



Oral presentation

Exposé oral

**Written submission from the
Birch Narrows Dene Nation**

**Mémoire de la
Nation des Dénés de Birch Narrows**

In the Matter of the

À l'égard de

Orano Canada Inc., Cluff Lake Project

Orano Canada Inc., Projet de Cluff Lake

Request to Revoke the Current Licence and
Release the Cluff Lake Project to the
Institutional Control Program

Demande visant à révoquer le permis pour le
projet de Cluff Lake et à transférer la propriété
au Programme de contrôle institutionnel

Commission Public Hearing

Audience publique de la Commission

March 1, 2023

1^{er} mars 2023



**Orano Canada Inc.
Cluff Lake Project
Request to Revoke the Current License and
Release the Cluff Lake Project to the
Institutional Control Program**

Technical Review

January 18, 2022

Submitted by:

Birch Narrows Dene Nation



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1.0 Introduction

Birch Narrows Dene Nation (BNDN) has prepared this report as our written submission for the Canadian Nuclear Safety Commission's (CNSC) hearings on Orano Canada Inc's application for the revocation of its uranium mine and mill operating license for the Cluff Lake Mine (the Project). In this submission, we have prepared a series of technical comments and recommendations on the license revocation application with a focus on the implications and potential impacts on our Treaty and Aboriginal rights and interests. Our review includes the following documents:

- CMD 19-H02, 18-H102 - Request to Revoke the Current License and Release the Cluff Lake Project to the Institutional Control Program
- CMD 23-H8.1 - Written submission from Orano Canada Inc.
- Orano Canada Inc. Cluff Lake Project Long-Term Monitoring and Maintenance Plan
- Orano Canada Inc. Cluff Lake Project. End State Report for Provincial Institutional Control Detailed Post Decommissioning Plan, V5 R0

These technical comments and recommendations were directly informed by input from our members at a community meeting with our members held in Turnor Lake on January 11th, 2022. These comments and recommendations have been reviewed, revised, and approved by BNDN Chief and Council.

The planning, construction, operation, and closure of the Cluff Lake Mine occurred without any meaningful consultation with BNDN by industry or the Crown. As a result, there are many aspects of mining and subsequent decommissioning that have been done in a way that our community disagrees with and/or have resulted in negative environmental effects. Most of these concerns are difficult or impossible to address because of the late stage of the Project, however, where possible we believe that Orano the CNSC In addition to this written submission, BNDN intends to send representatives from our Nation to intervene at the Commission hearings scheduled for March 1 - 2, 2023.

1.1 Birch Narrows Dene Nation

Birch Narrows Dene Nation is a Denesųliné First Nation band within the meaning of the Indian Act (Canada) and an Aboriginal people within the meaning of Section 35(1) of the Constitution Act, 1982 (Canada). BNDN members have occupied the lands of Dene Nene or "Land of the People" in northern Saskatchewan since time immemorial according to our own laws and system of government. Today, BNDN is a diverse and vibrant community of Dene, Cree and Métis citizens with 812 registered members. BNDN has 3 reserves, one at Turnor Lake (IR 193B) adjoins the village of Turnor Lake Saskatchewan and is the main reserve for BNDN. Churchill Lake (IR 193A) is at the junction of Churchill Lake and Frobisher Lake, and Turnor Lake (IR 194) is on Peter Pond Lake east of Dillon, SK. BNDN's vision is a healthy, self-reliant, educated, and united community. BNDN mission is to provide good governance and create opportunities for the wellbeing of all members.

As a signatory of Treaty 10, BNDN asserts that Treaty 10 was not an agreement to surrender lands and resources. As such BNDN laws, customs and jurisdiction still apply to our Ancestral Lands. There are cultural sites and artifacts left throughout the region that are significant for our members. Our community members continue to hunt, fish, gather and trap on the lands throughout our Ancestral Lands. Any direct or cumulative impacts from development could negatively affect our ability to exercise Aboriginal and Treaty rights, including the livelihoods of those who live off the land. The lands, waters and resources throughout our Ancestral Lands are essential to the well-being and survival of our First Nation.

The BNDN Traditional Use Study Specific to Nexgen's Proposed Rook 1 Project (Firelight Research Inc., 2019) reports the following BNDN historical context:

Chief Raphael Redshilldkze signed Treaty 10 on behalf of the Clear Lake Band on August 28, 1906. Treaty 10 was based on other numbered treaties, and included the following standard hunting, trapping, and fishing rights clause:

And His Majesty the King hereby agrees with the said Indians that they shall have the right to pursue their usual vocations of hunting, trapping and fishing throughout the territory surrendered as heretofore described, subject to such regulations as may from time to time be made by the government of the country acting under the authority of His Majesty and saving and excepting such tracts as may be required or as may be taken up from time to time for settlement, mining, lumbering, trading or other purposes. (Indian Claims Commission 1995, p.56)

The Clear Lake Band later came to be known as the Peter Pond Band. This Band was separated in 1972 into the Buffalo River Band and Turnor Lake Band; today, they are known as the Buffalo River Dene Nation and the Birch Narrows Dene Nation (Indian Claims Commission 1995).

BNDN members continue to exercise our Treaty and Aboriginal rights including hunting, trapping, fishing, plant gathering and cultural/spiritual practices in the immediate area of the Rook 1 Project and throughout our Ancestral Lands. BNDN members have observed decreasing furbearer and caribou populations throughout our Ancestral Lands which the members expect to be further impacted by the proposed Rook 1 Project.

BNDN has constitutionally protected Treaty rights, inherent Aboriginal rights, Aboriginal title and interests in and to Dene Nene. BNDN must be consulted and accommodated by the Crown with respect to potential impacts on our rights.

2.0 Orano Canada's Cluff Lake Mine

The Cluff Lake Mine (the Mine) was an open pit and underground uranium mining operation about 215 km north of Turnor Lake and 75km south of Lake Athabasca in northwestern Saskatchewan. The Mine was owned and operated by Orano Canada (Orano; the Proponent) throughout the entire life of mine

(during the lifetime of the Project, Orano was referred to as AREVA and as Cogema). Mining activities at the Cluff Lake Mine started in 1980 and continued until operations ceased in 2002. Throughout the life of mine, Cluff Lake produced over 62 million pounds of yellowcake (uranium ore concentrate) and also produced 8000 ounces of gold.

