



Cluff Lake Project Licence Renewal

Commission Hearing
May 15, 2019
CMD 19-H3.A



CNSC Staff Presentation



Claude Waste Rock Pile





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CNSC Staff's Presentation

- Provide a review of Orano's licence application:
 - Proposed licence and draft Licence Conditions Handbook (LCH)
- Summarize CNSC staff's assessment on:
 - Current site status
 - Orano's safety performance since last mid-term update in 2016
- Provide CNSC staff's conclusions and recommendations



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FACILITY OVERVIEW



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Cluff Lake Project Description (1/4)

Decommissioned Tailings Management Area



Decommissioned Claude Waste Rock and Pit



Cluff Lake



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Cluff Lake Project Description (2/4)



View of Claude Lake from on top of horizontal drains. August 2018.





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Cluff Lake Project Description (3/4)



View of D-Pit Lake. August 2018.



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Cluff Lake Project Description (4/4)



View of the dam which partially surrounds the tailings management area, taken from the covered tailings (August 2018).





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Aerial Footage of Cluff Lake TMA



CNSC and Orano
staff obtained
drone footage
of the Cluff
Lake tailings
management
area (TMA)

June 2018



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REVIEW OF LICENCE APPLICATION



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Orano's Request for Licence Renewal

- Current Cluff Lake Project licence expires July 31, 2019
- Orano has applied for:
 - Licence renewal for a period of 5 years, to July 31, 2024
 - Acceptance of their Detailed Post-Decommissioning Plan (DPDP)
 - Acceptance of the value of the proposed Financial Guarantee



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Reduction in Licensed Area (1/2)

- Decommissioning has reduced overall risk of the Cluff Lake Project area
- All areas have been completely remediated and pose no immediate risk
 - Confirmed through gamma surveys of the areas
- Removal of areas not used for mining and milling from the proposed licence will allow Orano to return the surface leases to the Province



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Reduction in Licensed Area (2/2)

- CNSC staff agree with Orano and the Province that the properties proposed for removal are safe
- No restrictions to drinking boiled water, hunting, fishing or harvesting are necessary for any of the Cluff Lake properties



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Proposed Licence UML-MINEMILL-CLUFF.00/2024

- Reflecting Post-Decommissioning status of the Cluff Lake Project
- Reducing permitted activities to **possess, manage** and **store** nuclear substances
- Reduce land area under the licence to properties requiring CNSC licensing



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REGULATORY OVERSIGHT



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Environmental Protection Review

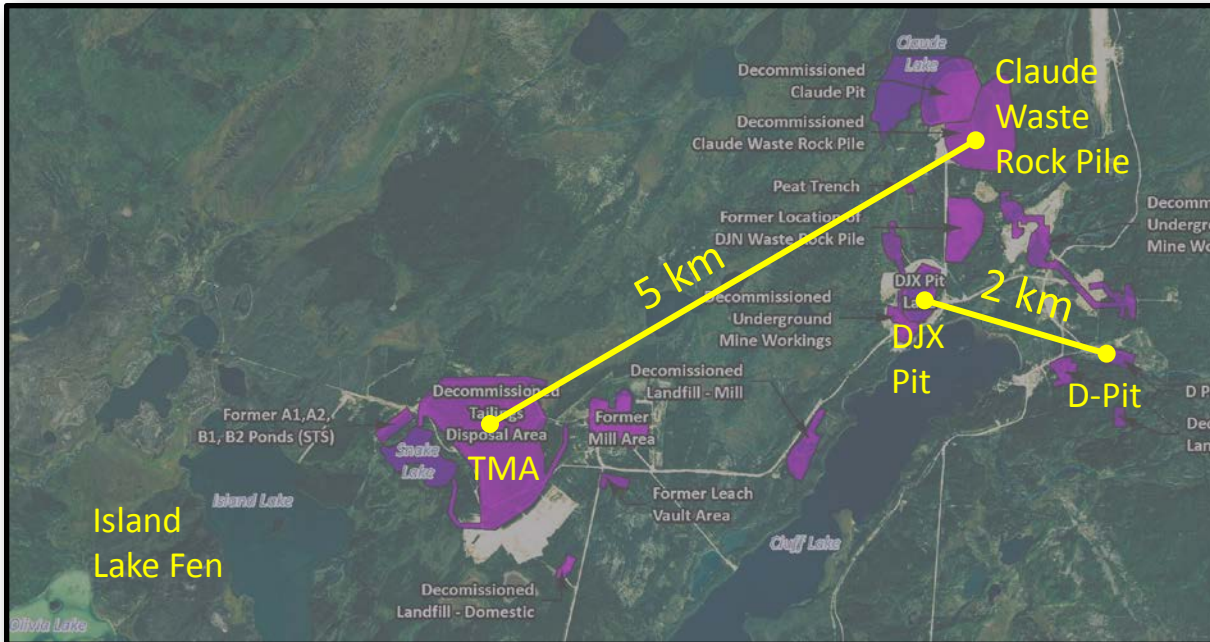
- CNSC staff performed an Environmental Protection Review (EPR) under the *Nuclear Safety and Control Act*
- Not a designated project under the *Canadian Environmental Assessment Act, 2012*

