address each of the medium safety significance findings and that the enforcement actions are considered closed.

26. CNSC staff submitted that all reportable events and action level exceedances reported by CFM at the CFM facility over the current licence term were reported to the Commission through CNSC staff's periodic Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities. CNSC staff noted that no event was significant enough to warrant reporting to the Commission in an Event Initial Report. CNSC staff submitted that CFM implemented corrective actions for all reported events over the current licence term and that all events are considered closed. The Commission is satisfied with CFM's event response and reporting over the current licence period.
27. The interventions by Citizens Against Radioactive Neighborhoods (CARN) ([CMD 21-H105.6](#)) and the Port Hope Community Health Concerns Committee (PHCHCC) ([CMD 21-H105.7](#)) raised concern regarding security at the CFM facility. Cameco reported that CFM maintains a security program at the CFM facility to control access to the site and to nuclear substances, prescribed equipment, and prescribed information. CNSC staff conducted 4 inspections related to the security SCA over the current licence term and submitted that CFM's security program adequately satisfies the specifications set out in [REGDOC-2.12.3, Security of Nuclear Substances: Sealed Sources and Category I, II and III Nuclear Material, Version 2.1](#). The Commission is satisfied that CFM has an adequate security program in place to ensure the safe and secure operation of the CFM facility.
28. The intervention by P. Harris ([CMD 21-H105.8](#)) questioned if Cameco is storing enriched uranium purchased for strategic business purposes at the CFM facility. CFM is licensed to produce nuclear fuel bundles from depleted, natural, and enriched uranium compounds at the CFM facility. CNSC staff submitted that Cameco does not store enriched uranium purchased for any strategic purposes at any CNSC-licensed facility.
29. The PHCHCC raised concerns in its intervention (CMD 21-H105.7) regarding radiation emissions from the transportation of uranium hexafluoride (UF₆) cylinders. In CMD 21-H105.B, CNSC staff clarified that UF₆ is not received, processed, or produced at the CFM facility, rather, it is handled at Cameco's Port Hope Conversion

Facility, which is operated under a separate licence. CFM receives uranium dioxide (UO₂) powder as source material for nuclear fuel pellet production. CNSC staff affirmed that these materials are transported in accordance with the [Packaging and Transport of Nuclear Substances Regulations, 2015](#), and that the dose rates on the outside of the packages meet regulatory requirements. The Commission is satisfied that CFM is managing, and will continue to manage, the packaging and transport of radioactive material associated with CFM facility operations in compliance with regulatory requirements.

Radiation Protection

30. CFM is required to have a radiation protection program in place that meets the requirements of the [Radiation Protection Regulations](#) (RPR).⁶ Cameco submitted that CFM has implemented a radiation protection program at the CFM facility in compliance with the RPR. CNSC staff verified the compliance of CFM's radiation protection program through 7 inspections over the current licence term. CNSC staff reported that its most recent inspection in February 2020 confirmed that CFM's radiation protection program complies with the RPR and CNSC licence requirements. The Commission is satisfied that CFM's radiation protection program at the CFM facility meets regulatory requirements.
31. CNSC staff reported that no worker at the CFM facility received a radiation dose in excess of the CNSC's regulatory limits during the current licence period. The maximum effective dose received by a nuclear energy worker (NEW) during the current licence period was 12.6 millisieverts (mSv). The regulatory effective dose limit for a NEW is 50 mSv per year, and 100 mSv over a 5-year period. Skin and extremity doses for NEWs at the CFM facility have also been well below CNSC regulatory limits. Over the current licence period, the maximum equivalent dose to the skin for a NEW was 108.4 mSv and the maximum equivalent dose to the extremities for a NEW was 107.5 mSv. The regulatory equivalent dose limit to the skin or to the extremities for a NEW is 500 mSv per year. The Commission is satisfied that CFM is controlling effective and equivalent doses to NEWs at the CFM facility below regulatory requirements.
32. CNSC staff submitted that, over the current licence term, 10 action level exceedances related to the radiation protection SCA occurred at the CFM facility.⁷ CNSC staff reviewed all events and reported that CFM adequately implemented corrective actions in response to each action level exceedance. The Commission is satisfied with CFM's implementation of corrective actions in response to radiation protection related action level exceedances.

⁶ SOR/2000-203.

⁷ Action levels are designed to alert licensees before regulatory dose limits are reached. By definition, if an action is reached, a loss of control of some part of the associated radiation protection program may have occurred, and specific action is required, as defined in the *Radiation Protection Regulations*.