In total, the Cluff Lake Mine had 2 underground mines, 4 open pit mines, an above ground tailings management area (TMA), a mill to process the ore, and several support facilities including a camp and an airstrip. All of the site infrastructure is within either the Island Creek watershed or the Cluff Creek watershed. Both watersheds flow into the Old Fort River system which flows northwest and eventually discharges into Lake Athabasca east of the Athabasca River. The Island Creek watershed was impacted by mining operations and is expected to slowly recover over time. The Cluff Creek watershed is expected to be negatively impacted from contaminated groundwater from the Claude pit and Claude waste rock stockpile seeping into Claude Lake and Claude Creek.

2.1 Closure Activities at the Cluff Lake Mine

Following CNSC's approval of closure objectives for the mine in 2003, the main mine closure activities on site occurred from 2004 until 2006. The main mine closure activities in 2004-2006 included demolition of the mill, covering the Tailings Management Area (TMA) and the Claude waste rock pile with a till cover, backfilling the Claude open pit with waste rock, flooding the DJX pit and planting trees throughout the site. Further decommissioning activities occurred in 2013 to demolish any remaining infrastructure such as the camp, water treatment facilities and other support buildings.

Since 2013, the only activities on site have been ongoing environmental monitoring programs. The environmental monitoring programs Orano has been following were also approved by the CNSC. Orano still has an active license for the Cluff Lake Mine and maintains responsibility and liability over the site.

On February 28, 2020, Orano submitted an application to the CNSC to revoke their license for the Cluff Lake Mine. If this application is successful, the long term responsibilities and control of monitoring at the site would be transferred to Saskatchewan through the Institutional Control Program (IC Program). To have their license revoked and have responsibilities for the site transferred to Saskatchewan, Orano has had to carefully follow the site decommissioning plan. Orano have also prepared a Long Term Monitoring and Maintenance Plan (LTMMP) for the Cluff Lake site and will be responsible for providing Saskatchewan with sufficient funds to cover the costs associated with the monitoring and maintenance required in the LTMMP.

The Saskatchewan IC Program was developed to allow companies to transfer long term monitoring and maintenance responsibilities for sites with radioactive wastes to the Province, while maintaining all monitoring and environmental protection requirements as described under the federal *Nuclear Safety and Control Act* legislation. If this application is successful, this will be the first modern mining project to ever be released to the Saskatchewan IC Program.

In their LTMMP and in the license revocation application, Orano acknowledges that some metals are currently elevated above water quality guidelines in Snake Lake and Island lake due to activities during operations, as these lakes received effluent from the water treatment plant and the TMA during the life of mine. Orano expects water quality to improve in these waterbodies over time.

Orano also expects water quality in Claude Lake, Claude Creek, Peter River and Cluff Lake to have increasing concentrations of metals due to seepage from the Claude Waste Rock Stockpiles entering these waterbodies via groundwater flow. The studies that Orano has undertaken indicate that BNDN members could hunt, fish, gather and trap around the mine site without any risk of suffering negative health effects. Orano's studies also suggest that plant life and wildlife living in the area is not likely to have negative health effects or contaminant build up from the elevated metals concentrations in the Cluff Creek watershed. In fact Orano's human health risk assessment concluded that the site is safe for unrestricted access and continuous human habitation without risks to human health from the Mine.

2.2 Long Term Monitoring Plans for the Cluff Lake Mine

In the LTMMP approved by Saskatchewan, Orano has proposed the frequency and types of monitoring that will take place long-term at the Cluff Lake site under the IC Program. The monitoring program is designed to assess the level of risk to human health and safety based on the model that Orano has developed and refined since closure of the mine in 2002. The program is also designed to verify the predictions Orano has made in their ecological risk assessment, and to confirm that the water impacted by the mine is meeting the water quality objectives for the site. The LTMMP also focusses on making sure that the mine features remaining on site (TMA and Waste Rock Stockpiles, open pit and underground workings) are stable. The LTMMP includes three main monitoring categories which are described in further detail here.

2.2.1 Geotechnical Monitoring

Through the geotechnical inspections and maintenance, inspectors will visit the site to ensure that the mine features still on site are stable and do not pose any risk to public safety for people using the land in the area. The mine features that inspectors will inspect are the ditches, dams and cover on the TMA, the Claude Waste Rock Stockpile cover and the cover on the Claude Pit. The inspectors will also check to make sure that there is no unsafe access to the pit lakes, landfills or the underground mine workings. If the inspectors notice any stability issues with any of these features (such as erosion on any dams or covers), the LTMMP includes budget for repairs to these features.

Proposed mine feature stability monitoring will occur every 3 years for the first 15 years, every 5 years from years 15 to 30, and every 10 years for years 30+. Public safety on site will be monitored every 10 years.

2.2.2 Surface Water Quality Monitoring

Ongoing sampling of surface water quality on site will be used as the most representative and important aspect of determining how successful the decommissioning of the Mine will be. Surface water quality monitoring will be used to validate Orano's water quality models and be used to confirm the potential effects on the receiving environment, including plants, fish and other wildlife.

Water quality modelling and sampling on site have been used to identify the key contaminants that must be required for long term monitoring on site. These contaminants are uranium, molybdenum, selenium, Radium-226, copper and cadmium. Because Orano has identified these as the contaminants of primary concern on site, the surface water quality sampling program has been designed to analyze for these contaminants at locations where they are expecting to see their highest concentrations in the receiving environment.

Proposed surface water sampling frequency is planned to take place every 3 years for the first 15 years of the IC Program, then every 5 years for years 15-30, then every 10 years for years 30+. The sampling locations are shown in Figure 6, the sampling program summary table is shown in Figure 1, and the key contaminant water quality objectives are shown in Figure 2.

