



File/dossier : 6.02.04

Date : 2018-11-13

Edocs pdf : 5712171

Oral Presentation

Exposé oral

Written submission from the English River First Nation

Mémoire de la Première nation d'English River

In the Matter of

À l'égard de

**Regulatory Oversight Report for Uranium
Mines, Mills, Historic and Decommissioned
Sites in Canada: 2017**

**Rapport de surveillance réglementaire des
mines et usines de concentration d'uranium et
des sites historiques et déclassés au Canada :
2017**

Commission Meeting

Réunion de la Commission

December 12, 2018

Le 12 décembre 2018



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November 13, 2018

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Review of the Regulatory Oversight Report for Uranium Mines, Mills, Historic and Decommissioned Sites: 2017.

This submission is made on behalf of the English River First Nation (ERFN).

English River First Nation has a population of approximately 1500 people, and is located in Northern Saskatchewan. The on - reserve members of the First Nation reside at two small remote Northern Saskatchewan reserves called Patuanak and La Plonge. These reserves are located approximately 600 km North of Saskatoon. Approximately half of ERFN's population resides off reserve.

The Canadian Nuclear Safety Commission (CNSC) will present a report on "Regulatory Oversight for Uranium Mines, Mills, Historic and decommissioned Sites in Canada". This topic is of great importance to the people of the English River First Nation, as there are currently five uranium operations that lay within English River First Nation Traditional Territory - (McArthur, Key Lake, Cigar Lake, Rabbit Lake, McLean Lake, and the proposed Millennium Mine). Three of these mines are currently in care and maintenance and the uranium industry is at an extreme low. These factors have caused the people of ERFN to consider the issues of closure and decommissioning.

The people of ERFN have subsisted on this land for generations- fishing, hunting, gathering, and living on these lands. The effects of decommissioned mines, the safety performance of licensees, and the status of historic sites in Canada is an important topic to the people because the process and end-state of decommissioning will directly affect the people and the land.

Overview of Report Review

The review of the Regulatory Oversight Report for Uranium Mines, Mills, Historic and Decommissioned Sites in Canada: 2017 (RoR) was a valuable experience to the ERFN, specifically members of the engagement and environmental subcommittee, referred to as JIEES. The JIEES meets at least four times a year as established in the collaboration agreement (CA) between Cameco Corporation and ERFN, these meetings are supplementary to the engagement completed via the Northern Saskatchewan Environmental Quality Committee (EQC), which ERFN has one representative on (Mr. Norman Wolverine). The agendas of the JIEES meetings are driven by the ERFN members; however, the effectiveness of these meetings are undermined by apprehension that can be conveyed by the saying “how can we know what we don’t know.”

The RoR provides an opportunity with ERFN leadership and management to point directly to conclusions made by the CNSC regarding the performance of uranium industry leaders and specific uranium sites. It also provides a summation of the key performance indicators of these sites, and therefore the questions that concerned community members can ask to address their concern. The existence of the RoR was brought to the attention of ERFN outside of established engagement activities. However, ERFN is aware that other committees such as the JIEES were directly engaged in the RoR review process by Cameco.

As part of the review of the RoR, completed in conjunction with a local environmental scientist who has experience with the uranium mining industry in Saskatchewan and the Canadian Nuclear Safety Commissioning (CNSC) (Attachment 1, Review Technical Memorandum), there were several areas where information sharing should be bolstered to improve the effectiveness of the JIEES that will be pursued by ERFN through the established quarterly meetings. For example, it is ERFN’s expectation that exceedances (of environmental assessment / environmental risk assessment predictions) such as those identified for the Cigar Lake, McClean Lake, and Beaverlodge sites should not be communicated for the first time to the JIEES representing potentially impacted communities via the RoR.

The review of the RoR has emphasized to ERFN not only the importance of having an established framework for industries to engage with impacted communities, but also the need for an established framework for regulators to engage with impacted communities.

This section of the Submission is divided into three subsections:

- (1) Recommendations for Readability
- (2) Key Area of Concern and
- (3) Requested Action.