Environmental Protection

33. Cameco submitted that CFM maintains an environmental risk assessment (ERA) for the CFM facility in accordance with the requirements of CSA Standard N288.6. In 2016, Cameco submitted an ERA for the CFM facility to the CNSC that concluded that there were no undue risks to the environment or to human health resulting from CFM facility operations. Cameco further submitted a review of the 2016 ERA to CNSC staff in 2021. CNSC staff assessed the submission and determined that, based on recently collected environmental monitoring data, the conclusions of the 2016 ERA remained valid. The Commission is satisfied that monitoring data supports the conclusions of the 2016 ERA, and that CFM has maintained a valid ERA for the CFM facility that meets regulatory requirements.
34. Cameco submitted information regarding uranium released from the CFM facility as atmospheric emissions and liquid effluent. CNSC staff reviewed CFM's data and reported that, throughout the current licence term, annual releases of uranium in liquid effluent from the CFM facility remained below the licence limit.⁸ The maximum annual release of uranium in liquid effluent over the current licence term was 1.58 kilograms uranium per year (kg/yr) in 2014. CNSC staff also reported that air emissions from the CFM facility remained below the licence limit.⁹ The maximum annual atmospheric release of uranium over the current licence term was 1.26 kg/yr in 2018. Based on the emissions data on the record for this hearing, the Commission is satisfied that CFM has maintained uranium releases from the CFM facility within regulatory limits.
35. Regarding soil monitoring, Cameco submitted that CFM collects soil samples around the CFM site a minimum of every 3 years. The most recent samples were taken in 2019. CNSC staff reviewed CFM's soil monitoring data and reported that the results for all samples taken over the current licence term were below the [CCME- Canadian Soil Quality Guidelines of the Protection of the Environment and Human Health](#) value of 23 microgram uranium per gram soil ($\mu\text{g/g}$). The 2019 average uranium concentration in soil near the CFM facility was 2.4 $\mu\text{g/g}$, below the Ontario natural background level of up to 2.5 $\mu\text{g/g}$. The maximum uranium soil concentration detected over the current licence term was 17.4 $\mu\text{g/g}$ and is attributed to historical contamination in Port Hope. CNSC staff submitted that no adverse consequences to human health or the environment are expected based on the soil monitoring results. The Commission is satisfied that the soil monitoring data indicates that the public and the environment continue to be protected from releases from the CFM facility.

⁸ The regulatory limit for liquid uranium releases to the sewer is 145 kg/year.

⁹ The regulatory limit for atmospheric uranium releases from process stacks and building ventilation emissions for the CFM facility is 14 kg/year.

36. Cameco submitted information regarding CFM's groundwater and surface water monitoring programs at the CFM facility.¹⁰ Based on CFM's groundwater monitoring data over the current licence term, CNSC staff confirmed that CFM's activities are not contributing to uranium concentrations at the CFM site. CNSC staff reported that, though uranium concentrations in surface water samples have occasionally exceeded surface water quality guidelines during the current licence term, no trends of increasing uranium concentrations have been identified. CFM assessed uranium in surface water as part of its 2016 and 2021 ERAs and did not identify a risk to human health or the environment. Based on the evidence submitted, the Commission is satisfied that CFM's groundwater and surface water monitoring results indicate that the health of the public and the environment remain protected.
37. The intervention by Citizens Against Radioactive Neighbourhoods (CARN) (CMD 21-H105.6) raised specific concern regarding the potential health effects of airborne uranium on individuals living near the CFM facility. Cameco submitted information regarding air emissions from the CFM facility during the current licence period. The highest average concentration of uranium in ambient air taken at the perimeter of the CFM site during the current licence period was 0.0024 µg/m³, which is below The Ontario Ministry of the Environment, Conservation and Parks' ambient air quality criteria for uranium.¹¹ The Commission is satisfied that uranium emissions from the CFM facility are below air quality criteria, indicating that the public and the environment continue to be protected from atmospheric releases from the CFM facility.
38. The interventions by CARN (CMD 21-H105.6), PHCHCC (CMD 21-H105.7), and P. Harris (CMD 21-H105.8) raised concerns regarding the public health impacts of radiation emitted from the CFM facility. Specific concerns included potential health impacts for those living, working, and attending school in the nearby community. Cameco reported that gamma radiation is the primary contributor to public dose from the CFM facility. Cameco submitted that CFM monitors gamma radiation at the fenceline of the CFM site and uses the results in its public dose calculations. CNSC staff submitted that the highest estimated dose to a member of the public from the CFM facility over the current licence term was 0.031 mSv/year.¹² Based on this information, the Commission is satisfied that CFM has effective radiation protection measures in effect to protect public health and notes that doses to the public remain well below regulatory limits.