Sampled Medium	Location	UTM (NAD1983 UTM Z12N)	Analytes	Frequency*
Surface Water Quality	Claude Lake (CDE1000S)	584816E 6471613N	cobalt, cadmium, selenium, nickel, uranium, sulphate	Every 3 Years (First 15 Years) Every 5 Years (Years 15 to 30) Every 10 Years (Years 30+)
	Claude Lake SW1 Extra station as per CNSC	585201E 6472726N		
	Claude Lake SW2 Extra station as per CNSC	585079E 6472562N		
	Peter River (PTR3000S)	585381E 6470483N		
	Snake Lake (ISL2000S)	579937E 6469069N	molybdenum, selenium, uranium, radium-226, sulphate	
	D Pit (BLD2000S)*	586870E 6469935N		
Surface Water Quality	Island Lake (ISL4000S) Island Creek at the Dolomites (ISL5100S)	578366E 6469168N 575316E 6469717N	molybdenum, selenium, uranium, radium-226, sulphate	
Surface Water Quality	Cluff Lake (CFF1000S) – Community	581942E 6466575N	Cobalt, cadmium, selenium, nickel, uranium, sulphate	
	Cluff Lake SW1 Extra station as per CNSC	585296E 6470269N		
	Cluff Lake SW2 Extra station as per CNSC	585053E 6470177N		
Surface Water Quality – Reference	Bridle Creek (#ISL5300s)	578359E 6470647N		
	Peter River (#PTR1000S)	586528E 6474145N		
	Douglas River (ISL6400S) - Community	585659E 6461567N		

Figure 1: Proposed LTMMP surface water quality monitoring program for the Cluff Lake Mine

TMA			
Parameter	Unit	Snake Lake	
Mo ⁽¹⁾	µg/L	73	
Se	µg/L	10	
Ra ²²⁶	Bq/L	0.11	
U ⁽²⁾	mg/L	0.088	
SO ₄ ⁽³⁾	mg/L	n/a	
Mining Area			
Parameter	Unit	Claude Lake	Peter River
Co	µg/L	20	20
Cd	µg/L	1	1
Se	µg/L	10	10
Ni ⁽⁴⁾	µg/L	25	25
U ⁽²⁾	mg/L	0.088	0.088
SO ₄ ⁽³⁾	mg/L	n/a	n/a

Figure 2: Key Decommissioning water quality objectives for the Cluff Lake Mine site (Orano Canada, 2022)

2.2.3 Sediments, Benthic Invertebrates, Fish and Vegetation

The monitoring of sediments, benthic invertebrates, fish and vegetation is not a part of the LTMMP. Because water is the primary pathway for contaminants to enter the ecosystem and thus poses a risk to humans and the environment, the LTMMP only includes geotechnical and water quality monitoring. While it is not a requirement for the LTMMP to meet its objectives, the LTMMP does include one round of sampling of sediments, benthic invertebrates, fish and vegetation twenty years after the Mine enters into the IC Program. In that single sampling event, sediments and benthic invertebrates will be gathered and analyzed from Snake Lake and Island Lake. Fish tissue will be gathered from Cluff Lake, Sandy Lake and Island Lake. Vegetation cover will be surveyed from a selection of the existing ninety-eight plot locations on the site and the subset will include at least one site each from the TMA cover, the Claude Waste Rock Stockpile, and other areas that were replanted on site.