1. Recommendations for Readability

There is no substitute for potentially impacted communities that lack the relevant resourcing themselves to have access to an impartial, experienced third party review of such submissions as the RoR. However, ERFN has provided a few recommendations to improve the readability of the RoR itself (Table 1) to be considered for the next report and we want to emphasize that consistency as well as thoroughness are important for a reader without familiarity with such management systems and/or a scientific education.

Table 1: English River First Nation’s Recommendations for Regulatory Oversight Report

Applicable Section	Recommendation
Section 9 through 21 Historic and Decommissioned Sites	As was provided for the Cluff Lake site, figures visually depicting the progress of reclamation activities would be very beneficial. This could also be applicable to active operations conducting progressive reclamation.
Section 2.4 Environmental Protection	A brief summary of the environment and human health protection process should be provided, specifically the interaction between environmental assessment, follow-up and compliance monitoring, and environmental risk assessments. As well,
Discussion of Exceedances	Consistent format and thoroughness of information should be provided when discussing exceedances, including discussion pertaining to: <ul style="list-style-type: none"> • relevant data trends (historical delineation of exceedance); • temporal and spatial extent, and magnitude of exceedance; • performance in relation to regulatory limits (e.g., discharge limits); • performance in relations to environmental protection guidelines; • risk characterization, including potential cumulative effects; and • corrective action timelines.
Section 9 through 21	Site-specific guidelines (for example on page 111) are referred to for historic and decommissioned sites, these should be provided. Timelines for meeting these site-specific guidelines should also be including in evaluating site performance.
Discussion of Non-compliances	Similar to spill reporting, brief descriptions of each non-compliance should be provided. It seems that hardly an inspection goes for certain Safety and Control Areas (e.g., Radiation Protection), independent evaluation of the risk posed by these infractions would be beneficial to the reader.
Description of Sites	Consistently in terms of level of information and location within each relevant section, a site specific description should be provided of the sources of discharge (air, water, soil) and the location of discharge points to the receiving environment should be provided.

2. Key Area of Concern

Reassuringly to the ERFN, in the RoR the CNSC asserts their acceptance of the performance in 2017 of the uranium mines, mills, historic and decommissioned sites in northern Saskatchewan. Based review of the RoR, and in terms of the key performance indicators the report focuses on (1) Radiation Protection, (2) Environmental Protection, and (3) Conventional Health and Safety, ERFN has not identified any consequential reason as to why the RoR should be not be accepted. However, although not a Safety and Control Area, ERFN expects that engagement should be a key performance indicator assessed annually. Section 1.3 of the RoR, Public Information and Community Engagement conveys that engagement is part of CNSC's purview.

A framework for engagement would be developed in collaboration with ERFN and the CNSC. It would provide guidance to the CNSC and companies as to when it would be necessary to engage with ERFN regarding issues arising from the operation of the uranium mining industry in Northern Saskatchewan. Further, the framework would provide standards for engagement with ERFN- which companies would be required to follow.

A framework for engagement would be beneficial to all parties involved in the uranium mining industry in Northern Saskatchewan. It would open up the lines of communication enabling the free flow of information to the people who live off of the land, in a culturally sensitive manner. This would result in stronger relationships between the people of ERFN, the CNSC, and companies.

The development of the framework would begin by outlining of the concerns of the impacted Indigenous group - ERFN. The next step would be to identify the circumstances that give rise to obligations of companies and the CNSC to engage with ERFN. The final step would be to develop attainable protocols for engagement. Elders and leadership from ERFN would need to be involved in the developmental process in order to ensure cultural sensitivity.

3. Requested Follow-up

It is requested that the CNSC consider the establishment of an engagement framework (at minimum in relation to the key performance indicators outlined in the RoR) for the uranium industry that sites can be measured against. This would ensure consistent engagement, as well as establish a higher level of confidence that site are being transparent. Further, it is requested that the CNSC consider the development of a framework for CNSC themselves to engage with impacted communities.

Conclusion

This submission discusses recommendations pertaining to the readability of the RoR (Table 1), as well as the key area of concern for ERFN which is the lack of determination by the CNSC on the performance of sites in relation to community engagement.

