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**Supplementary Information** 

Presentation from Cameco Corporation

Renseignements supplémentaires

Présentation de Cameco Corporation

In the Matter of the

À l'égard de

**Blind River Refinery** 

Raffinerie de Blind River

**Application to renew licence for Cameco Corporation's Blind River Refinery**  Demande de renouvellement de permis pour la raffinerie de Blind River appartenant à Cameco Corporation

**Commission Public Hearing** 

Audience publique de la Commission

November 24, 2021

**24 novembre 2021** 





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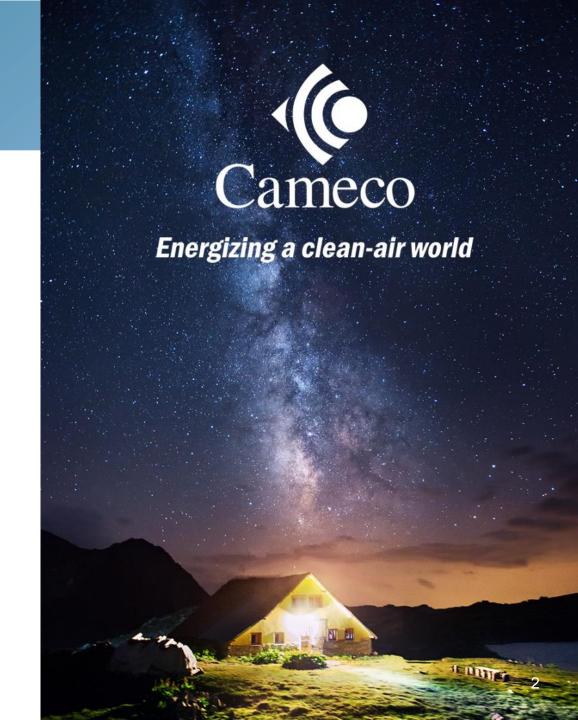
# CNSC Licence Renewal Hearing Blind River Refinery

**November 24, 2021** 

CMD 21-H9.1A

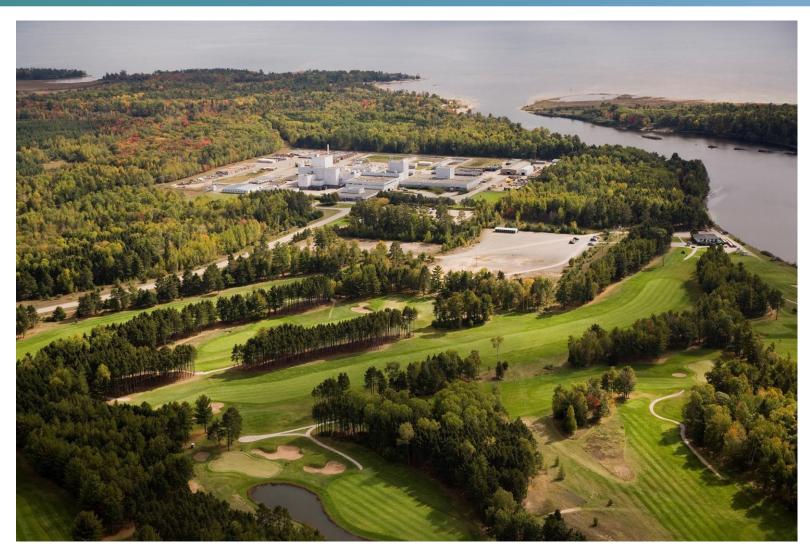
#### Vision and Values

- Our Vision is aligned with the world's growing need for carbonfree energy
- Our Values
  - Safety and Environment
  - People
  - Integrity
  - Excellence



# **Blind River Refinery**





- Situated at the confluence of the Mississaugi River and Lake Huron
- Located approximately 2 km south of the Mississauga First Nation and 5 km from the Town of Blind River

# **Blind River Refinery**



- Safely operating since 1983
- World's largest commercial uranium refinery
- CNSC licensed site









100% Cameco Ownership

140 Employees

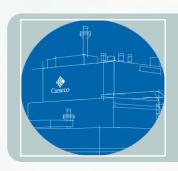
Licensed to 2022 by the Canadian Nuclear Safety Commission Licence Capacity 18,000 kg U as UO<sub>3</sub>