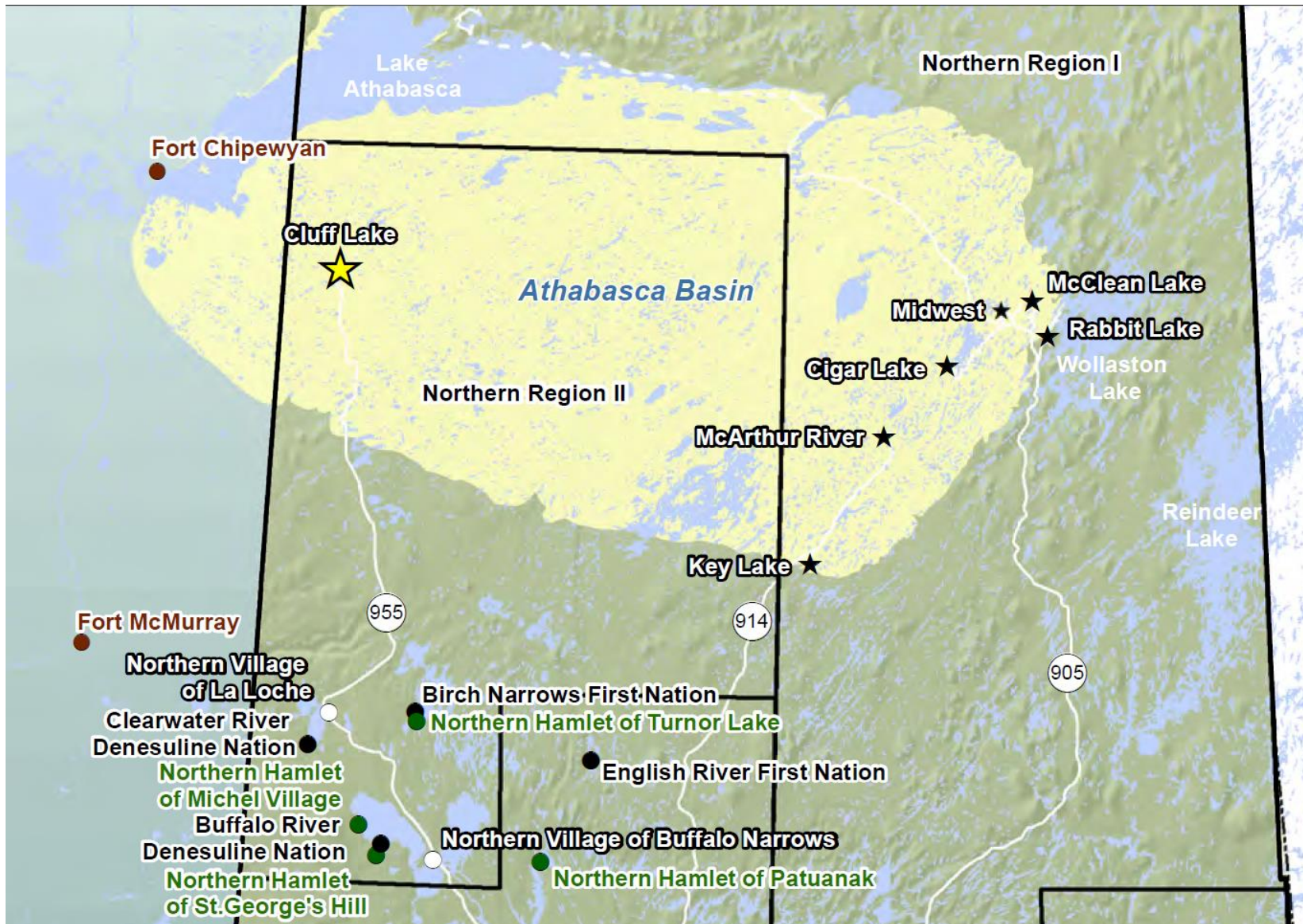


Figure 3: Location of the Cluff Lake Mine (Orano Canada, 2022)

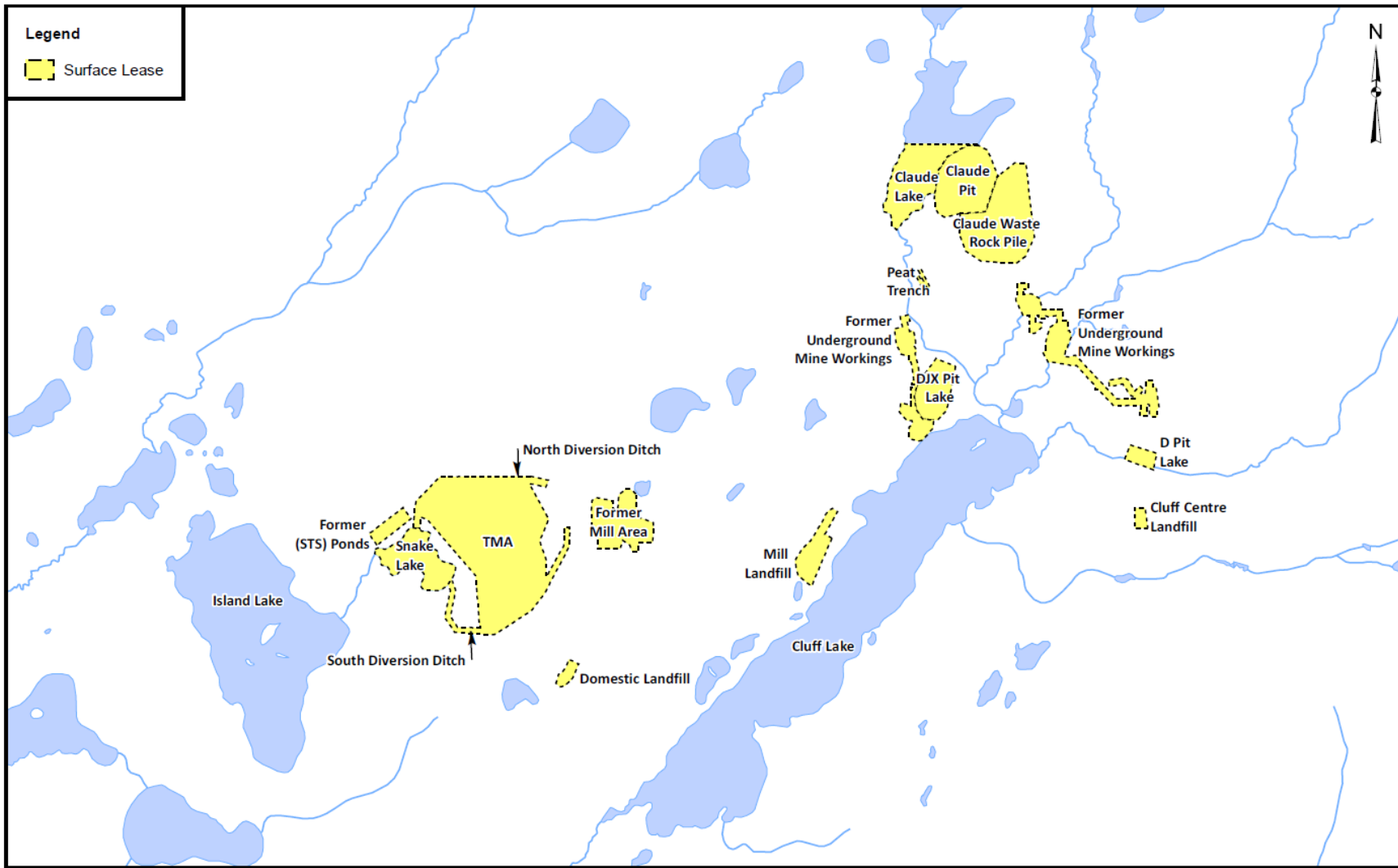


Figure 4: Map of parcels of land at the Cluff Lake Mine to be transferred to the Institutional Control Program (Orano Canada, 2022)



Figure 5: Drainage from mine features (red arrows) and water flow on site (blue arrows)