¹⁰ Surface water refers to above-ground water bodies. Ground water refers to water found beneath the earth's surface.

¹¹ The Ontario Ministry of the Environment, Conservation and Parks' Ambient Air Quality Criteria for uranium is 0.03 µg/m³.

¹² The regulatory dose limit for a member of the public is 1 mSv/year.

39. The current release limits for the CFM facility are set at a fraction of its derived release limits (DRL).¹³ Subsequent to the submission of Cameco's licence renewal application, CNSC staff requested that Cameco establish Exposure Based Release Limits (EBRLs) for the CFM facility's air and liquid release points. CNSC staff requested the change because this methodology derives more conservative limits that further protect human health and sensitive environmental receptors. In response to CNSC staff's request, Cameco submitted air and liquid EBRLs that align with the [Ontario Regulation 419/05 Air Pollution – Local Air Quality](#) and [Canadian Council of Ministers of the Environment \(CCME\)– Protection of Aquatic Life Guidelines](#), respectively. CNSC staff reviewed and accepted Cameco's revised release limits for the CFM facility and have included them in Appendix A of the proposed licence. The Commission is satisfied that the revised release limits are conservative and are protective of the public and the environment.
40. CNSC staff submitted that, through its [Independent Environmental Monitoring Program \(IEMP\)](#), CNSC staff took samples from publicly accessible areas around the CFM site to verify that the public and the environment surrounding the facility are safe. CNSC staff completed IEMP campaigns around the CFM site in 2014, 2015, 2017 and 2020. The results from the most recent campaign (2020) indicated that concentrations of uranium in air, water, and soil around the CFM facility were well below guideline levels. Further, CNSC staff reported that the results from each of the IEMP campaigns indicate that the public and the environment surrounding the CFM facility are protected, and no human health impacts are expected.¹⁴ The Commission is satisfied that the results of the CNSC's IEMP campaigns indicate that the health of persons and the environment around the CFM site remain protected.
41. The intervention by CARN (CMD 21-H105.6) raised concern regarding the impacts of climate change and potential flooding on the CFM facility. The Commission notes that, during the [2012 licence renewal hearing for CFM](#), CNSC staff stated that there have been two flood studies for the area around the CFM facility, both of which used the maximum 100-year flood event and probable maximum flood in the area. Both studies concluded that the facility would not be impacted by the probable maximum rainfall event in the area. The Commission's view is that, since the probable maximum flood criteria were used, the continued reliance on the studies is acceptable for the purpose of a 1-year licence renewal.
42. CNSC staff submitted that five action level exceedances related to the environmental protection SCA occurred at the CFM facility over the current licence term. CFM investigated each exceedance and implemented corrective actions as required. CNSC staff reviewed CFM's response to each event and determined that CFM responded appropriately to each event. CNSC staff also determined that the action level exceedances did not impact the public or the environment. The Commission is satisfied

¹³ The DRL for a given radionuclide is defined as the release rate that would cause an individual of the most highly exposed group to receive, and be committed to, a dose equal to the regulatory annual dose limit.

¹⁴ [IEMP results](#) for the CFM facility are available on the CNSC's website.

that CFM implemented adequate corrective actions in response to the five environmental action level exceedances.

Conventional Health and Safety

43. CFM is required to implement a conventional health and safety program that complies with the [Canada Labour Code](#)¹⁵ and the [Canada Occupational Health and Safety Regulations](#).¹⁶ Cameco submitted that CFM has a strong conventional health and safety program in place at the CFM facility to manage non-radiological workplace safety hazards and to protect personnel and equipment. Cameco provided details on CFM's health and safety program at the CFM facility, including information on key program components, employee training, the Joint Health and Safety Committee, and the use of personnel protective equipment. CNSC staff completed 5 inspections of CFM's conventional health and safety program over the current licence period. CNSC staff determined that the conventional health and safety program in place at the CFM facility meets regulatory requirements. The Commission is satisfied that CFM has implemented a conventional health and safety program at the CFM facility that meets requirements and will protect personnel from conventional safety hazards.
44. Cameco submitted that, in 2020, CFM achieved 5 years without a lost-time injury (LTI) at the CFM facility. CNSC staff reported that one lost-time injury occurred at the CFM facility over the current licence period which resulted in one day of lost time. CNSC staff reported in the [Regulatory Oversight Report for Nuclear Processing, Small Research Reactor and Class IB Accelerator Facilities: 2015](#) that CFM performed adequate corrective actions in response to the LTI.