ERFN commends uranium industry leaders, Cameco and Orano, on their efforts to respectfully engage with impacted communities, particularly in the areas of optimizing the potential for local economic benefits. As the local environment that supports these sites also supports our communities, it is a welcomed and essential change that industries prioritize benefits remaining local. However, as advocates of the industry overall in our communities, ERFN leadership and management require the ability to address the real and perceived fears associated with uranium mining and milling, as well as nuclear energy production. Through the review of the RoR, it has been cemented that ERFN's desire for the establishment of engagement frameworks is not only reasonable but would be beneficial overall.

ERFN has no objections to the acceptance of the RoR, in terms of the three key performance indicators detailed in the oversight report.

Technical Memorandum

Review of the Regulatory Oversight Report for Uranium Mines, Mills, Historic and Decommissioned Sites in Canada: 2017

November 9, 2018

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Introduction

This technical memorandum has been prepared for the English River First Nation (ERFN), and provides a review of the Regulatory Oversight Report for Uranium Mines, Mills, Historic and Decommissioned Sites in Canada: 2017 (RoR). The intent is to inform the ERFN's Intervener Submission document in preparation.

English River First Nation

English River First Nation is a Dene and Cree First Nation located in Northern Saskatchewan. ERFN's two largest reserves are La Plonge Reserve and Wapachewunak, located approximately 600 km north of Saskatoon, Saskatchewan. The EFRN is a signatory to Treaty 10 and is comprised of nineteen different reserves:

- La Plonge 192,
- Elak Dase 192A,
- Knee Lake 192B,
- Dipper Rapids 192C,
- Wapachewunak 192D,
- Ile a la Crosse 192 E,
- Primeau Lake 192F,
- Cree Lake 192G,
- Grasswoods 192J,
- Leaf Rapids 192P,
- English River (Porter Lake) 192H,
- English River FN Barkwell Bay No. 192I,
- English River FN Haultain Lake No. 192K,
- English River FN Flatstone Lake No. 192L,
- English River FN Cable Bay Cree Lake No. 192M,
- English River First Nation Cable Bay Cree Lake I.R.,
- English River FN Beauval Forks No. 192O,
- Slush Lake Reserve No. 192Q, and
- Mawdsley Lake Reserve No.192R.

Traditionally ERFN's members lived along the river at Primeau Lake, Knee Lake, and Cree/Dipper Lake. The "people of the river" are known for their bold and collaborative spirit and trusting and humble nature. They are dedicated to stewardship of the land and the education of future generations. It is well recognized that Indigenous peoples in Canada have long experienced socio-economic marginalization, however, collectively in Canada a recent positive change has occurred. This change is not only about reconciliation for the long-term injustices of marginalization, but it is about rectifying the lost contribution of these peoples to the understanding, culture, society and economy of Canada.

The community is highly influenced by its respected Elders; they are widely consulted to make decisions, providing wisdom and support, and passing on teachings through story-telling and leadership. Elders are particularly important providing a living connection to a heritage that Canada has been on the brink of losing (e.g., dozens of indigenous languages are at risk of disappearing).

The ERFN is rising to the challenge of ensuring sustainable development in the vicinity of their communities and within their Territory, and recognizes the unique and important role they have to play in Northern Saskatchewan. While remaining true to traditional values as “keepers of the land,” members also pursue opportunities to participate in the development of ERFN’s resources (e.g., forestry, industry and workforce).

English River First Nation established Des Nedhe Development LP in 1991 to create sustainable employment and business opportunities for English River members. Since its inception, Des Nedhe Development has invested in established companies that are leaders in Saskatchewan’s mining and construction industry and expanded its portfolio into the areas of retail and real estate development and management. The company takes pride in its strong focus on growth through investment, experienced management team and history of delivering solid financial results. Looking forward, Des Nedhe is exploring new opportunities across the province, in multiple sectors, and is positioned to play an important role in the province’s economic future.