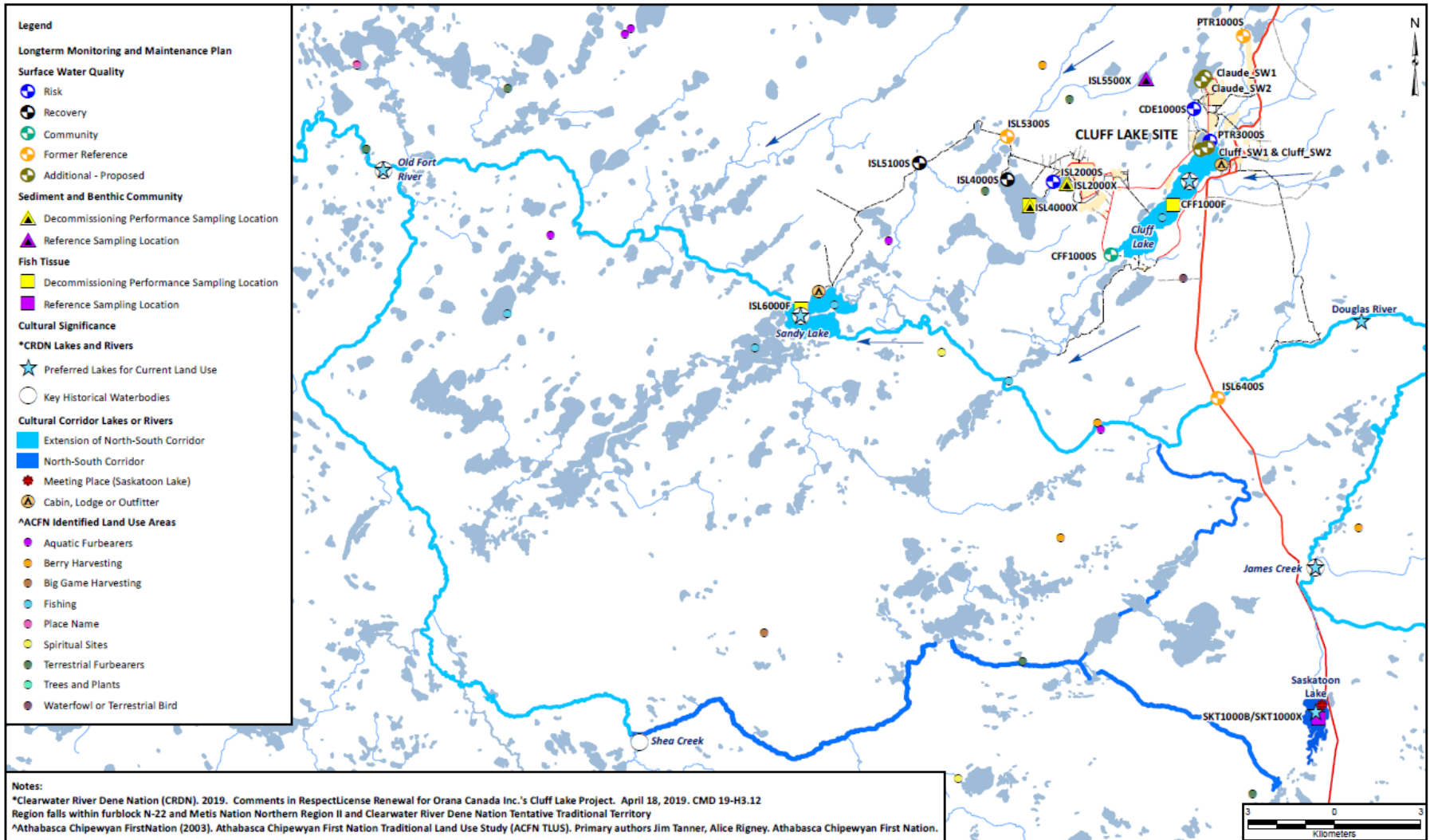


Figure 6: Proposed Monitoring Locations for the Long-Term Monitoring and Maintenance Plan for the Cluff Lake Mine Site

3.0 Community Engagement on the License Revocation Request

BNDN held a community meeting in the Birch Narrows Dene Nation Arena Mezzanine in Turnor Lake on January 11, 2023. About twenty BNDN members were in attendance. At the community meeting, BNDN staff, with support from our technical advisors from Tamarack Environmental, presented an overview of the Cluff Lake Mine and the key details of the license revocation application. BNDN facilitators then recorded traditional knowledge, oral history and other input and perspectives on the project from community members at the meeting. Input from community members was used to inform the comments and recommendations in this report.

3.1 Summary of Input from BNDN Members

During the community meeting BNDN members provided comments, questions, recommendations, and stories that have been included below. The general themes were focused on environmental monitoring, predicted long term impacts, information requests and stories from the Cluff Lake Mine's operations and closure phases. The facilitators made best efforts to answer questions but in some cases responses are more appropriate from Orano or the CNSC.

3.1.1 Questions:

- How long will contamination (specifically radionuclides and metals) last in water and soil?
- How often will the water be tested?
- Where can BNDN members find long term Cluff Lake Mine monitoring data?
- What are current contaminant levels like in relation to other closed mines in Saskatchewan?
- Will groundwater monitoring be completed?
- Why would groundwater not be monitored? It's very important
- What does the Commission and Orano Canada do with BNDN's written and oral submissions? How are they used to make decision?
- Is it standard practice to hand control of closed mines back to Saskatchewan?
- Does Orano Canada pay for all future monitoring and clean-up should any new issues arise on the site?
- What happens if there are issues identified in 50 years that are not known today or if issues are worse than predicted? Does Orano have to be involved or pay more?
- Who has monitored the Cluff Lake Mine decommissioning and closure to date?
- Did the CNSC approve the burying of mine equipment and vehicles?

- Is that the only way it can be close? What alternatives were there?
- One member asked presenters whether they believed BNDN should accept this proposal?
- Are there any liners under in the pits or tailings areas?
- What if there is a major issue (e.g. natural disaster affecting site) after Saskatchewan takes over responsibility?
- What can we really do to influence this process?
- Where can we find more information on the history of Cluff Lake Mine and the monitoring reports?
- What type of signage is on the site?
 - Does the signage properly describe the site and the risks with land use in the area?
 - Does the signage show the contaminated areas and areas to avoid?
 - Can the signage be translated to Dene or Cree?

3.1.2 Comments, Stories and Recommendations:

- Elder who worked at the site recalled story of all mine equipment and the mill being disposed of in pits and buried. Elder recalled environmental issues like leaking fluids and not recycling materials.
- Elder recalled a story from a person who worked at the Cluff Lake Mine on closure activities when there were only a few people on site. His friend said that tailings were spread out all over the site by bulldozers breaking the berm on purpose.
- Elder stated that this mine needs to be closed and monitored effectively as previous mines near Lake Athabasca were not. This process will set a precedent for other mines, so it needs to be done carefully and with community input.
- Elder stated the long-term impact of mining needs to be considered as decision we make today will impact future generations. BNDN Territory is very pristine, which is becoming more rare in Saskatchewan. The goal is to keep BNDN Territory pristine and healthy.
- A member commented that we can use the Cluff Lake Mine decommissioning and closure process to close other mines more effectively in the future. There is a need to compile the lessons learned from the Cluff Lake closure and recommendations for improvement.
- A member requested more information on how pits, ponds and tailings areas were lined.
- Elder requested that if Orano Canada and CNSC believe the water is safe, then personnel should commit to publicly drink the water from the Cluff Lake Mine site.
- Member suggested that groundwater sampling be added to annual monitoring program and that more information was needed from Orano to understand how groundwater moves at the

site. Member suggested that groundwater should be monitored at least once per year at a minimum.

