Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

CMD 25-H12.47A

Date: 2025-01-15

Supplementary Information

Presentation from the Athabasca Chipewyan First Nation

In the matter of

NexGen Energy Ltd.

License application to prepare a site for and construct its Rook I uranium mine and mill project

Commission Public Hearing
Part 2

February 2026

Renseignements supplémentaires

Présentation de la Première Nation des Chipewyan d'Athabasca

À l'égard de

NexGen Energy Ltd.

Demande de permis concernant la préparation de l'emplacement et la construction de son projet de mine et d'usine de concentration d'uranium Rook I

Audience publique de la Commission
Partie 2

Février 2026

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Canada

COMMISSION HEARING PRESENTATION

Athabasca Chipewyan First Nation

FEBRUARY 2026
NEXGEN CNSC HEARING

ATHABASCA CHIPEWYAN FIRST NATION

We have occupied our region for thousands of years. We continue to hunt, trap, fish, and gather just as our ancestors before us.

We are the K’ai Taile Denesuline, stewards of the region. We carry a deep understanding of the land and are committed to creating a better world for the generations to come.

Project Location

Past and Present

ACFN has proved to the commission and to the proponents and respective governments we have significant Traditional Land Use in the area.

Including but not limited to:

- łuezą́n tué chogh (Carswell Lake), thai tué (Sandy Lake)
- łuezą́n túaze (Cluff Lake)
- Lake Athabasca on both sides of the Saskatchewan-Alberta border

Western methods have proved we have utilized this area of Treaty No. 8. In this area, our nation practices traditional activities that are vital to our nation's food security.

Including but not limited to:

- ceremonial practices,
- trapping,
- camping and living in cabins,
- travelling to important land use areas harvesting resources

Classification

OTHER VS. PRIMARY

Proponent has insisted that due to the geographical understanding of the western world we shall be considered and engaged with as a secondary interested party.
ACFN has **no intention** of causing inverse and negative repercussions to the livelihood and economic reconciliation of our neighboring First Nations

ACFN **is intending** to educate and promote a safe and sustainable future for all Uranium development and plea to the CNSC to do their due diligence of the crown in their approval decisions