4.2.2 Conclusions on CFM's Performance

45. The Commission is satisfied that CFM has adequate programs 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 1-year licence term. The Commission comes to its conclusion noting that:
- CNSC staff conducted over 25 inspections at the CFM facility over the current licence period and rated CFM's performance in each SCA as "satisfactory".
 - CNSC staff verified that CFM has implemented the appropriate corrective actions in response to CNSC regulatory findings over the current licence term.
46. The Commission is satisfied that CFM has a radiation protection program in place to protect workers, the public and the environment from radiation hazards associated with the CFM facility. The Commission bases its conclusion on the following:

¹⁵ R.S.C., 1985, c. L-2

¹⁶ SOR/86-304.

- CNSC staff have performed inspections of CFM's radiation protection program at the CFM facility and verified that it meets regulatory requirements.
 - Radiation doses to workers at CFM were well below regulatory limits during the current licence period and no worker received a radiation dose in exceedance of the CNSC's regulatory limits.
 - CFM has implemented adequate corrective actions in response to radiation protection related action level exceedances.
47. The Commission is satisfied that CFM has an environmental protection program in place at the CFM facility that has, and will continue to, protect the health and safety of persons and the environment surrounding the CFM site. The Commission comes to its conclusion based on the following:
- CNSC staff have conducted inspections of CFM's environmental protection program and confirmed that it meets regulatory requirements.
 - Effluent monitoring data has confirmed that that CFM has maintained liquid and airborne releases of uranium from the CFM facility within regulatory limits.
 - Environmental monitoring data has shown that doses to the public from the CFM facility remain within regulatory limits, and the results of the CNSC's IEMP campaigns indicate that the health of persons and the environment around the CFM facility remain protected.
 - CFM has maintained an ERA for the CFM facility which is compliant with regulatory requirements and is supported by environmental monitoring data.
 - The revised release limits are conservative and are protective of the public and the environment.
 - CFM implemented adequate corrective actions in response to the five environmental action level exceedances.
48. The Commission is satisfied that CFM has implemented a conventional health and safety program at the CFM facility to protect the safety of workers and the public from non-radiological hazards over the proposed licence period. The Commission bases its determination on the fact that CNSC staff have determined, through inspections, that CFM's conventional health and safety program meets regulatory requirements. The Commission notes that CFM has experienced few lost-time injuries at the CFM facility over the current licence period.

4.3 Indigenous Engagement

49. The common law duty to consult with Indigenous peoples applies when the Crown contemplates action that may adversely affect Aboriginal 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 peoples. The CNSC ensures that its licensing decisions under the NSCA

uphold the honour of the Crown and its constitutional obligations pursuant to section 35 of the *Constitution Act, 1982*.¹⁷

50. The duty to consult is engaged wherever the Crown has “knowledge, real or constructive, of the potential existence of an Indigenous right or title and contemplates conduct that might adversely affect it”.¹⁸ Licensing decisions of the Commission, where Indigenous interests may be adversely impacted by its decision, will therefore engage the duty to consult, and the Commission must be satisfied that the duty has been met prior to making the relevant decision.
51. Cameco is not requesting any changes to the authorized activities or terms and conditions of the current CFM licence in its 1-year licence renewal application for the CFM facility, however, CNSC staff are recommending the addition of new environmental release limits to Appendix A of the renewed licence. The Commission concludes that the renewal of existing authorized activities and the addition of more conservative environmental release limits does not give rise to novel adverse impacts.
52. CNSC staff identified the following First Nation and Métis communities who may have an interest in Cameco’s licence renewal application due to the proximity of their communities, treaty areas and/or traditional territories to the CFM facility or due to their previously expressed interest:
 - Williams Treaties First Nations
 - Alderville First Nation
 - Chippewas of Beausoleil First Nation
 - Chippewas of Georgina Island
 - Chippewas of Rama First Nation
 - Curve Lake First Nation
 - Hiawatha First Nation
 - Mississaugas of Scugog Island First Nation
 - Métis Nation of Ontario
 - Mohawks of the Bay of Quinte
53. CNSC staff reported that, in April 2021, CNSC staff sent letters of notification to the list of interested First Nation and Métis communities, providing information on Cameco’s application and details on how to participate in the hearing process. CNSC staff also meet monthly with the Curve Lake First Nation (CLFN) as a part of the Terms of Reference to discuss the operations of CNSC regulated facilities. In June 2021, CNSC staff gave a presentation to the CLFN regarding to the CFM licence renewal request. CNSC staff submitted that it had not received specific concerns from Indigenous Nations and communities regarding Cameco’s licence renewal application.