Saskatchewan Uranium Industry

The Athabasca Basin of northern Saskatchewan has been the site of several major uranium discoveries and Saskatchewan is recognized as a world leader in uranium production. The uranium is exclusively used for electricity generation at nuclear power plants, which is a non-carbon emitting energy source and provides over 16% of Canada’s electricity needs.

The uranium industry is a significant economic driver in northern Saskatchewan where resource extraction and mining overall is relatively limited. In 2017, the uranium industry spent more than \$331 million on salaries, wages and benefits for its direct employees. Of this over \$107 million was paid to residents of Saskatchewan’s north (SMA 2017). As stated in the RoR, 48% of mine employees are classified as northerners, and mines are one of the largest employers of Indigenous people in Canada.

Collaboration Agreement

All of the uranium mines, mills, historic and decommissioned sites in northern Saskatchewan are considered of interest to the communities of ERFN. In northern Saskatchewan, the industry leaders Cameco Corporation and Orano Canada Inc. have entered into formal agreements with Indigenous communities, including ERFN (referred to as collaboration agreement (CAs) or impact benefit agreements (IBAs). These agreements provide Indigenous communities with workforce and business development programs, dedicated community engagement programs, community investment monies and mechanisms to collaborate around environmental stewardship. These industry leaders have also entered into several trapper compensation agreements with individual land users who are affected by their activities.

These agreements are part of the effort undertaken in recent history to engage and respect local communities, First Nations, Metis Nations and local land users during the planning and execution of industrial developments. Execution of these agreements ensures that engagement occurs with the intent to minimize the potential and perceived negative impacts from a development, as well as optimize potential positive impacts. Signing of these agreements conveys a general trust in the industry’s performance and is recognition of a positive working relationship with the industry leaders; however, they do not convey guaranteed support for all proposed activities.

Leadership Role

Recently members of ERFN have gained a heightened awareness of the external factors that can affect the mining industry and that life of mine estimates based on resource delineation are just projections. As such, the communities have started to shift some of their focus from operational performance and economic benefits to the long-term environmental effects of closure and associated reclamation uncertainties. Key concerns of the communities are the:

- operation and ultimate closure of the Key Lake Operations, due to the long-term (1000s of year) management of tailings and linkages to Wheeler River system that is an areas of heightened value; and
- operation and ultimate closure of McArthur River Operation and Key Lake Operations, due to potential for cumulative effects on the Wheeler River system.

The Wheeler River region is recognized as an important cultural, ecological and sustainability resources (i.e., drinking water, food and air) area for the communities of ERFN. The prevalence of the importance of the resources (clean air, water, soil, and country foods) in this area is likely to only increase in value to local land users following closure of local operations.

Aligned with the evolution of environmental assessments (EAs), engagement on proposed operations and activities has included a component specific to decommissioning and reclamation, however, the information is recognized as conceptual. The ERFN leadership and management is aware that timely engagement and consultation regarding the development of a Decommissioning and Reclamation Plan for each northern operation will occur. However, preparing for this will include developing the skills and knowledge required to discuss the associated concerns and opportunities with not only the operations but also community members.

Further, the opportunities for direct regulatory interaction needs to be considered by EFRN leadership and management. Things being considered:

- The licensing periods of active operations, historical and decommissioned site has been lengthened in recent years (average 10 years).
- The number of Canadian Nuclear Safety Commission (CNSC) inspections (one per year) conducted at remediation and decommissioned site is reduced as compared to active operations.
- Provision of Nuclear Energy Worker (NEW) exposure tracking information (i.e., measured data) will cease following decommissioning and reclamation activities having been completed to a sufficient degree (i.e., use of CNSC-licensed dosimetry service providers no longer called for).
- The Independent Environmental Monitoring Program (IEMP) covers a broad area and sampling frequency in terms of site-specific data is limited.

As such, the frequency and timing of opportunities for direct regulatory interaction needs to be considered. Proposed projects, operations and site should be required and are being required to obtain a high degree of public confidence in order to proceed. It is not unreasonable for communities to conclude that although they have no reason to question that industry leaders are acting responsibly and are

trustworthy, they should not have to trust them. The expectation is that regulators will add to the development of positive relationships by providing a reasonably clear and transparent review.