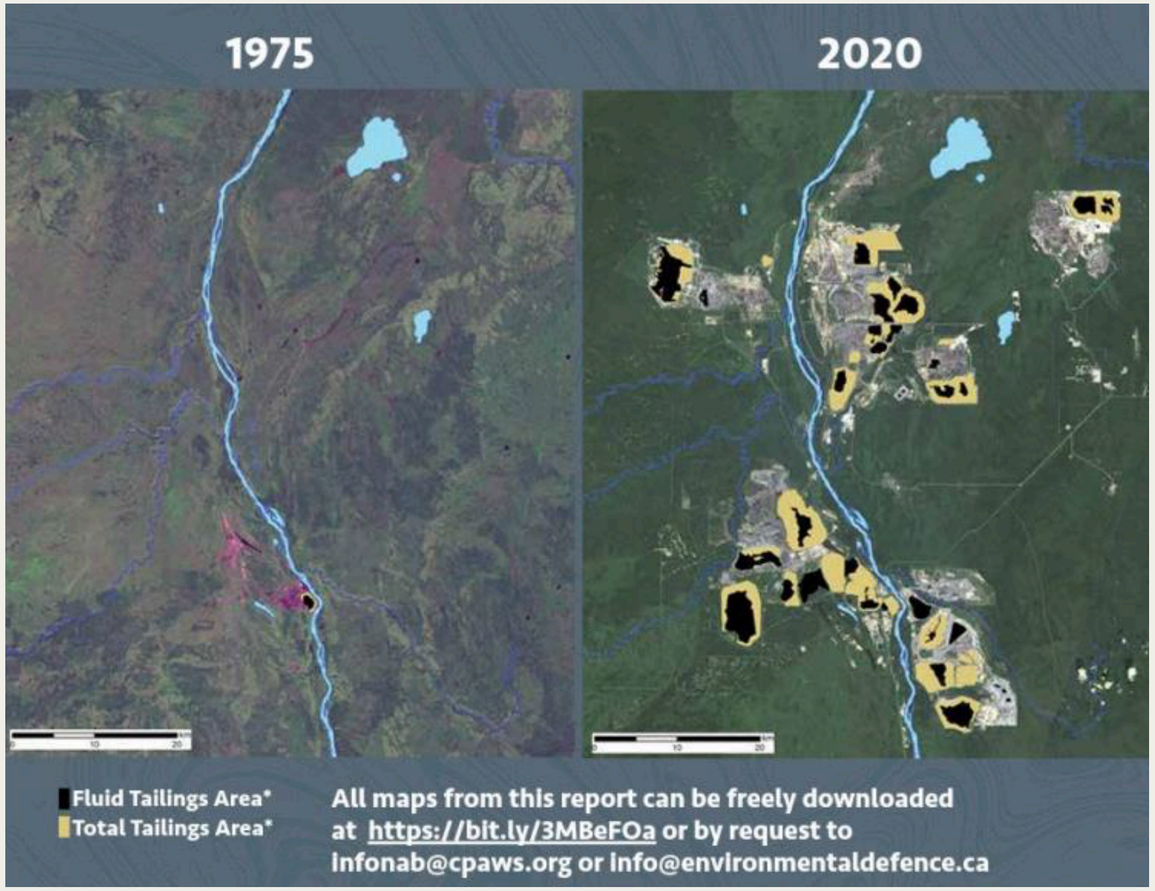
Cumulative Effects

OILSANDS OPERATIONS

Oilsands deposits in the area lie
under 141 thousand square
kilometers

Open pit mining activities are
used to extract the bitumen,
these mining activities leave toxic
tailings ponds behind.

Our territory is surrounded by development.
The Government and the proponents have still not
addressed cumulative impacts to our nation after over 60
years of development.



ACFN Submission

WRITTEN SUBMISSION TO THE CNSC:

1. Distribution Coefficient Assumptions
2. Uncertainty in Hydrogeological Modelling
3. COPC identification and screening are not protective of Indigenous Traditional Land Use pathways
4. Mixtures and additive effects are not assessed, contrary to federal human health guidance
5. Air pathway and inhalation carcinogenic risks are under-characterized
6. Soil exposure assessment does not address bioaccumulation into traditional foods and medicines
7. Long-term and intergenerational exposure pathways are not incorporated into risk conclusions
8. Certain post-closure pathways are unassessed
9. Sediment quality COPC selection and long-term sediment exposure pathways are not consistently assessed or justified
10. Air deposition pathways to soil, water, sediment, and traditional food chains are not assessed or integrated into the HHRA

ACFN Submission

PRESENTATION FOR CNSC AND FOR OUR NEIGHBOURING RELATIVES WILL HIGHLIGHT:

1. Unclear look into the future and technology
2. Increased health risks
3. Lack of emergency preparedness

Issue 1

LACK OF BATEA; SELECT BEST TECHNOLOGY TO MINIMIZE DISCHARGES

Issue 1

EFFLUENT TREATMENT & BATEA ASSESSMENT

- NexGen seeks site prep & construction licence WITHOUT documented BATEA analysis for operational discharges
- EIS and TSD XVIII describes a high level ETP concept: tanks/clarifiers; two-stage chemical treatment; precipitates to paste/backfill; treated effluent recycled or batch-released via offshore diffuser
- Key steps are still placeholders (T02 pre-treatment; T03 enhanced post-treatment) with unit operations, design criteria, and performance basis not defined
- EIS states the ETP design will be refined to meet REGDOC-2.9.2, noting it was a draft at time of writing
- However, environmental assessment legislation already required alternative-means analysis