¹⁷ *Constitution Act, 1982*, Schedule B to the *Canada Act 1982*, 1982, c. 11 (U.K.).

¹⁸ *Haida Nation v. British Columbia (Minister of Forests)*, 2004 SCC 73 at para 35.

54. On Cameco's Indigenous engagement efforts, Cameco submitted that it sent letters to the identified Indigenous Nations and communities to inform them of the licence renewal application and to invite their participation. Cameco reported that, in response to the interest expressed by the CLFN, Cameco met with the CLFN. Cameco also submitted that it provides its Quarterly Compliance Monitoring and Operational Performance Report and Annual Compliance Report to the CLFN, the Mississaugas of Scugog Island First Nation, the Hiawatha First Nation, and the Alderville First Nation. The Commission encourages Cameco to continue its engagement with all interested Indigenous Nations and communities.
55. The intervention by CLFN (CMD 21-H105.5) acknowledged the engagement efforts made by CNSC staff and Cameco and did not raise specific concerns related to the licence renewal application. The CLFN provided recommendations for improved engagement and suggestions for CNSC staff to improve the language used in its submissions in relation to Indigenous rights and engagement. The Commission encourages CNSC staff to discuss opportunities to address these recommendations with the CLFN.
56. The Commission is satisfied that this application for a 1-year licence renewal does not change the activities authorized under the current licence and will not cause novel adverse impacts to any Aboriginal or treaty rights. The Commission notes that both CNSC staff and Cameco engaged with the identified Indigenous Nations and communities to notify them of the application and encourage their participation in the hearing process. The Commission also acknowledges the efforts of Indigenous Nations and communities to engage with both Cameco and CNSC staff, as well as their efforts to contribute to the hearing process.
57. Efforts made by CNSC staff with regard to Indigenous engagement are key to the important work of the Commission toward reconciliation and relationship-building with Canada's Indigenous peoples. The Commission is satisfied that, for this licence renewal application, the Commission's responsibility to uphold the honour of the Crown and its constitutional responsibility with regard to the duty to consult has been satisfied. 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.

4.4 Public Information

58. The CNSC requires all Class I nuclear facility licensees to implement and maintain a public information program (PIP) to effectively communicate information related to the health, safety and security of persons and the environment, and other issues associated with nuclear facilities to the public. Cameco submitted that CFM has a mature PIP in place to inform the residents of the Town of Port Hope and surrounding community of its activities at the CFM facility. Cameco maintains a [community website](#) to communicate information on its Ontario facilities and submitted that its annual public

interest polling has consistently shown a high level (~90%) of community support for its continued operations in Port Hope. CNSC staff reported that CFM's PIP meets the requirements of [REGDOC-3.2.1 Public Information and Disclosure](#).

59. The Commission is satisfied that CFM has an effective public information program in place to communicate information on its activities over the proposed licence term to the public. The Commission notes that CNSC staff determined that CFM's PIP meets regulatory requirements.

4.5 Financial Guarantee

60. CFM is required to maintain a financial guarantee, per condition 12.2 of its current licence. The Commission approved CFM's financial guarantee of \$21 million, maintained in the form of an irrevocable letter of credit, in [November 2017](#). CNSC staff reported that, in May 2021, Cameco submitted CFM's updated Preliminary Decommissioning Plan (PDP) to the CNSC, in line with the 5-year review cycle. CFM identified that it had reduced the volume of radioactive contaminated waste at the CFM facility by approximately 70% since 2015, thus reducing the liability of future decommissioning costs. CFM also identified reductions to other indirect decommissioning costs. As a result, CFM proposed a revised financial guarantee of \$10.8 million in the form of an irrevocable letter of credit.
61. The interventions by the PHCHCC (CMD 21-H105.7) and the CLFN (CMD 21-H105.5) raised concern regarding the adequacy of the financial guarantee for the CFM facility. CNSC staff submitted that it verified the revised financial guarantee in accordance with the updated PDP and assessed the cost estimate against the criteria in CNSC [G-206: Financial Guarantees for the Decommissioning of Licensed Activities](#). CNSC staff found the revised financial guarantee to be acceptable and confirmed the letter of credit to be an acceptable financial instrument per G-206. The Commission is satisfied that the revised cost estimate and financial guarantee of \$10.8 million is sufficient, noting that CFM has substantially reduced the amount of radioactive waste at the CFM facility. The Commission accepts the new financial guarantee amount in the instrument of a letter of credit and directs CFM to provide the original financial guarantee instrument within 90 days of the issuance of this decision.

