



CLEARWATER RIVER DENE NATION – TREATY 8

November 11, 2022

Nicole Frigault
Environmental Assessment Specialist, Technical Support Branch
Canadian Nuclear Safety Commission

RE: Nexgen Rook I Project Information Request

Hello Nicole,
Please find Clearwater River Dene Nation (CRDN) leadership approved Information Requests (IRs) below:

Engagement

Under **section 4.1 Indigenous Engagement table 4.1-1: Summary of Primary Indigenous Group Key Engagement Activities**, how is CRDN defined? Is the correspondence, meetings, joint working group, site tours data coming directly through engagement with Chief and Council members only? Or does this include CRDN leadership and community members? If community members are included, at what level? Treaty members? Local members? Community members that are considered hunters, trappers, gatherers and/or environmental advocates? On page 78, the job descriptions are identified within community, but they are not categorized with attached numbers/data.

- Need to host a working group to discuss topics including but not limited to Socio-economic, community well-being, and employment

Section 4.1 Indigenous Engagement

Data requires more demographical categorization, e.g., special groups, trappers, hunters, gatherers, knowledge keepers, Elders, environmental community advocates, educators, local business owners, local cabin owners, etc.

- Adapt to include more demographic information in all community engagement aspects/participate in the survey collection, interviews, and workshops.

This could help determine any real gaps in all types and methods of data collection and land use studies. There may not be enough participants identified and/or considered for both

Indigenous and local trappers, hunters, gatherers, etc. that carry Indigenous-local land intelligence no one else can claim (as these are intrinsic, inherent, and diverse ways of knowing) and this would be considered a massive loss and missed opportunity of vital local-traditional knowledge and deep understandings of the geography and biodiversity.

Section 2.5.1 General Communication Methods indicates NexGen exploring ways to further develop its use of social media for the Project and does not have a dedicated social media platform for communication in the Local Priority Area (LPA).

- Recommend contextualized social media: Recommend NexGen hire a social media representative within the community and work with them to create an Instagram, Tik Tok and Facebook account to educate our communities and ensure any workshops, presentations, interview selection, and all forms of communications and opportunities are not missed.

Creating these social media accounts will help close the communication and accessibility gaps. These social media platforms are great for sharing and providing important and valuable information in real time with little to no cost, capturing all LPAs.

Section 2.5.4 Public Engagement Methods there are no Indigenous methodologies being used to access and gain Indigenous insight. For example, when providing the project information packages (under table 2.5-1: Summary of Primary Indigenous Group Engagement Methods)

- Recommend hiring community member to contextualize and provide NexGen methodologies for all engagement opportunities including social media
 - E.g., photovoice, short creative videos, etc. Partnering to provide information updates on the project, identify opportunities to engage with the Project. E.g., maps and models can be co-created and co-designed to what is culturally appropriate and understood. Providing context for fluent first nation speaking communities/nations. The models, maps and distribution of materials need to be accessible and transmitted in ways that meet the needs of true community engagement through a more inclusive messaging. There are proactive alternatives to cartography (digital technologies by decolonial Indigenous artists, Indigenous indicators of cumulative impacts, etc.). “A better map is one that I am part of, not as an object, but as a subject of my own future” -Alais Ole-Morindat. There are participatory continuums and collaboration quality to be considered.

Section 4.4

Recommend clear definitions of Indigenous and Local knowledge, Indigenous knowledge has been defined by “input from Indigenous Groups, and relevant literature”. This is very vague and there are no sources being cited/referenced to the relevant literature.

In 2021, CRDN Elders, language workers, trappers, hunters, gatherers, and community care advocates developed a definition of what Indigenous Traditional Knowledge (ITK) means “a

network of knowledges, beliefs, and traditions intended to preserve, communicate, and contextualize Indigenous relationships with culture and landscape over time. Indigenous epistemologies (how knowledge can be known), pedagogies (how knowledge can be taught), and ontologies (our ways of life in the world) include the holistic, empirical data and knowledge in historical, geographical, cultural, spiritual, social, economic, environmental, and experiential studies of the natural world. Our diverse knowledges are portable, in that they call for reliance upon local resources and careful observations of the interactions between living beings and natural processes within an ecosystem (any ecosystem) to ensure human survival.”