Issue 1

LACK OF BATEA FOR CONTACT WATER PROCESSING

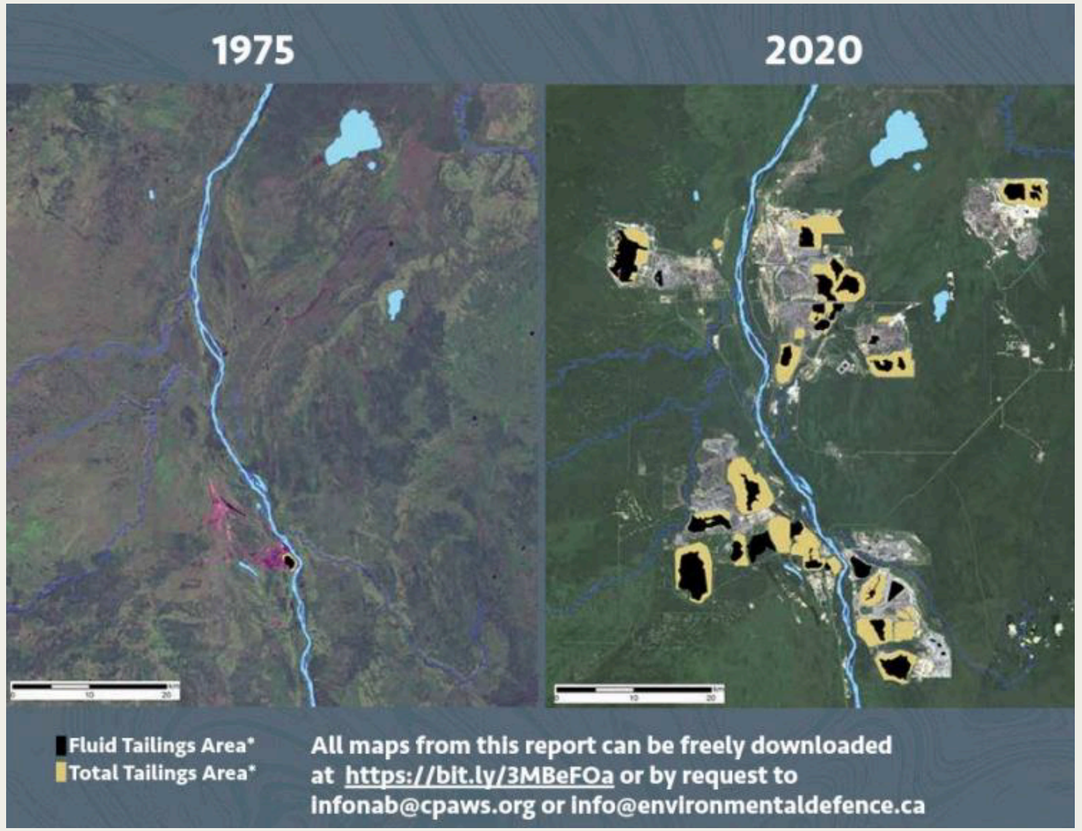
- If licence to construct granted without BATEA, and facility is built, it locks in civil layout, building footprint without public review of BATEA options
- This also makes the ERA/HHRA conclusions conditional on assumed removal efficiencies rather than a defined treatment.
- Risk assessment indicates arsenic (and other constituents) can exceed targets under modestly reduced treatment performance.
- Limited contingency margin and reinforcing that BATEA its public review must be completed before construction.

Does not yet demonstrate compliance with REGDOC-2.9.2 (BATEA-based design)

Issue 1: Risks

ACFN EXPERIENCES

- “Figuring it out later” is not a proven method of planning and minimizing impact.
- Oilsands operations have told us otherwise
- Tailings facilities and cleanup is still a threat to our survival and our lands



Issue 1

ACTION AND RESPONSE REQUEST FOR CNSC

- **Provide documented consolidated BATEA assessment for water management approach, comparing all feasible alternatives**
- Ensure compliance with REGDOC-2.9.2
- Require a design-basis description of unit operations and performance assumptions (influent range, treatment efficiencies, residuals management, redundancy/upset recovery).
- Demonstrate use of best technologies
- Demonstrate discharges are minimized rather than just below limits

- Provide documented, consolidated BATEA for liquid effluents, including an explicit evaluation of high-recycle / minimized-discharge operating modes for contact/process water
- **Specify exact treatment unit operations, design criteria, redundancy, polishing steps NOW**
- **Provide licensed release limits & action levels for key COPC, including uranium, radium, arsenic, selenium, molybdenum, nickel, cobalt, copper**
- Define T02 (“Mine and runoff water pre-treatment”) and T03 (“Enhanced effluent post-treatment”) by listing intended unit operations, design criteria, redundancy/upset recovery, and expected removal mechanisms for key COPCs (eg As, U, Ra)
- Benchmark against leading practice for minimizing routine contact-water discharge at uranium mines/mills and explain transferability to Rook I