- One member requested water quality monitoring and fish population sampling to be conducted in Turnor Lake and Frobisher Lake.
- Several Elders and members requested that BNDN be provided its own Environmental Monitor that can participate in the long term monitoring of Cluff Lake Mine and other uranium mine sites. Members suggested that Orano should fund this role for interested local communities.

4.0 Technical Review of the License Revocation Application

BNDN has undertaken a technical review of the license revocation application for the Project and has considered information available in the LTMMP. This technical review is focused on information gaps, deficiencies in data, underrepresentation of potential effects, inadequate monitoring, and lack of involvement of BNDN. All of these priorities for BNDN comments are discussed through the lens of potential impacts of the Project on BNDN Treaty and Aboriginal rights, interests and claims.

Table 1. Comments and recommendations on the Cluff Lake Mine License Revocation Application

#	Document Reference	Comment	Recommendation
1.	CMD Section 4.1.1	<p>BNDN notes that our Nation had relatively little involvement in the regulatory process for the Cluff Lake Mine throughout the life of the Project. BNDN also had limited involvement with Orano throughout the life of the Project.</p> <p>This lack of engagement does not reflect the magnitude of impacts that the Cluff Lake Project has had and will continue to have on our Treaty and Aboriginal rights and interests. BNDN wishes to increase our involvement and understanding of the Cluff Lake Project and all major projects within our Ancestral Lands. BNDN recognizes the responsibility that the CNSC and various Saskatchewan Ministries have in administering</p>	<p>BNDN requests that the CNSC, the Saskatchewan Ministry of Energy and Resources (SMER) and the Saskatchewan Ministry of Environment (SMoE) each work with BNDN to develop a Long-Term Relationship Agreement (LTRA) to maintain a table for ongoing dialogue with our Nation for activities within our Ancestral Lands.</p>

		development projects in our Ancestral Lands, and in the spirit of reconciliation we see it as reasonable and appropriate for our Nation to have a direct and regular dialogue with regulatory agencies who have authority over decisions affecting our Treaty and Aboriginal rights and interests.	
2.	CMD Section 1.3.1	<p>BNDN notes that the IC Program has no regulatory requirements for the engagement or involvement of impacted Indigenous Nations during the IC phase of the Project. The Reclaimed Industrial Sites Act (RISA) and The Reclaimed Industrial Sites Regulations (RISR) also do not include any requirements for Saskatchewan to obtain consent or support for the decision to release any mines to the IC Program.</p> <p>BNDN is concerned that input and involvement from our members will not be an obligation of SMER during the IC Phase of the Project. Our members are concerned about the environmental liabilities at the Cluff Lake Mine and our experience of the site adversely impacts our members ability to trust future uranium development on our Ancestral Lands, especially if we are not engaged or involved in monitoring activities during the IC phase of the Project.</p>	BNDN requests that the release to the IC Program include requirements for ongoing engagement with BNDN and with provisions for BNDN involvement in the implementation of the LTMMP, to the extent that this can be mandated by CNSC. Where CNSC does not have authority/jurisdiction, BNDN requests that facilitation and coordination support be provided to ensure appropriate relationships with the IC regulators are established. This may include providing BNDN with contact information for provincial staff responsible for implementation of the IC Program, transmission of issues/concerns raised by BNDN to those staff, and facilitation of introductory meetings.
3.	General Comment	BNDN notes that Orano holds numerous other mineral exploration claims either solely or jointly with other companies within BNDN Ancestral Lands. To date, BNDN has had very limited engagement with Orano on activities on our Ancestral Lands despite the significant historic and	BNDN requests that Orano work with BNDN to develop a Collaboration Agreement to coordinate engagement with our Nation related to all Orano activities on our Ancestral Lands.

		<p>ongoing impacts to our Treaty and Aboriginal rights and interests.</p> <p>BNDN wishes to develop a positive working relationship in the spirit of reconciliation with Orano. We intend for our working relationship to facilitate the avoidance and mitigation of adverse impacts to our rights, and to support appropriate and suitable benefits to our Nation through economic and community development opportunities.</p>	
4.	Commission Doc Section 4.1.1	<p>While it has not been documented by Orano, SMOE or the CNSC up to this point, it is important to note that the Cluff Lake Project has had significant impact on BNDN members throughout the life of the project and continues to impact BNDN members ability to exercise their rights to this day. Many BNDN members worked at the site during operations and have become distrustful of industry practices as a result. Many BNDN members avoid the area due to a real and perceived sense that the area is contaminated by the historic activities on site. These significant concerns by BNDN members have never been incorporated into regulatory or other project decision making processes, which is a significant concern for BNDN.</p>	<p>BNDN requests that CNSC, Orano, SMOE and SMER acknowledge that the level of engagement with BNDN on the Cluff Lake Mine throughout the life of Project does not reflect the magnitude of impacts the Project has had on BNDN Treaty and Aboriginal rights and interests.</p> <p>BNDN has been significantly impacted by the Cluff Lake Mine. Consultation and engagement with our Nation on future projects in our Ancestral Lands must be dramatically increased from what occurred at the Cluff Lake Project.</p>
5.	LTMMP Table 1-6	<p>In LTMMP table 1-6, Orano shows the suite of analytes proposed for the water quality monitoring program during the IC phase of the project. BNDN is concerned that the Proponent is only proposing to sample the contaminants of potential concern (COPCs).</p>	<p>A. BNDN requests that the LTMMP analytes include the standard suite of ICP-MS metals, plus anions and cations in addition to the key COPCs.</p> <p>B. BNDN requests that results of all monitoring activities be posted on</p>

