Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

CMD 22-H12.4

File / dossier : 6.01.07
Date: 2022-09-16
Edocs: 6884013

Oral Presentation

Written submission from the Canadian Nuclear Isotope Council

In the Matter of the

Cameco Fuel Manufacturing Inc.

Application to Renew the Class IB Nuclear Fuel Facility Licence for Cameco Fuel Manufacturing Inc. in Port Hope, Ontario

Commission Public Hearing

November 23-24, 2022

Exposé oral

Mémoire du Canadian Nuclear Isotope Council

À l'égard de

Cameco Fuel Manufacturing Inc.

Demande de renouvellement du permis d'exploitation de l'installation de combustible nucléaire de catégorie IB pour Cameco Fuel Manufacturing Inc. à Port Hope (Ontario)

Audience publique de la Commission

23 et 24 novembre 2022

Canada

September 14, 2022

Senior Tribunal Officer, Secretariat
Canadian Nuclear Safety Commission
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Re: Cameco Fuel Manufacturing Application for a Class 1B Fuel Facility Operating Licence Renewal (November 23 and 24, 2022 Public Hearing)

Dear President and Commission Members,

On behalf of the Canadian Nuclear Isotope Council (CNIC), we are pleased to support Cameco Fuel Manufacturing's application for its Class 1B Fuel Facility Operating Licence for a 20-year period.

The Canadian Nuclear Isotope Council (CNIC) is an independent organization consisting of representatives within the Canadian health sector, nuclear industry, and research bodies, convened specifically to advocate for our country's role in the production of the world's isotope supply. The CNIC serves as a voice in safeguarding the continued availability of isotopes, ensuring our public policies are risk-informed and science-based, and support the highest levels of public health and safety.

Cameco Fuel Manufacturing is a member of the CNIC and provides its customers, who produce a significant portion of our energy in addition to cutting-edge medical isotopes, with essential products in the nuclear supply chain. With decades of experience, Cameco has a long history of safe, responsible operations and expertise.

Around the world, nuclear isotopes are used for a variety of modern medical procedures and treatments, including in diagnostic imaging and precise radiotherapeutic treatments of illnesses like cancer and heart disease. Cameco directly contributes to the production pipeline of these critical isotopes by creating the fuel bundles and reactor components needed to power CANDU nuclear reactors.

Cameco is one of only two fuel fabrication suppliers that serve Canada's reactor fleet and is the largest domestic fabricator of zirconium reactor components for CANDU reactors located around the world. The fuel bundles and reactor components produced at Cameco play an important role in nuclear industries here in Canada and globally, powering our communities and producing life-saving isotopes.

Exclusively using fuel bundles from Cameco, Ontario's Bruce Power produces nuclear power and life-saving medical isotopes, like Cobalt-60. Cameco manufactures specialized adjusters sets containing Cobalt-59, which can then be irradiated in reactors to produce Cobalt-60 isotopes. The Cobalt-60 produced at Bruce Power is used to sterilize over 40% of the world's single-use medical devices. Particularly during the Covid-19 pandemic, this critical isotope helped prevent the spread of harmful disease and kept our frontline workers and communities safe.

Over 70% of the world's supply of Cobalt-60 is produced in Canada's nuclear power plants. Without nuclear reactors, powered by fuel bundles from Cameco, there would be no source of Cobalt-60.

Lutetium-177 is also produced in Canada's nuclear reactors, which is used in targeted radionuclide therapy to treat cancer. Lutetium-177 is attached to a peptide or protein and when injected in a patient, it can "seek-and-destroy" cancer cells with limited harm to the surrounding healthy tissues. These revolutionary treatments would not be otherwise possible without nuclear power and isotopes. In 2021, Cameco fabricated the first-of-its-kind Target Finger Tube assembly which houses the Lutetium targets in Bruce Power's reactor, allowing for safe production of Lutetium-177 isotopes in Canada.

For the last half-century, Canada has been a global leader in the research, development, and production of medical isotopes and pharmaceuticals. The world continues to rely on Canada for its supply of critical isotopes, and the CNIC was established to ensure this leadership can continue. As a member of the CNIC and a supplier of essential fuel components, Cameco's importance to the isotope sector is clear.

As a current Class 1B Fuel Facility Operating Licence holder, Cameco has been safely producing fuel bundles since 1965. Cameco has since grown to become one of the largest employers in Northumberland County, employing 600 people at its Port Hope & Cobourg operations. Cameco also contributes to its local community by utilizing a variety of local suppliers and contractors. More broadly, the wider Canadian nuclear industry includes over 76,000 high-value jobs, which demonstrates the strength and size of this important sector fuelled by Cameco.

A Licence Renewal for a 20-year term will allow Cameco to continue operating its facility to fuel reactors in Canada and internationally, and contribute to the production of important medical isotopes. A 20-year licence term will add workforce stability for Cameco's employees in addition to certainty for customers, which will benefit the nuclear supply chain and the local economy.

Additionally, increasing the amount of uranium processed at Cameco in a year to 1,650 tonnes of uranium as UO_2 will allow the facility to operate at its actual production capacity and meet changes in supply and demand in the supply chain. It is estimated that the global market for medical isotopes will grow 15% per year to reach between $14 and $33 billion US. Canada can only take advantage of these optimistic figures with sufficient supply of fuel bundles and components to power our reactors. Canada is reliant on companies like Cameco to continue its position as a global leader in the field of nuclear isotopes.

For these reasons, the CNIC supports Cameco's application for a Class 1B Licence Renewal. Cameco is an important part of Canada's nuclear ecosystem and supports job creation and investment.

The CNIC is thankful for the invitation to intervene in this process and wishes to provide its insight through this written submission in addition to an oral presentation.

Sincerely,

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