- Recommend to use this definition as a culturally appropriate definition of ITK for CRDN.

Adaptive Management

Section 23.5, Summary Page 192

Gathers information to inform decision making

There is a need for government to create a regional monitoring body to manage impacts of this mine and other proposed mines in order to manage cumulative effects, conduct monitoring and recommend adaptive management techniques as concerns raised. This body must be co-developed with First Nations and provide for formal advisory and monitoring functions for First Nations.

Comment:

- Who determines the changes or ‘adaptations’ during the project
- Create body to provide CRDN advise to government
- CRDN should be involved in co-development of management plans

Environmental

Under Environmental Assessment, **section 5.2 Atmosphere** key findings, use language “remain low”, **5.2.2 Noise** key findings, “low magnitude”, **5.2.3 Climate Change** key findings, “no meaningful affect”, and “low GHG emissions”, **5.3.2 Hydrology** key findings, “changes would likely be undetectable”, **5.3.3 Surface Water Quality and Sediment Quality** key findings, “not result in any threshold exceedances”, “result in minor”, **5.3.4 Fish and Fish Habitat** key findings, “unlikely to be measurable”, “not significant”, **5.4 Land-5.4.3 Wildlife and Wildlife Habitat** key findings, “restored to the extent possible”, and “not significant”. The key findings for incremental lifetime cancer risk are “negligible to very low”, and the incremental and cumulative effects on human health are predicted to be “not significant” (pages 161-162).

- What are the definitions of this language, more specifically, how exactly are the potential risks calculated? At what concentration levels? What are the measurements being used to indicate and determine the “remain low”, “no meaningful affect”, etc. conclusions?

On page 155, in Section 5.2 there is mention of disturbance from lights and noise due to construction and operation of the project but no mention and focus to light pollution, which

can affect bird migration routes and other wildlife, including the quality of the night sky which affects navigation by wildlife and humans/people.

- How will light pollution be measured over the duration of project and what is the design to “minimize sensory disturbances”?
- How will the work and the buildings affect acoustical performance in the ecosystem? (i.e., mating calls, other communications - i.e., loons calling each other to prepare for migration, winds, and other ethological indicators)?

More Information regarding sampling frequency to indicate the time of year all samples were collected for all studies.

- No mention in this study of any specific lake stressors, such as cyanotoxins. Why no mention?
- What types of predictive models were applied to all environmental studies that have been conducted to date, to determine their potential direct and indirect environmental-human-social-economic impacts? What were these models based on?

Section 2.3.2 Project Components and Activities, Monitoring ponds:

- What will be monitored here?
- How is waste rock different from tailings?
- If tailings are stored underground, what is waste rock and why is it stored at surface?
- West bermed runoff collection area – where does runoff come from and what are the potential hazards of this runoff? How are these hazards assessed?

Section 1.2.6 – General Schematic:

- Are COPCs in groundwater and interstitial air tracked? Is this in permafrost and has projected permafrost thaw been accounted for? This was an issue at Giant Mine - they stored arsenic trioxide dust in underground stopes and now the permafrost is thawing, resulting in increased hydraulic conductivity in the ground, increased mobility of groundwaters, etc.

Section 1.2.7 Decommissioning and Reclamation

- Are there financial guarantees or reclamation bonds being required to ensure NexGen is responsible for all costs to restore the site to its original state?
- Please share the invasive species management plan.
- Will the future of buildings and landscapes be co-designed with the aesthetics of the community and landscape in mind? Recommend hiring community members as Indigenous architects, engineers, and community members to co-design plans.
- Draft and share a socioeconomic report and socioeconomic management plan.
 - How will the site contribute to neighbourhood quality improvement? Will the land owned, managed, and stewarded by CRDN maintain or increase in value?

- Is there consideration of thermal comfort? How much heat will be released over time? What current studies show the effects of increased heat on local biomes and human settlements?