		<p>BNDN recognizes that the COPCs are the most significant elements to analyze for given their implications on the assessment of risk from the site and the validation of modelled water quality. Regardless, BNDN expects that if SMER will be collecting water quality samples that they will samples for a broad suite of metals to facilitate interpretation of results, especially if sampling returns unexpected results. By sampling a broader suite of elements during the IC phase, BNDN will have greater confidence in the recovery, stability and risks associated with the site.</p>	<p>a public website within a reasonable timeframe of being collected. BNDN should be notified of new results being posted, and the results should be presented in a plain language format to be accessible to band members. This website should be maintained until at least 2053 (i.e. 30 years from the present). The monitoring results could be presented on the website, through links to other websites (such as the CNSC registry), or as documents available for download. The intent of this request is that information on monitoring is easily accessible to members for the short and medium term.</p>
6.	LTMMP Section 3.3	<p>BNDN notes that the Proponent has proposed that ongoing sampling of sediments, benthic invertebrates, fish tissue and vegetation will not be included as part of the LTMMP monitoring program, with the exception of a single voluntary sampling event 20 years after the entry into the IC Program.</p> <p>BNDN is concerned with this lack of sampling, especially of fish tissue, as our members harvest fish from the area including lake whitefish, northern pike, lake trout, and suckers. Importantly, a single round of data collection within 20 years is only sufficient to compare with guidelines in these environmental components. Additional sampling is necessary to capture seasonal and</p>	<p>BNDN requests that the Orano and SMER include the sampling of benthic invertebrates, sediment, and fish tissue as part of the LTMMP. This should occur on at least three occasions throughout the execution of the LTMMP and could easily be accomplished alongside the water quality monitoring that is planned (e.g. in year 9, 20, and 30).</p> <p>Fish tissue samples could be collected and submitted by BNDN or other Indigenous land users as part of a country foods monitoring program developed with SMER or the CNSC.</p>

		annual variability, and to evaluate potential trends.	
7.	LTMMP Section 3.2.1 Evaluation of Performance	Results of surface water monitoring will be evaluated to determine the performance of receivers and to verify predictions of modelling. In the event that there are exceedances of predicted concentrations of contaminants, the LTMMP indicates that a "tiered approach" to respond to monitoring results will occur that may include additional root-cause investigations or monitoring (Section 3.2.1). These proposed actions are ambiguous and allow a great deal of leeway for interpretation and inaction on the part of Saskatchewan.	<p>BNDN requests that an adaptive management plan be included within the LTMMP describing clear triggers, responses, and contingency measures for any negative impacts or exceedances of predictions. This must include:</p> <ul style="list-style-type: none"> • Clear triggers for a) additional mandatory monitoring and b) mandatory investigations of exceedances in the event of two or more consecutive results above the 95th percentile. • Clear definitions for what results would be considered a "trend". • Commitments to remedy negative trends identified by investigations, where those issues are linked to mine activities or infrastructure. • A reporting process to communicate any exceedances and the adaptive management measures being taken. This must include reporting on whether issues that have been identified are resolved. <p>The above adaptive management plan must also apply to the additional monitoring of sediments, benthic invertebrates, and fish tissues described above.</p>
8.	Cluff Lake Environmental Protection Review Report	In Table 3.1 of the Cluff Lake Environmental Protection Review Report (November 2022) and LTMMP Table A-2, Orano shows their key decommissioning	A. BNDN requests that the DSWQOs be revised to meet more robust guidelines, such as those prepared by the CCME. These objectives are

<p>(November 2022) Table 3.1 and LTMMP Table A-2</p>	<p>surface water quality objectives (DSWQO), current water quality guidelines (WQGs) and water quality monitoring results for 2020 and 2021. In Section 3.1.1 of the LTMMP, Orano notes that water quality in Claude Lake and Claude Creek are expected to exceed WQGs for cadmium, copper, cobalt, uranium and nickel plus selenium is expected to accumulate in soils over time. Orano has argued that this is not a concern because these COPCs will meet DWSQOs and the Human Health Risk Assessment (HHRA) calculated that these exceedances do not pose a risk to human health.</p> <p>BNDN notes that the HHRA results and achieving the DSWQOs provides limited comfort to BNDN land users, who see any long term exceedances as a significant adverse impact to members ability to exercise our Treaty and Aboriginal rights. The DSWQO values are substantially above the widely recognized water quality objectives in Canada such as the Canadian Council for Ministers of the Environment (CCME) objectives.</p> <p>While the COPCs may meet the decommissioning objectives set by Orano, the CNSC and SMOE, BNDN notes that the decommissioning objectives will result in adverse impacts to BNDN Treaty and Aboriginal rights.</p> <p>Our concerns are not adequately addressed in the license revocation application. BNDN members intend to continue to exercise our rights around the Cluff Lake Mine site. The elevated</p>	<p>considered a minimum standard by BNDN and would provide our members with confidence that adequate protections are in place for the long-term protection of the environment.</p> <p>B. BNDN requests that Orano and SMER work with BNDN to address our outstanding concerns around long-term contamination at the Cluff Lake Mine site and the consequent impacts to our Treaty and Aboriginal rights. This could be done through the development of an LTRA or other Collaboration Agreements with BNDN as a forum for ongoing communication, consultation and engagement.</p>
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		concentrations of COPCs in Claude Creek and Claude Lake adversely impact our members’ ability to exercise their rights through a lack of confidence that the environment is truly remediated.	
9.	Orano Written Submission Section 2.2.2	BNDN notes that the written submission does not include the final amounts that Orano will be required to provide for the Monitoring and Maintenance Fund and the Unforeseen Events Fund Deposit as part of the IC Program. BNDN expects to confirm that the amount of financial assurance provided by the Proponent will be sufficient to cover long term costs associated with the LTMMP.	<p>A. BNDN requests that SMER confirm the amount of financial assurance that Orano will be required to provide for the Monitoring and Maintenance Fund and the Unforeseen Events Fund Deposit, as well as the type of financial assurance that Orano will be providing.</p> <p>B. BNDN requests that SMER clarifies how inflation has been calculated to estimate the deposit for the Monitoring and Maintenance Fund and the Unforeseen Events Fund.</p>
10.	Commission Doc Section 1.3.2	BNDN notes that mineral exploration activities frequently occur near historic mining operations. In fact, Orano is the operator on the Shea Creek Project 15 km south of Cluff Lake which is in advanced exploration and recently published a technical report that states that Shea Creek has a uranium resource comparable in size to what was mined at Cluff Lake.	BNDN requests that SMER clarify the implications that entry into the IC Program has for future mineral exploration activities at the Cluff Lake Mine site and whether Orano will be permitted to continue to utilize the Cluff Lake site for exploration activities related to their adjacent properties such as the Shea Creek Project.
11.	Orano End State Report Section 2.4.1.1	In Section 2.4.1.1 of Orano’s End State Report for the Institutional Control Program, Orano notes that the D-Waste rock pile continues to not achieve As Low as Reasonably Achievable (ALARA) objectives for gamma radiation. Orano has argued that the limited area with gamma radiation readings are acceptable as they are “unlikely to	BNDN requests that Orano and SMER work with BNDN to address our outstanding concerns related to the remnant elevated gamma radiation and the consequent impacts to our members ability to exercise their Treaty and Aboriginal rights through