# **Blind River Refinery**





BRR receives and processes natural uranium concentrates from around the world to produce uranium trioxide (UO<sub>3</sub>)



The majority of the  $UO_3$  produced is shipped to Cameco's Port Hope Conversion Facility, where it is converted into either uranium dioxide ( $UO_2$ ) or into uranium hexafluoride ( $UF_6$ )

#### **Successful Licence Term**



#### **Environmental Performance**

- All process emissions maintained at several orders of magnitude below safe release limits
- No action level exceedances during 10-year term

#### Safety

- World class safety performance
- In June, celebrated 15 years without a Lost Time Injury (over 4 million hours)

#### **Community Support**

• 2021 polling – 96% of residents support Blind River Refinery operations

# Licence Renewal Request



Renewal for a 10-year licence term

Maintain current production limit of 18,000 tU as UO<sub>3</sub>

Continued authorization to conduct the necessary activities required for, associated with or arise from the production of UO<sub>3</sub>

Maintain current approval to install and commission equipment to increase annual production capacity up to 24,000 tU as UO<sub>3</sub> as warranted

Approval of the proposed financial guarantee of \$57.5 million

#### Commitment to Future





Committed to continual improvement



Committed to open, timely and meaningful communications



Continued community partnership and support



Strengthen relationship with MFN

#### COVID-19





#### March 2020

Work from home Implement new protocols Suspend contract work Cancelled tours indefinitely



#### May 2020

Restarted UF<sub>6</sub> plant in and Blind River Refinery as planned



#### **Jan/Feb 2021**

Voluntary rapid testing offered



#### Nov 2021

Implemented requirement to be fully vaccinated

Temporarily suspended operations at UF<sub>6</sub> plant in Port Hope and Blind River Refinery



**April 2020** 

Mandatory masks throughout facilities

**Sept 2020** 

Approved by Ontario government to receive rapid tests – conducted weekly



**March 2021** 

Safety of our workers, their families and our communities has been, and remains, our top priority Adjusted protocols according to government and public health requirements

#### COVID-19



May 2020 – established the COVID-19 Relief Fund



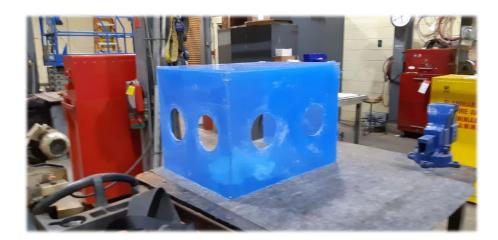
\$250,000 available to Northumberland County and Blind River area organizations impacted by the pandemic

12 organizations supported in Blind River area

Donated P100 masks and sanitizer to Children's Aid and the local hospital

Assisted hospital with creating plexiglass barriers

Committed to continuing to support our communities going forward



# Strong Management Systems





Mature and fully implemented management system that is anchored by our **Quality Management Program** 



Quality Management Program guides safety and control areas



Regular internal and regulatory audits



Strong safety and reporting culture

#### Safety is Our Top Priority



No lost time accidents during the current licensing period

Continued use of a safety charter by/for all employees

No job is so important we can't take the time to do it safely

Strong safety culture

Mature Health & Safety Management program



# **Focus on Training**



Systemic approach to training



Build skills and knowledge to ensure compliance



Implementation
of the
Supervisor
Radiation
Protection
training package

Strong training focus is a key contributor to our strong safety performance

# **Emergency Preparedness**



Highly trained, proficient emergency response organization

Regular tabletop exercises, drills and simulations

All members require 3-day training at Lambton College and routine re-training

Sudbury Fire department provides "live-fire" training annually



#### **Radiation Protection**





Extensive and mature Radiation Protection Program meets regulations



Radiation exposures controlled through:

- Engineering
- Administrative
- Training
- Zone control
- PPE
- Permits



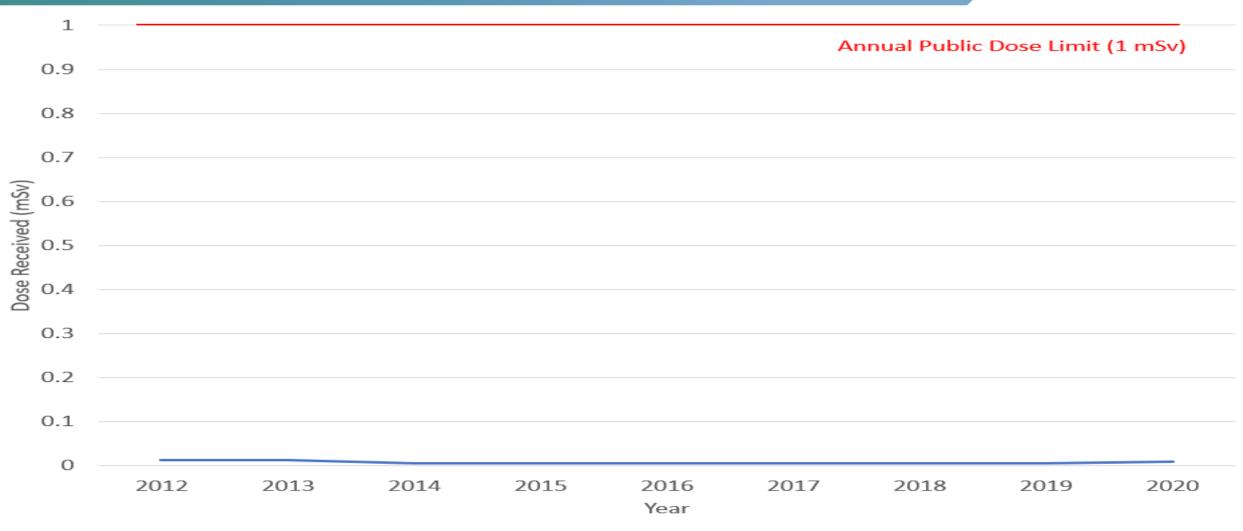
Comprehensive monitoring of workers and their work areas

Committed to keeping radiation doses As Low As Reasonably Achievable (ALARA

#### **Radiation Protection**



Total Effective Dose (mSv) Current Licensing Period



#### **Environmental Protection**





Robust and comprehensive environmental monitoring program measures quality of stack emissions, liquid effluent discharges and condition of surrounding environment



Strong environmental performance throughout current licence period



All stack and liquid discharges were well below regulatory limits and action levels



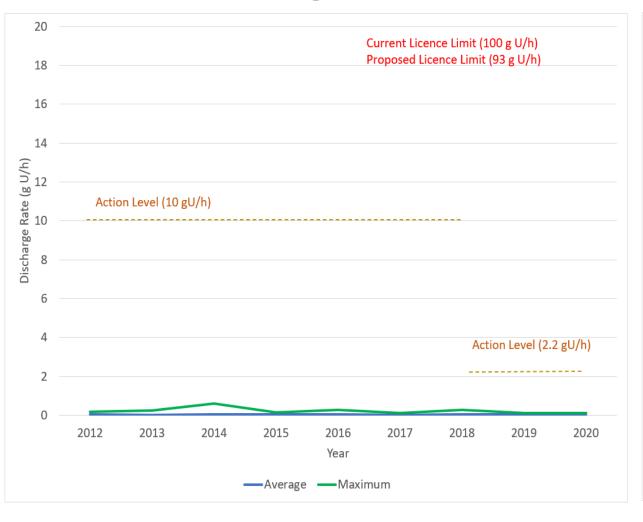
ERA review in 2020 concluded human health and ecological risks remain negligible

#### **Stack Uranium Emissions**

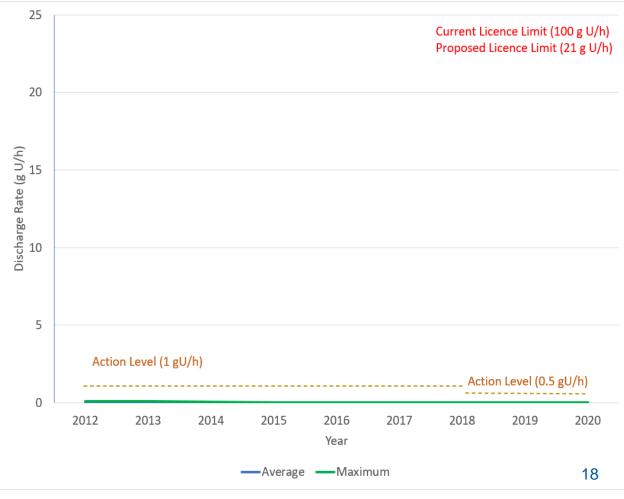
DCEV and Absorber: Current Licence Period



