Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

CMD 26-H102.5

Date: 2026-02-25

Written Submission from the Athabasca Chipewyan First Nation

Mémoire de la Première Nation des Chipewyan d'Athabasca

In the matter of

À l'égard du

Saskatchewan Research Council

Saskatchewan Research Council

Application to renew licence for the Gunnar Mine Remediation Project

Demande visant à renouveler son permis pour le projet de remise en état du site Gunnar

Hearing in Writing

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Canada

ACFN
DENE LANDS AND RESOURCE MANAGEMENT (DLRM)

February 25, 2026

Re: Gunnar Five Year License Renewal

The Athabasca Chipewyan First Nation (ACFN) asserts its constitutionally protected Treaty and Aboriginal Rights under Treaty 8 and section 35 of the Constitution Act, 1982. These rights include, but are not limited to, the rights to hunt, fish, trap, gather, and practice culture throughout our traditional territory, including areas impacted by the legacy Gunnar uranium mine. The ACFN has unalienable Aboriginal rights. Members of ACFN continue to exercise their Section 35 of the Constitution Act guaranteed Aboriginal and Treaty rights. These rights include the ability to hunt, trap, collect food, and fish. Our people still use these areas, including those close to the site, as their predecessors have done for many years. The forebears of the present-day ACFN lived close by and depended on the lands there to support their way of life before Europeans intervened through commerce and treaty and before imposing provincial limits on ACFN.

ACFN does not view the proposed extension of remediation at Gunnar as an administrative matter. It is a matter directly related to the health of our lands, waters, wildlife, and people, therefore to our Treaty Rights and cultural survival.

ACFN Dene Lands and Resource management office has conducted a technical review and in-person interviews with ACFN elders on the provide CMD package provide on the 5-year Gunnar License renewal. During the information sessions, the project was reviewed to identify the anticipated impacts of the project on the environment, that is the lands, waters, and resources that ACFN members use and rely upon in practicing their Aboriginal and Treaty rights.

ACFN is concerned that the extension of this project will impact and directly contribute to infringements of ACFN's Aboriginal rights within ACFN traditional lands. Using the details supplied in the provided package, ACFN DLRM conducts a systematic screening procedure. ACFN members have expressed concerns about the past operations in the area and worry about the continued exploration timeline.

There are many environmental and cultural impacts that ACFN elders have touched on during the engagement. Members have expressed grave concern

regarding cumulative effects from uranium mining and other industrial activity in the region.

> "Since the increase in uranium mining around Goldfields, was the last time a caribou was seen in 1993."

Caribou is a culturally and spiritually significant species to ACFN it represents more than environmental change but the shift to our culture and disrupting protected Treaty rights.
The Gunnar site is hydrologically connected to Lake Athabasca, Peace Athabasca Delta and continues to the Mackenzie Delta. Members continue to raise concerns about contamination pathways through groundwater, limestone fractures, and aquatic systems. Elders and knowledge holder's state:

> "Mining three quarters under Lake Athabasca… When they closed the Gunnar mine, I know when they close the mine there has to be leakages… 25 km north, there is no testing, we need more."

> "Gunnar left such a mess, you could see the raw tailings… For me uranium tailings is leaking… The water flows right to our doorstep."

> "I refuse to eat fish trout from Lake Athabasca… The fish are bottom feeders and that's where the uranium would be."

Community members connect observed cancer rates and health uncertainties with uranium exposure pathways. Whether or not causation has been scientifically established, the fear itself reflects a serious breakdown in trust and confidence in regulatory oversight. Members also expressed concern for kin downstream in the Mackenzie Delta who rely on connected watersheds.

Members reflect on their past when uranium mining in the area was at its highest. Many address the lack of information, and long-term risks.

> "They didn't even tell the public about the risk from the uranium mining. Kids were drinking from tailings ponds."

The historical failure to inform and protect Indigenous communities compounds current distrust. The legacy of secrecy and delayed cleanup has created

intergenerational trauma and skepticism toward assurances that water and land are "safe."

Members question whether remediation can meaningfully address radioactive contaminants that have persisted for hundreds to thousands of years.

> "Remediation could take hundreds of years… Remediation is very cosmetic to me, only what you see."

> "There is no perfect clean up, can only cut down the dangers… The goal is for the land not to harm people in the future."

ACFN acknowledges the technical challenges of legacy remediation. However, the extension request must demonstrate not only progress, but long-term containment assurances consistent with the duration of radioactive hazard.

The current and perceived contamination of lands and waters:

- Interferes with the meaningful exercise of Treaty harvesting rights
- Deters members from fishing and hunting in affected areas
- Creates fear around consumption of country foods
- Reduces intergenerational land use and cultural transmission

A regulatory decision that extends remediation timelines without strengthening protections effectively prolongs the infringement on Treaty Rights.
The Crown has a duty to consult and accommodate ACFN in a meaningful and substantive way. Consultation must go beyond procedural engagement and include enforceable protections.

When considering Western Science and the current system being used to quantify the health of the environment has not included the impacted nations knowledge and recommendations. Majority of the ACFN elders interviewed requested stronger, independent, and transparent monitoring

> "I know they do weekly monitoring in Uranium City but they need to be doing that in Gunnar."