4.6 Cost Recovery

62. As a Class IB licensed facility, the CFM facility is subject to the requirements of Part 2 of the [Canadian Nuclear Safety Commission Cost Recovery Fees Regulations](#). CNSC staff confirmed that CFM has consistently paid its cost recovery fees in full during the current licence period. The Commission is of the view that CFM will continue to pay its cost recovery fees over the proposed licence period.

4.7 Nuclear Liability Insurance

63. CFM is expected to meet obligations for nuclear liability coverage under the [Nuclear Liability and Compensation Act](#) for the CFM facility. Cameco submitted supporting documentation to CNSC staff demonstrating that CFM has nuclear liability insurance in place for the CFM facility. The Commission is satisfied that CFM will continue to have nuclear liability insurance in place for the CFM facility over the proposed licence term.

4.8 Licence Conditions, Licence Length and Delegation of Authority

64. Cameco has requested that CFM's licence for the CFM facility be renewed for a period of 1 year as Cameco intends to apply for a longer-term licence renewal for the CFM facility in 2022. Cameco did not request any changes to the authorized activities, terms and conditions, or format of CFM's current licence. CNSC staff recommended that revised environmental release limits be included in Appendix A of the renewed licence, as described in section 4.2.1 of this Record of Decision. CNSC staff also recommended that the Commission accept Cameco's request for a licence period of 1 year, with an expiry date of February 28, 2023.
65. There are six licence conditions (LC) in the proposed CFM licence that contain the phrase "the Commission or a person authorized by the Commission". These licence conditions are identical to those in the current licence. For licence conditions 1.4, 2.4, 6.2, 8.2, and 12.2, CNSC staff recommended that the Commission delegate its authority, for the purposes described in each condition, 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

For licence condition 14.2, CNSC staff recommended that the Commission delegate its authority, as described in the condition, to the following CNSC staff:

- Director, International Safeguards Division
 - Director General, Directorate of Security and Safeguards
 - Vice-President, Technical Support Branch
66. The Commission is satisfied that a 1-year licence term is appropriate, given Cameco's intention to apply for a longer-term licence renewal for the CFM facility in 2022. The Commission accepts the licence as proposed by CNSC staff. The Commission also accepts CNSC staff's recommendation to delegate its authority, for the purposes described in licence conditions 1.4, 2.4, 6.2, 8.2, 12.2, 14.2. The Commission notes that

no new delegations of authority are being requested in addition to those authorized in the current licence.

5.0 CONCLUSION

67. The Commission has considered Cameco's application to renew the nuclear fuel facility licence for the CFM facility for a 1-year period. The Commission has also considered the information and submissions of Cameco and CNSC staff, as well as the written interventions provided by intervenors for the hearing. Based on its consideration of the evidence on the record for this hearing, the Commission accepts the revised financial guarantee of \$10.8 million and delegates authority as outlined in section 4.8 of this Record of Decision. The Commission, pursuant to section 24 of the *Nuclear Safety and Control Act*, renews the Class IB nuclear fuel facility licence issued to Cameco Fuel Manufacturing Inc. for its fuel manufacturing facility located in the Municipality of Port Hope, Ontario. The renewed licence, FFL-3641.00/2023, is valid until February 28, 2023.



Indra L. Maharaj
Member,
Canadian Nuclear Safety Commission

February 14, 2022

Date

Appendix A – Intervenors

Intervenors	Document Number
Municipality of Port Hope	CMD 21-H105.2
Canadian Nuclear Association	CMD 21-H105.3
Canadian Nuclear Workers' Council	CMD 21-H105.4
Curve Lake First Nation	CMD 21-H105.5
Citizen's Against Radioactive Neighbourhood	CMD 21-H105.6
Port Hope Community Health Concerns Committee	CMD 21-H105.7
Peter Harris	CMD 21-H105.8