In regards to the uranium industry in Saskatchewan, First Nations have limited direct interaction with regulators. In other provinces, First Nation councils have representation on provincial regulatory agency review committees and fully participate along side these agencies (e.g., co-governance) in EA approvals, permit and license amendment approvals, and work notification authorizations. The performance of the uranium industry in Saskatchewan, in terms of worker and public safety and environmental protection, is not in question. However, there is a reliance on industry leaders to represent the concerns and expectation of impacted communities to regulators and for industry leaders to represent the confidence of regulators regarding performance and environmental effects to impacted communities.

The RoR provides an opportunity for EFRN leadership and management to point directly to conclusions made by the CNSC regarding the performance of uranium industry leaders and specific uranium operations and site.

Findings from Report Review

I have reviewed the RoR in conjunction with EFRN leadership and members, identifying questions and comments community members would like answered, combining this with the knowledge and understand I have of the uranium industry and regulatory requirements. The review was completed in this manner to critically review the RoR in a concise and culturally sensitive manner.

Before and After for Decommissioning and Reclamation

A common question regarding the transition from an active mine or mill to a decommissioned site is, "how will things look?"

On page 133 of the RoR, pictures depicting the Cluff Lake site in 2009 and 2014 are provided, which is very helpful. The reader is required to do some work to confirm they depict the same relative area as the titles and the scale for the figures are not the consistent, but the reclamation progress is illustrated.

This would be a helpful addition for all operations and sites, at least for the historic and decommissioned sites. This could be asked of Cameco and Orano during engagement activities.

Environmental Protection Process

To a reader familiar with the EA process the document clearly illustrates the role of EAs, and the subsequent continuous environmental monitoring programs and iterative environmental risk assessment (ERAs) updates. The EA takes the project and overlays it on the existing environment predicting the potential environmental effects. Based on the predicted effects, it is concluded (1) the project is approved to proceed as planned, because the negative impacts are acceptable and are far outweighed by the potential positive impacts or (2) the project is rejected as planned. In current EAs, a predictive ERA is completed (overlying project on existing environment) which predicts expected changes in the environment (e.g., air and water quality). Through out the life of the project and on a regular basis environmental monitoring data is collected to verify effects are within those predicted in the EA. Site

ERAs are now completed on a regular basis using monitoring data, therefore, these ERAs are no longer predictive in nature but are based on measured environmental changes.

The report, for a reader familiar with the human health and environmental protection systems internal to the uranium industry, also outlines the protective measures of administrative levels and action levels. However, the relation to these levels and the regulatory limits is not illustrated. Discussion of action limit exceedances raises questions to the general reader about the safety of these operations.

It would be helpful for an overview of the process requirements for active sites, as well as historic and decommissioned sites be illustrated. This could be asked of Cameco and Orano during engagement activities.

Exceedances of Predictions

Arsenic in Seru Bay

As stated on page 42 of the RoR, the most recent site ERA completed for the Cigar Lake Operation (2017) shows that arsenic levels in water and/or sediment of Seru Bay (Waterbury Lake) are elevated above those that were predicted in the 2011 EA.

In Table 2.3 on page 28 of the RoR, the average concentration of arsenic in the effluent released to the environment from the Cigar Lake Operation (0.0750 mg/L) is substantially higher than that reported for the other site (next highest is McClean Lake Operation at 0.026 mg/L).

The performance of the operation in terms of meeting effluent quality discharge limits (i.e., how much arsenic can be present) is provided for context. However, there is no context provided regarding the volume of water that was predicted to be released in the 2011 EA as compared to what has actually been released, nor are any effluent quantity limits discussed. The environmental effects are a combination of the effluent quality (i.e., concentration of arsenic) and the quantity of effluent (i.e., how much water with arsenic is discharged). It is recognized that an ERA would capture both the quality and quantity, if based on current monitoring data (i.e., based on measured changes in the environment).