Infrastructure and Design Section 5

- Are infrastructure and material conservation in place?
- Will the camp, maintenance shop, warehouse building, airstrip and associated facilities, power supply and distribution facilities, fuel storage facilities, information technology and communications facilities, site roads and access facilities, etc. going to be recyclable and reclaimable or will those supporting infrastructures end up in the dump or buried somewhere? If so, are the locations to recycle, reclaim, dump, or bury determined?

Community well-being Section 19

- What community protections for the site and for the local communities be put in place? What trauma-informed and restorative justice-based policing or protective services will be implemented?
 - Need clear guidelines on what services are provided
 - Recommend community members being hired for these positions for emotional support?
 - What are the timelines for “periodic” surveys and criteria for determining an increased need for support

The 'indicators' used for social and cultural impacts and wellbeing are limited.

- The Canadian Index of Wellbeing covers 8 domains and at least half a dozen indicators for each (University of Waterloo). Some key missing indicators are life expectancy, mental health, functional health, public health (i.e., workers bringing in viruses or transmissible diseases, especially worrisome in the case of women in the proximity of work camps and sexually transmitted diseases), income and wealth volatility and distribution, time use, social relationships, community safety, diversity of leadership, quality of community politics (democratic or familial/tribal governance mechanisms).
- Recommend reviewing all indicators of the social-cultural impacts and wellbeing to be included and analyzed.

Stress

The CRDN community have been dealing with long-term stress due to the modifications made to their traditional lands by the presence of uranium mining industry, the mill site and other associated development. CRDN are especially vulnerable to the stresses produced by the uranium industry development within their lands. The Treaty rights of the CRDN have been repeatedly overstepped, impeding the ability of this Nation to hunt, fish, gather or trap freely. This directly impacts the ability of this community to rely on their land, use their land in a sustainable way and limited ability to live off their land. The stress of the loss of this livelihood, lack of social connection associated with these traditional tasks and loss of identity combined with the stress of proximity of the uranium industry developments. Uranium, and the potential for radioactive contamination, which is historically known for negative health effects on the environment, results in the loss of community members to the area due to their fears and

associated stress. This stress is amplified when you consider that the lack of consultation results in reduced trust.

Quantifying Stress

Traditional environmental assessments (EA) failed to effectively consider these health concerns, “new assessment is needed attending to linked issues of equity, sustainability and Indigenous food sovereignty” (Jonasson, 2019). In particular, First Nation communities are becoming more concerned about the impacts and risk of industrial development and incidents on Indigenous health and wellness and current EA guidelines have ineffectively considered these impacts (Shandro J. J., 2018).

In 2021, new guidelines were published to support impact assessment professionals and indigenous communities to help address these gaps during conventional assessments (Salerno, 2021). Impact assessment (IA) “practitioners have therefore tended to ignore mental health impacts to focus on more easily observable or readily quantifiable impacts, such as sensory disturbance. However, the often-intangible nature of mental health does not make the impacts of project development on mental health any less real” (Salerno, 2021).

“Health Impact Assessment (HIA) is a voluntary and unstandardized process ... has navigated the limitations of current EAs in which there is a tendency to focus on regulatory thresholds and quantitative measurements of risk” (Jones, 2015).

When considering that mental health risks are ‘new’ to the assessment process during project development:

- CRDN needs new and continued assessments completed to ensure thorough consideration of the mental well-being of their community members, especially regarding mental stress.

Perception of Risk

Being a subjective mix of both social and psychological factors, risk perception influences how harmful and chemical or exposure is perceived (Keller A, 2012). This report indicates that levels of stress and perception of stress affect health independently and were shown to increase the likelihood of worse health and mental health outcomes (Keller A, 2012).

Without clear federal or provincial guidelines on the acceptable level of risk during project development, it raises the question; what is an acceptable level of risk, or perception of risk, that is acceptable for the CRDN to tolerate for what seems an interminable future during the largest development-stage uranium project in Canada?

- CRDN needs to develop it’s own standards/thresholds in order to understand the risks they are bearing.