		<p>contribute significantly to the annual effective dose for traditional land users”.</p> <p>While the level of radiation from the D-Waste rock pile may not have been assessed to pose a risk to human health, the remnant, persistent radiation on site presents a significant concern to BNDN members who are much more likely to avoid the Cluff Lake area for traditional use knowing that there is remnant elevated radiation on site. This is an adverse impact on our ability to exercise our Treaty and Aboriginal rights.</p>	<p>our members perception that the site is contaminated.</p>
12.	Orano End State Report Section 4.3	<p>In Section 4.3 of the End State Report Orano observed elevated concentrations of sulphate, molybdenum, selenium, nickel and uranium in the D-pit following a heavy rainfall on site in 2020. Metals concentrations in the D-pit remained elevated into 2021. BNDN is concerned that the low frequency of surface water quality sampling during the IC Program will result in future significant incidents such as this going undetected. The low sampling frequency allowing for spikes in COPCs to be undetected increases the impacts on BNDN members ability to exercise their rights, as they will have doubts about the water quality at the Cluff Lake site.</p>	<p>BNDN recommends that water quality sampling as described in the LTMMP be undertaken on an annual basis for at least the first 30 years of the IC Program. The bonding associated with the monitoring and maintenance fund should be modified to reflect the associated costs in the increased sampling frequency.</p>
13.	General Comment	<p>BNDN notes that there is limited signage on site to notify land users of the presence of the Cluff Lake Mine and the mine features which will remain on site permanently. The presence of signage on site would ensure that BNDN member are aware of the location of the TMA, waste rock piles and open pits. This will</p>	<p>BNDN requests that Orano or Saskatchewan place signage on site so that it is clear to land users when they are on the site and near the mine features on site such as the TMA, open pits and waste rock piles.</p>

		<p>facilitate BNDN members avoiding the site if they wish and also prevent accidental disturbance of mine features that should remain undisturbed. It will also facilitate BNDN members in identifying and reporting if there are any issues on site that may not have been noticed between monitoring events on site.</p>	
14.	LTMMP Section 3.1	<p>BNDN notes that the SMOE and CNSC accepted the removal of groundwater from the LTMMP, and groundwater piezometers were removed from the ground in 2021.</p> <p>Groundwater and surface water resources are exceptionally important to BNDN and our members care deeply about the protection of groundwater resources and it is BNDN's strong preference that groundwater continues to be monitored during the IC phase. While we recognize that the surface water monitoring sites have been selected based on groundwater flow paths and the challenges associated with maintaining groundwater wells over the long term, the lack of groundwater monitoring is a significant concern for our members, including their perception of the magnitude of contamination on site and their ability to trust the monitoring results during the IC program.</p>	<p>BNDN requests that Orano, the CNSC and SMER work with BNDN to identify ways to monitor groundwater over the long term that satisfy BNDN concerns while also addressing the logistical challenges of maintaining groundwater wells over the long term.</p>
15.	General Comment	<p>BNDN members have heard numerous stories of improper tailings and mine waste disposal on site. This includes stories of tailings being spread inappropriately on the landscape and staff on site being requested to dispose</p>	<p>BNDN requests that Orano meet with BNDN to discuss the stories which members have heard regarding improper waste disposal on site to discuss where this may have occurred</p>

		of waste inappropriately. BNDN members are very concerned about these stories, which have fostered a sense of mistrust, a fear of using the land around the Cluff Lake Mine, and a sense of our Ancestral Lands being mistreated by industry. It is important to our Nation to understand how these situations were cleaned up by Orano (or not) to trust that the site has truly been remediated and properly closed.	and how these situations have been resolved or cleaned up by Orano.
16.	General Comment	Orano has stated throughout the application documents that they have met closure objectives set by Saskatchewan and the CNSC, and that the site is safe for unrestricted human use. While the closure objectives set by regulators indicate this, BNDN members are uncertain as to whether this is truly the case. Our members would have significantly more trust in these statements through action than through words written on paper and expect Orano to demonstrate that the land is safe for us as land users, rights holders and residents of the north.	BNDN requests that during a future site visit to Cluff Lake with BNDN members and leadership, Orano staff (including executives) drink water from Claude Lake, Claude Creek, Cluff Lake, Snake Lake and Island Lake to demonstrate that the water is truly safe.

5.0 Conclusion

Birch Narrows Dene Nation has prepared this review on the Cluff Lake license revocation and release to Institutional Control Program. We will have representatives participate as intervenors at the Commission hearing for the license revocation application. While our involvement in this Project has been negligible to-date, we expect meaningful consultation to occur going forward for all activities within our Ancestral Lands. We are providing this review on behalf of our community and expect that our comments and recommendations will be meaningfully considered by the Crown prior to a decision being made on Orano’s application. We are confident that identified issues can be resolved through ongoing engagement with the CNSC, Saskatchewan Ministry of Environment and Orano Canada. Birch Narrows Dene Nation also looks forward the continued engagement with Orano Canada for their ongoing and future activities on our Ancestral Lands.