It is conveyed on page 42 of the RoR, that the levels of arsenic although higher than predicted are lower than protective guidelines for the receiving environment (Saskatchewan Water Quality Objective of 5 µg/L). It implies that the 2017 ERA, concludes that there is no risk to humans or other biota from the elevated levels in the vicinity of the operation. The reader must assume that the ERA is based on current monitoring data that would encompass any potential cumulative effects to Seru Bay, as well the reader must make assumptions regarding potential implications to the cumulative effects assessment that would have been completed as part of the 2011 EA.

Questions I would ask, and that could be asked of Cameco during engagement activities:

- **Were arsenic levels elevated in both the water and the sediment in Seru Bay?**
 - **changes in sediment would indicate to me more of a concern**
- **Are there effluent quantity limits set for the site? If yes, how is the operations performance in terms of these limits?**

- **Is the effluent quantity discharged within limits predicted in the EA?**
- **What is the trend in terms of arsenic levels in the Cigar Lake Operation effluent?**
- **Can you confirm the 2017 ERA completed for the Cigar Lake Operation was based on monitoring data that would have captured any potential cumulative effects in Seru Bay?**

Selenium in McClean Lake's East Basin

As stated on page 95 of the RoR, the most recent site ERA completed for the McClean Lake Operation (2016) shows that selenium levels in the vicinity of the discharge location into the East Basin (McClean Lake) are above those predicted in the Environmental Impact Statement (EIS). The RoR states that the East Basin is an exposure lake, however, the reader is left to assume this is in the receiving environment. It is stated that concentrations remain below the provincial limit of 0.6 mg/L, but this is an effluent discharge limit and not a protective guideline for the receiving environment.

In Table 2.3 on page 28 of the RoR, the average concentration of selenium in the effluent released to the environment from McClean Lake operation (0.011 mg/L) is higher than the other operations with the exception of Key Lake (0.015 mg/L). In table on page 25 of RoR, indicates that concentration in effluent were substantially higher in 2016 (0.0210 mg/L) as compared to 2017.

No acute toxicity testing result for the end-of-pipe discharge or receiving environment data are provided in this section to reassure the reader that although levels are elevated no adverse effects occurred or are predicted. However, in Table 2.8 on page 28 of the RoR, it is reported that all tests completed in 2016 on acute toxicity passed. However, there is no context provided regarding the volume of water that was predicted to be released in the EIS as compared to what has actually been released. On page 96 of the RoR, however, it is concluded that CNSC staff will continue to review reported selenium concentration in effluent to ensure the receiving environment remains protected, indicating CNSC has concluded that no adverse effects occurred or are predicted.

Questions I would ask, and that could be asked of Orano during engagement activities:

- **Is McClean Lake's East Basin considered the receiving environment? If yes, is the level of selenium in the East Basin below relevant water quality guidelines?**
- **Are there effluent quantity limits set for the site? If yes, how is the operations performance in terms of these limits?**
- **Is the effluent quantity discharged within limits predicted in the EA?**

Radium at the Beaverlodge Site

On page 130 of the RoR, it is stated that at some locations measured radium levels in surface water are above that predicted by the quantitative site model (QSM). However, no additional context in terms of spatial extent or magnitude is provided. It is, however, concluded that adequate measures are in place to protect the public and the environment at the Beaverlodge site.

The reader can be reassured by the information provided on page 126 of the RoR in Section 11-B: Decommissioned Uranium Mines and Mills, and that provided on page 130.

“Once long-term environmental objectives for the site have been met, these sites may be released into institutional control or conditionally released from regulatory oversight.”

“Comparison of water quality monitoring results with the QSM prediction are one of the performance indicators used to determine if properties can be exempted from CNSC licensing and transferred into Saskatchewan’s Institutional Control Program.”

Therefore, the site will continue to be managed until long-term environmental objectives have been met. The question I would ask is provided below in the next subsection Guidelines.

Guidelines

A common question regarding the transition from an active mine or mill to a decommissioned site is, “how will environmental protection guidelines change?”