EPR concludes the licensee has, and will continue to make adequate provision for the protection of the environment and health of persons



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Overview of Site Features



Cluff Lake Tailings
Management Area



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CNSC Compliance Activities 2016-2018 (1/2)

CNSC staff conducted compliance assessment through desk-top assessments of licensee submitted documents



Cluff Lake Tailings Management Area



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CNSC Compliance Activities 2016-2018 (2/2)

Annual inspections conducted in 2016, 2017
and 2018:

- June 29, 2016 - Verify status of decommissioning;
no action items
- September 12, 2017 - Environmental protection SCA;
1 action item (training) [closed]
- June 20, 2018 – Environmental protection SCA;
no action items



CNSC Contractor sampling water



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Safety and Control Areas

The CNSC review focused on four relevant SCAs for this site. Each was assessed as Satisfactory (SA)

- Some SCAs have much reduced safety significance – considered as part of ongoing management system (--)
- Some SCAs no longer apply (n/a)



Safety and Control Area	
Management System	SA
Human Performance Management	--
Operating Performance	--
Safety Analysis	n/a
Physical Design	--
Fitness for Service	n/a
Radiation Protection	SA
Conventional Health and Safety	SA
Environmental Protection	SA
Emergency Management and Fire Protection	--
Waste Management	--
Security	n/a
Safeguards and Non-Proliferation	n/a
Packaging and Transport	n/a



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Management System SCA (1/2)

Relevant management system documentation reviewed during the last three annual inspections included:

- Surface Water Monitoring Procedures
- Document Control
- Emergency Preparedness and Response
- Occupational Health and Safety



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Management System SCA (2/2)

Well-defined corporate practices, programs and training requirements to manage the hazards and risks encountered at the Cluff Lake Project

Appropriate organization and management structures are in place



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Radiation Protection SCA

- Since 2013, Orano has not required Nuclear Energy Worker (NEW) designated staff for any of the ongoing decommissioning activities
- Since 2014, Orano has not issued dosimetry to Orano staff or contractors
- Radiological safety (doses) verified by area monitoring; modelling expected exposures in work plans

Radiation protection requirements have been met by Orano; personnel at the Cluff Lake Project area are protected



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Conventional Health and Safety SCA

- Orano's health and safety activities are defined within the Cluff Lake Management System
- During the 2016 to 2018 working season there were:
 - Zero lost-time injuries
 - Zero modified work injuries
 - Zero medical incidents

Cluff Lake Project health and safety
requirements have been met



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Environmental Protection SCA

- Currently achieving Decommissioning Surface Water Quality Objectives
- The site has no effluent discharges and no longer produces any contaminants or waste

Orano continues to make adequate protection for the environment



Fresh water diversion ditch - TMA



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CNSC Independent Environmental Monitoring Program (IEMP) at Cluff Lake (1/3)

- Verifies that public health and the environment are not adversely affected by releases to the environment around CNSC-regulated facilities
- Confirms the licensee's operations adequately protect the public and the environment
- Complements the CNSC's environmental protection compliance program activities
- Results available to the public on CNSC's IEMP Web page