#### **DCEV**



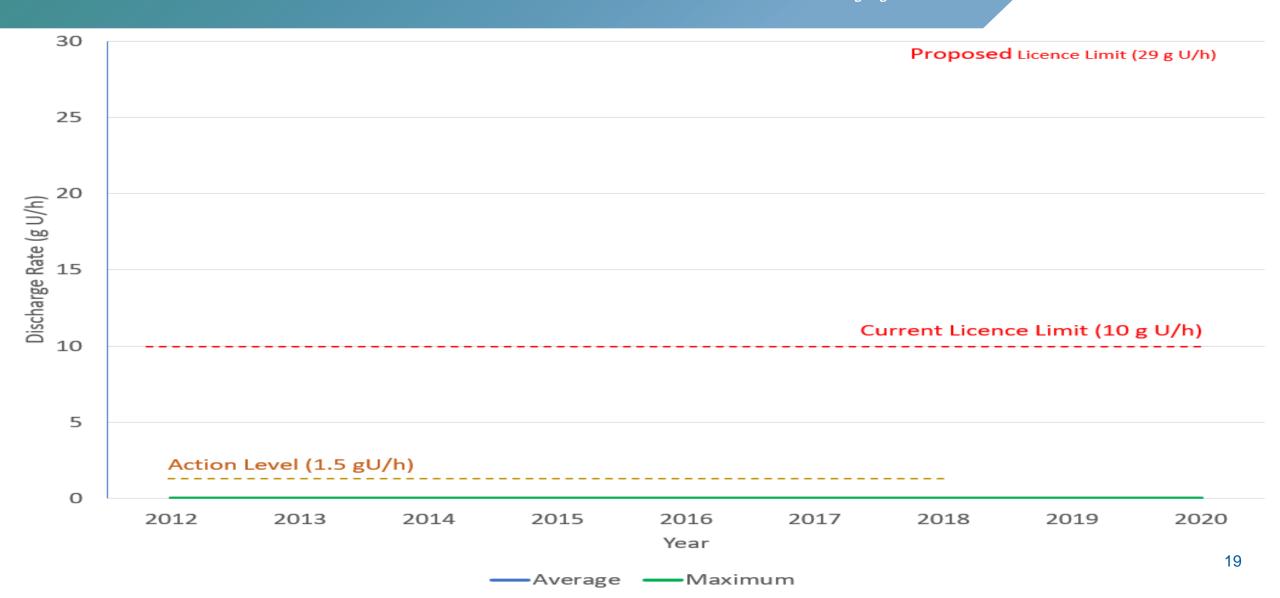
#### **Absorber**



#### **Stack Uranium Emissions**

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Incinerator – Current Licence Period



#### Liquid Effluent Discharges Current Licence Period

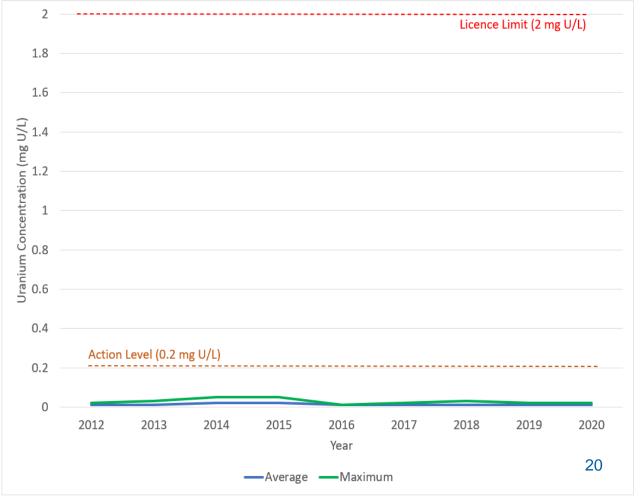


#### **Nitrate in Effluent**

#### Licence Limit (1000 mg NO<sub>2</sub>/L) 900 Nitrate Concentration (mg NO3/L) 200 Action Level (120 mg NO<sub>3</sub>/L) 100 2012 2013 2014 2015 2016 2017 2018 2020 2019 Year