With historic and decommissioned sites, as opposed to the mines and mills, meeting the Metal Mining Effluent Regulations (MMER) discharge limits are no longer referred to and the Canadian Water Quality Guidelines for the Protection of Aquatic Life, Health Canada Drinking Water Guidelines, and the Surface Water Quality Objectives are applied to the site. On page 111 of the RoR it is stated that water quality objectives for each site are provided in their respective sections; however, this information is generally lacking. Perhaps a table, provided as an appendix, would have been helpful to illustrate guidelines and consistent application of guidelines. Beyond the scope of the RoR, through discussion of the RoR with EFRN management it was determined the process of identifying appropriate and site-specific guidelines would also be beneficial.

Question I would ask, and that could be asked of Cameco and Orano during engagement activities:

- **What are the environmental protection objectives applied to the sites, and how do they compare to federal and provincial guidelines?**
- **What are the sites performance in terms of meeting expected timelines of closure?**

Lack of Non-Compliance Description

The lack of detail on the non-compliances identified during CNSC staff inspections would be perceived as concerning to a community member. Although the severity is identified, for example as having low-safety significance, in context of the frequency of occurrence this is not very reassuring. For example, McArthur River Operation reported 6 non-compliances related to Human Performance Management and Radiation Protection (page 50 of the RoR); therefore, during the three separate inspections related to these safety control areas (SCAs) (refer to Appendix B) on average 2 non-compliances were identified. Without details it is hard to rationalize how non-compliances in radiation protection and fitness for service could be non-consequential. Further, details pertaining to spills of low significance are provided allowing for further evaluation and determination that the events were non-consequential.

It is rationalized that these non-compliances were likely administrative, omissions of management system redundancies put in place to provide numerous layers of protection, or reflect continuously improving protection measures; however, without context this is an assumption on the reviewer’s part.

It would be beneficial if a brief description of non-compliances be provided similar to that provided for spills (i.e., could be a table in appendix).

Site Description Occurrence and Consistency

Upfront in Section 5 Rabbit Lake Operation (page 61 of RoR), there is a brief yet helpful description of the site that includes discharge locations to the receiving environment. For Key Lake Operation (page 80 of RoR) and McClean Lake Operation (page 96 of the RoR) these description are provided later within the text, and for other operations and site this information is generally lacking. Although the RoR doesn't provide details on environmental monitoring locations, it is helpful to reviewers to have a high-level understand of the key aspects being monitored by the Environmental Protection Program that is discussed in each section.

It would be beneficial if a brief description of discharge locations to the surrounding environment be provided for context for each mine, mill and historic and decommissioned site.

Question I would ask, and that could be asked of Cameco during engagement activities:

- **Re: the McArthur River Operation section (Section 4), Figure 4.4 provided on page 54 of the RoR is not clear as the legend is missing some components (i.e., red and blue dotted lines illustrate what as compared to black dotted line).**

Financial Guarantees

As stated on page 12 of the RoR, licensees are required to develop preliminary decommissioning plans and associated financial guarantees to ensure work activities are covered financially and work is guaranteed for completion with no liability to the Government. This is very reassuring, however, there is no context provided on if this includes monies for engagement and consultation.

Question I would ask, and that could be asked of the CNSC:

- **Does the financial guarantees established for the sites encompass monies required to undertake engagement and consultation?**

Recommendations

Based on the relatively limited interaction between ERFN and regulators, emphasis should be put on the thoroughness of submissions made to the public by regulators, such as the CNSC RoR.

The RoR would indicate that for specific SCAs rarely an inspection occurs when a compliance infraction is not identified, particularly for the SCA of Radiation Protection. Although the severity of these infractions are identified (i.e., low-safety significance), as with spill reporting an understanding of the specific risks represented by each event that is being categorized as low risk is necessary for external stakeholder to establish trust in the management system. It would be my recommendation to communicate this as part of the Intervenor Submission (CNSC 2017). It would also be reasonable to request additional details pertaining to:

- Reported exceedances of environmental changes predicted, including discussion relating to the potential for cumulative effects. The regular completion of ERAs is meant to address such exceedances and to characterize the risk to ensure the environment and humans are protected, but specific context should be provided so community members can understand what has been deemed an acceptable risk.
- The developed set of guidelines for historic and decommissioned site, and how they compare to those used for active operations.