Food Security & Traditional Diet

Section 19 EIS - Pg 19-66-67

Actual or perceived contamination – discouraging traditional land use. Previous Uranium projects have resulted in increased negative opinions regarding the perceived risks to their traditional land, resulting in notable decreases in land-use amongst community members

Comments:

- How will this Project support perceived risks amongst the community members in order to increase the trust of the community members and therefore increase the reliance of their traditional lands, including harvesting traditional foods?

Heritage Resource

Summary Document Section 5.5.2- Page 164

No heritage resources identified

Comments:

- What is the protocol for chance finds?
- Community monitor should be present monitoring during all phases of development

Project Effects on indigenous land and resource use Section 5.5.3

Figure 5-6, Summary – Page 166

Does not account for the impact of stress on the indigenous community

Comment:

- Perceived risks need to be assessed and the impacts of long-term stress on the mental and emotional well-being of the community members

Employment Opportunities Section 2.2.2

Summary Document Page 21 and Page 5/6

Draft a Site Employment Management Plan

- Clear guidelines on how the site will be accessible for all workers. For which equity-deserving group categories (for example: sex, age, ethnicity, disability, economic status, gender, gender expression, pregnancy status, family status, neurodiversity, caste, nationality, race, sexual orientation, religion, language group, and creed)?
- Understanding the demographic of the CRDN and the commitment of the Project to hire community members– Recommend hosting Employment Workshops – hosting hiring fairs within the community makes employment opportunities accessible, achievable and supports trust the Project builds with community members. Commit to more than only funding to support indigenous monitors throughout the project; historically the community has already voiced they want to encourage training oppportuning for higher ranges of employment opportunities.

Additional CRDN Recommendations:

1. CRDN to develop community-specific monitoring program that involves: (i) design of monitoring and (ii) conduct of monitoring – with the goal to produce a long term data

set and track record of monitoring to restore community trust in area (or, to identify issues that are undermining community trust in terms of monitoring results).

2. Co- develop programs with CRDN to facilitate CRDN confidence in industry and land use safety.
3. CRDN requires all collected data within a reasonable and mutually agreeable timeframe.
4. Complete a Health Impact Assessment (HIA) that includes a perceived stress assessment and determine the level of acceptable stress the community can manage.
5. Develop notification and communication protocols so that CRDN to be notified and included in any investigations into causes of any discrepancy in environmental sampling.
6. CRDN to be engaged prior to any changes to sampling frequency during adaptive management.
7. CRDN community members to be present during each site visit.
8. CRDN requires funding support for environmental monitor training, survey and collection techniques, data management, etc. CRDN to develop and manage all aspects of training.
9. CRDN to expand monitoring program to align with all phases of the project: development, operations, and reclamation. CRDN will monitor environmental, geotechnical, perception of risk, land use, etc.
10. Develop broader regional Land Use Plan to manage new phase of uranium development and ensure CRDN lands remain healthy and viable for generations to come.

Works Cited

- Jonasson, M. S. (2019). Oil pipelines and food sovereignty: threat to health equity for Indigenous communities. *J Public Health Policy*, 40(4):504-517.
- Jones, J. &. (2015). Addressing historical impacts through impact and benefit agreements and health impact assessment: Why it matters for Indigenous well-being. *Northern Review*, 41, 81–109.
- Keller A, L. K. (2012). Does the perception that stress affects health matter? The association with health and mortality. *Health Psychol*, 31(5):677-84.
- Salerno, T. T. (2021). *INDIGENOUS MENTAL WELLNESS AND MAJOR PROJECT DEVELOPMENT GUIDANCE FOR IMPACT ASSESSMENT PROFESSIONALS AND INDIGENOUS COMMUNITIES*. Firelight Research Inc; Impact Assessment Agency of Canada .
- Shandro, J. J. (2018). *A Guideline for Conducting Health Impact Assessment for First Nations in British Columbia, Canada*. Tsimshian Environmental Stewardship Authority.
- University of Waterloo. (n.d.). *CANADIAN INDEX OF WELLBEING*. Retrieved October 2022, from <https://uwaterloo.ca/canadian-index-wellbeing/what-we-do/domains-and-indicators>