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CNSC IEMP at Cluff Lake (2/3)

- Sampling conducted in August 2017
- Samples of radon in ambient air, surface water, fish, blueberries and Labrador Tea collected in publicly accessible areas off the site
- Samples analyzed for metals and radionuclides



CNSC staff sampling fish in Sandy Lake near the Cluff Lake site



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CNSC IEMP at Cluff Lake (3/3)

Radionuclides and selenium:

- Results are similar in range at both the reference and exposure locations and are within the natural background of the region
- Daily intake from fish, blueberries, water and Labrador tea remains safe for consumption
- No expected health impacts at these levels

IEMP results indicate that
people and the environment have been protected



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OTHER REGULATORY MATTERS



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Indigenous Engagement

- Cluff Lake Project area is situated within historic Treaty 8 (1899) as well as the Métis Nation-Saskatchewan Northern Region 2
- CNSC staff identified First Nation and Métis groups who may have an interest in the proposed licensing decision

Athabasca Chipewyan First Nation (Treaty 8 Territory)
Clearwater River Dene Nation (Treaty 8 Territory)
Black Lake Denesuline First Nation (Treaty 8 Territory)
Fond-du-Lac Denesuline First Nation (Treaty 8 Territory)
Ya'thi Néné Land and Resource Office
Prince Albert Grand Council
Buffalo River Dene Nation (Treaty 10 Territory)
Birch Narrows Dene Nation (Treaty 10 Territory)
The Métis Nation – Saskatchewan



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Participant Funding



PFP
Participant Funding
Program

Applicant	PFP funding granted
Ya'thi Néné Land and Resource Office	\$38,810.05
Saskatchewan Environmental Society	\$4,200
Athabasca Chipewyan First Nation	\$19,400
Clearwater River Dene Nation	\$40,360.20
Métis Nation Saskatchewan	\$32,953.80
TOTAL	\$135,724.05



CNSC staff engaging the public

CNSC's Participant Funding Program (PFP) is made available to Indigenous peoples, members of the public, and stakeholders



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Financial Guarantee (1/2)

- For all Saskatchewan mines and mills, Financial Guarantees are held in trust and accessible by the Government of Saskatchewan if the licensee is no longer able to operate the site
 - Must be reviewed and accepted by the Province
- Value is tied to the projected cost of actions necessary to safely terminate any licensed activity



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Financial Guarantee (2/2)

- Current Financial Guarantee (FG) is for C\$26.8 million
- Orano proposed a revised FG of C\$3.5 million since decommissioning work had been completed
- Province of Saskatchewan is in agreement with the proposed FG

The proposed Financial Guarantee is adequate



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Licensee Public Information Program

CNSC staff reviewed Orano's Public Information and Disclosure Program and determined that it meets the requirements of CNSC's REGDOC-3-2-1, *Public Information and Disclosure*

Orano's Public Information Program is appropriate for the level of risk and public interest in the project



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Future of Cluff Lake Project (1/2)

- Future transfer of remaining Cluff Lake properties into the Saskatchewan Institutional Control Program (ICP)
- Process for this decision by the Commission recently presented in CMD 18-M38, *Overview of the Institutional Control Program for Decommissioned Mine and/or Mill Sites in Saskatchewan*



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Future of Cluff Lake Project (2/2)

Transfer of remaining areas into the ICP requires:

- Orano demonstrating the site is protected and stable for the long-term
- Province is willing to accept the properties into the ICP
- Commission makes a decision on the application at a public hearing

Transfer expected within five years



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RECOMMENDATIONS



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CNSC Staff Recommendations (1/2)

CNSC staff recommend the Commission:

- Accept the new licensed area provided in Appendix A of the proposed licence
- Accept the revised Financial Guarantee of C\$3.5 million for the Cluff Lake Project based on the new Detailed Post-Decommissioning Plan



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CNSC Staff Recommendations (2/2)

- Renew CNSC licence, UMDL-MINEMILL-CLUFF.01/2019, with a standardized licence conditions handbook for a period of five years, expiring July 31, 2024

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