Issue 2

ARSENIC CANCER RISK TO SUBSISTENCE HARVESTERS

Issue 2

ARSENIC RISK ASSESSMENT

- Predicted incremental arsenic ILCR: 4 in 100,000 (Project only, during project lifespan) – Exceeds Health Canada negligible level of 1 in 100,000
- With Fission development (Project + Fission PLS Property): up to 11 in 100,000 for subsistence harvesters at Patterson Lake
- Central case assumes 50% Traditional Food from lake
- Baseline: 69/100,000 for the reference subsistence harvester
- NexGen argues that adding to already high baseline makes it acceptable

Not clear why acceptable to increase risk where baseline is already elevated

Issue 2

HUMAN HEALTH RISK ASSESSMENT

- NexGen HHRA does not consistently align with Health Canada guidance.
- Chemicals excluded; inconsistent COPCs with other nuclear faculties in the area
- Mixture toxicity not assessed
- Predictive modelling for fate and transport of chemicals not conducted in all media
- Exposure pathways excluded
- ACFN concerns align directly with federal risk assessment requirements
- CNSC cannot rely on current record to support a defensible finding of 'no unreasonable risk'.

Revisions are required prior to regulatory decision-making.

Issue 2: Risks

ACFN EXPERIENCES

- The cancer rates in Fort Chipewyan are higher than those in the province of Alberta
- Pre-existing risks in our community and will be further impacted throughout Treaty 8.
- We share major water systems; our community relies on these water systems.

Issue 2

ACTION AND RESPONSE

- Commit to quarterly/annual arsenic monitoring in fish, moose organs, moose meat with explicit action levels
- Document ACFN Traditional Food use patterns, consumption rates, nutritional/cultural importance
- Establish escalation triggers if post-construction monitoring shows concentrations exceed predictions

Address: Is it acceptable to ADD risk to a community already above negligible cancer baseline?

Issue 3

IMPORTANT HAZARDS NOT ANALYZED

Issue 3

BOUNDING ACCIDENT SCENARIOS

- Section 21 identifies many explosion mechanisms: underground blasts, LNG plant, transformer, generator, fuel fires
- Risk matrix allows "catastrophic and highly unlikely" classification, but these are not analyzed quantitatively
- Only ONE explosion scenario fully analyzed: solvent extraction fire/explosion (short-term uranium dispersal only)
- Others screened out as "always ALARP" or excluded from hazard evaluation entirely
- Missing: Gross UGTMF failure, multi-system natural hazard cascade, major underground incident
- No bounding scenario for explosives magazine detonation or on-site LNG power system explosion

No explicit analysis of low-probability, high-consequence multi-system failure scenarios

Issue 3: Risks

ACFN EXPERIENCES

- Our nation has seen once-in-a-lifetime natural disasters regularly, wild-fire evacuation, 100-year flood.
- In 2023, we experienced and still determining the fallout from a tailings pond seepage and spill in our territory
- Preparing for the worst is crucial to peace of mind.

Issue 3

ACTION AND RESPONSE

- List ALL explosion scenarios considered but not analyzed – provide complete inventory
- Analyze 2–3 very low-probability, high-consequence events explicitly (e.g., LNG blast, explosives accident)
- Analyze very severe, unlikely events (UGTMF gross failure, seismic + multi-barrier loss)
- Quantify design margin above predicted consequences – what if assumptions are too optimistic?
- Discuss Cliff-Edge effects
- Show physical effects, likely damage states, environmental & health consequences for each

Address: How can you claim that Explosives Act compliance replaces need for project-specific consequence analysis?

Action and Statements

ACFN has provided three examples of many to establish concerns with this project:

1. Unclear look into the future and technology
2. Increased health risks
3. Lack of emergency preparedness

ACFN requests that the CNSC ensures that our written submission is taken under consideration, and the actions and requests outlined today be addressed prior to the approval of the Rook 1 Uranium Mine

CONCLUSION

Our people have occupied this land for generations and intend to continue to practice our Treaty Rights for generations to come

We will be continually reviewing the current status and risk in all Uranium development in this region and hope that these projects learn from past mistakes and oversight when it comes Indigenous Stewardship

ACFN will be available and will continue to be leaders in environmental protection for all those that seek it

Marsi Cho

FROM THE K'ÁI TAILÉ DENÉ