—Average — Maximum

#### **Uranium in Effluent**



# **Waste Management Program**



Implemented improved waste segregation at all Ontario facilities to reduce the amount of radioactive waste generated

- 40,000 drums of uranium product sent to a uranium mill for uranium recovery
- 250,000 empty drums processed and decontaminated

Over the current licence period, significantly reduced inventory of scrap drums and other stored wastes, including:

- 25,000 drums of marginally contaminated materials to a permitted hazardous waste site
- 750,000 kg of contaminated combustible material incinerated

LOT: C0231 S85 LOT: C0231 S85 DRUM: 31 DATE: 05/2015 S

LOT: CO231 GROSS AND DRUM: 32 TARE AND DATE: 05/2016 NET

# **Public Information Program**



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# We make information about of operations and activities available several ways:

- Meetings/presentations
- Tours (suspended due to COVID-19)
- Social Media







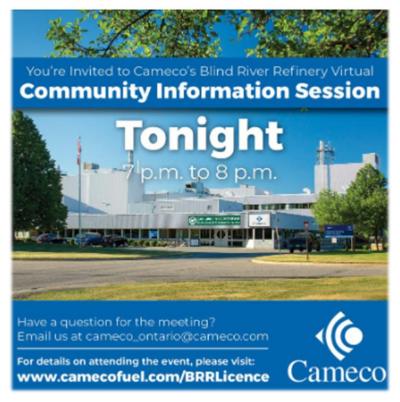
Camecofuel.com

#### **Public Disclosure Protocol**

- Public-Disclosure-Protocol-Cameco-Ontario-Operations.pdf (camecofuel.com)
- Environment & Safety Refining: Blind River Fuel Services - Businesses - Cameco



Cameco's Blind River Refinery is holding a Virtual Community Information Session from 7 to 8 p.m. tonight. This information session will provide the public with details on our operations and a forum to ask questions. Click here to join at 7 p.m. tonight: https://bit.ly/3aJVpNx

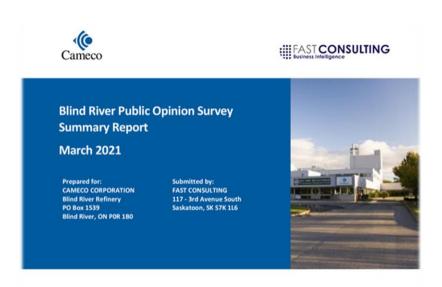


# **Public Information Program**



# Public Opinion Polling

- Conducted by a third-party
- Consistently 93%+ support for the Blind River Refinery since 2009 when polling started
- 96% support in 2021
- Report is available on our website



#### Collaboration





Signed Memorandum of Understanding in 2010



Meet regularly with Chief and Council



Provide quarterly and annual compliance reports



40 projects supported over current licence period



Committed to continuing a positive, respectful path together and addressing any concerns with transparent information

# **Community Investment**





Proud to operate in Blind River and committed to making a difference and enhancing the quality of life where we live, work and play



Community investment program, which provides a mix of financial and volunteer support, focuses on four key areas



17 important community projects supported through the Employee Giving Campaign since it began in 2004



### **Diversity and Inclusion**





Cameco has made formal commitments to diversity and inclusion









# **Continual Improvement**





Annual objectives to improve Safety and Health, Environment, Radiation Protection and Emergency Response



Non-conformance and corrective action process provides an effective framework for investigations and to prevent re-occurrence







Operational Reliability and Lean Manufacturing programs implemented



Implemented more than 20 new CNSC REGDOCs and CSA Standards

#### **Future Success**



Committed to continual improvement

Cameco is qualified to carry out the activities permitted under our licence

**World leader in safety** 

Strong environmental performance

**Strong community support** 



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# Questions