It would be my recommendation to ensure that the Exceedances of Predictions discussed in the RoR:

- radium at Beaverlodge,
- selenium at McClean Lake, and
- arsenic at Cigar Lake

have been presented to ERFN directly via other engagement channels (e.g., Northern Saskatchewan Environmental Quality Committee, or specific engagement committee established as part of the collaboration agreement). If these issues have not been previously presented, it would be my recommendation to request that they are and communicate this as part of Intervenor Submission. It would not be appropriate in my opinion that the first time potentially impacted communities hear about these exceedances is in the RoR.

Regarding engagement and consultation (Section 1.3 of the RoR), my recommendation would be to present how the community feels about the level of engagement they receive from industry leaders (i.e., frequency and accommodation of attendees expectations/schedules/location) identifying the level as more than adequate, adequate or inadequate. My understanding is there is a level of engagement committed to in the collaboration agreements (Engagement and Environmental Subcommittee [JIEES]), therefore, I'm assuming the level is adequate. However, it is understandable that if this engagement is driven by the concerns expressed by of the First Nation (e.g., want clean air, clean vegetation, clean country foods) knowing exactly what specific information to request would be difficult. It is also understandable that the content of the engagement provided is not easily assessed by the communities themselves without input or reassurance from regulators or other outside experts. Therefore, communications, such as the RoR, provide community members a means to determine if the information being provided to them through engagement activities is complete and/or factual. The report, however, needs a technical translator, as well as Dene and Cree translators that are seen as impartial by the community members. The communities resourcing this themselves would not be reasonable, but building this capacity locally within these communities would be preferential.

The RoR is a way regulators can directly communicate to the general public their findings and approval of the yearly performance of the various operations and sites, and it can go a long way to establishing trust in the information provided by industry leaders in regular engagement activities directly to communities. However, as indicated in the RoR there is limited opportunity for communities to directly convey their concerns and expectations to regulators.

The one-way communicate of a report does not address the community's concerns regarding the degree to which industry leaders act as the intermediary between the impacted communities and the regulators.

This is why opportunities to act as Intervenor whether in terms of positive or negative submissions are invaluable.

It is my understanding that the EFRN is planning to use the Intervenor Submission & Presentation to:

- Communicate the importance of northern Saskatchewan to EFRN, particularly the Wheeler River region in terms of culture, ecological and sustainability resources.
- Illustrate and personalize the communities that are being impacted by the uranium industry in Saskatchewan.
- Outline their desire for the establishment of engagement frameworks for (a) industry and (b) regulators.

In relations to the first two objectives, understanding the potential linkages between changes in the environment and receptors in the environment, including humans, requires a clear understanding of which organisms are present and how those organisms are functioning in their environment (e.g., for humans this is referred to as land use). This is one of the many areas that Traditional Knowledge and community input is crucial. As ERAs are conducted regularly for each operation, there are continuous opportunities to redefine the receptors that are assessed and their characteristics (i.e., update which receptor is being assessed and how the modelling represent the ways that human is exposed to contaminants). For example, the ten EFRN representative who live at Cree Lake and use the region that support the Key Lake Operation should recognize themselves when the human receptors of the ERA for the site are discussed. EFRN has a critical role to play ensuring the exposure pathways that could affect their members are adequately represented now and in the future.

From my review of the information provided there is no significant reason to object to the CNSC's conclusions in the RoR that the operations and historical and decommissioned sites are being managed effectively in terms of the SCAs. The RoR concludes that adequate protections are in place to protect the environment and humans during operation and closure/decommissioning activities. **However, there is no determination made in the RoR if there is adequate engagement being completed, and as an Intervenor EFRN has the opportunity to address this gap in the performance evaluation provided.** It is my understanding that EFRN wants to work towards establishing a culturally sensitive framework for engagement that works towards addressing the needs of remote community members. In relations to this framework, it would be my recommendation that EFRN consider some aspect where the identification of information needs (i.e., what the communities ask for from industry leaders in terms of information) is informed by regulators or an impartial subject matter expert.

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