ACFN would like to request:

1. Expanded groundwater and surface water monitoring near the Gunnar site, including north of the site and within connected hydrological pathways.
2. Digestible reporting to impacted communities.
3. Independent ACFN led testing programs from the community based monitoring team that would be funded by the proponent or regulator.
4. Inclusion of new scientific innovations, including advanced isotope tracing, fracture flow modelling, and long-term radionuclide migration modelling.
5. Sediment and benthic species testing, particularly in areas such as Morus Bay.
6. Cumulative effects assessment, addressing uranium, pulp mills, oil sands, and other industrial activities together.

As Elders stated:
"We see cumulative effects from all mining, and we need to address them together."

Moving forward direct communication is a top priority for ACFN. From this submission ACFN request direct feedback on how ACFN submissions are incorporated into CNSC decisions. Increased in-community engagement from Saskatchewan Research Council (SRC) and Saskatchewan ICP programs. Transparent publication of all monitoring results in accessible formats

From feedback from ACFN members and based on historic actions taken by government and industry this extension cannot be fulsomely supported without strengthened conditions. Overall, without these measures, the extension would prolong environmental uncertainty, impact-built trust and put impairment to ACFN Treaty Rights. Final thought on the use of Treaty Rights and the future of the land

"Now I wouldn't use the land if they deemed it remediated."
"In Gunnar there used to be trees now it's barren land."

Lastly elders would like to see innovations and protect the lands for the next serval generations to preserve Dene Culture.

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"Big changes have happened in the past 60 years, and we can continue to do better."

ACFN calls upon the CNSC and the Crown to uphold their constitutional obligations and ensure that legacy uranium contamination does not continue to compromise our lands, waters, and future generations. This is not solely about remediation timelines. It is about restoring trust, protecting Treaty Rights, and ensuring that radioactive legacies do not define the future of our Nation.

Regards,

Janelle Flett, Resource Development Advisor ACFN DLRM

Technical observations and questions on the implementation of radiation protection program at the Gunnar Remediation Project

To: Janelle Flett, Athabasca Chipewyan First Nation (ACFN)

From: Mark Gerchikov

Date: February 4, 2026

Subject: Technical observations and questions supporting ACFN review of Gunnar CMD 26-H102 (CNSC Staff Submission and Appendix materials) and related CNSC Gunnar inspection reports (2022–2024)

A key improvement would be to explicitly document, in the CMD package and follow-up monitoring narrative, the line of evidence used to demonstrate completeness of the remediation footprint and source inventory, and how residual “unknowns” will be managed.

Specifically, CNSC/SRC should summarize the basis for concluding that all significant legacy sources and pathways have been identified (e.g., reconciliation to historical drawings/as-builts and aerial imagery, systematic walkdowns, targeted investigation of suspected features such as buried lines/pipelines and dispersal areas, and how anomalies in sampling/monitoring were resolved), and then define clear investigation triggers and contingency actions for late-discovered legacy features (including offsite).

Other improvements should focus on making contamination-dominant and internal exposure pathways as transparent and auditable as the gamma program. In practice, that means CNSC/SRC should

- clearly distinguish what gamma spot checks demonstrate versus how alpha/beta contamination controls are independently verified (including instrumentation/protocols, smear versus direct survey basis, background handling, and explicit action levels)
- explicitly document how radon and radon progeny monitoring is implemented in “active work areas,” focusing on any enclosed or low-ventilation spaces and the criteria for when monitoring frequency can be risk-based
- describe how internal dose is quantified (not just that effective dose is tracked), including the monitoring methods used for long-lived radioactive dust and radon progeny and how these roll up into reported dose
- define risk-informed triggers for reducing follow-up air monitoring and for re-initiating it under disturbance, drought, or wildfire conditions, and (5) improve traceability in inspection reporting (e.g., calibration validity for the inspection date) so the measurement record is defensible and interpretable by communities.

These 4 areas may have been covered in the internal SRC radiation protection program and records but were not clearly documented in the reviewed documentation.

Observations

Observation 1: The inspection measurement summary (as communicated in the inspection report SRC-GMRP-2023-01) emphasizes gamma dose-rate spot checks and provides limited detail on contamination-pathway verification. While gamma surveys are useful for external dose/hotspot screening, uranium mine/remediation work commonly requires explicit verification of contamination controls (alpha/beta surface contamination and potential internal exposure pathways). The inspection documentation would be more useful if it clearly described how contamination controls were verified (through field measurements and/or audit of the licensee's contamination-control program evidence), and what the reported measurements are intended to demonstrate.

Similar concerns apply to the 2022 inspection report - it still isn't clear from the report what instrumentation/protocol was used for those contamination checks (alpha-capable vs beta/gamma-only, smears vs direct frisk, action levels), so the documentation doesn't fully demonstrate how dominant alpha/beta contamination pathways were independently verified

[FYI, my concern stems from previous experience of how some CNSC staff might conduct and interpret such measurements].

Observation 2: Appendix D of inspection report SRC-GMRP-2023-01 lists RadEye calibration dates in 2024 for measurements taken during the Aug 29–30, 2023 inspection. Clarifying calibration validity as of the inspection date would improve confidence.

Observation 3: The 2024 inspection report reads as a more substantive oversight touchpoint than the 2023 report, in that CNSC identifies multiple notices of non-compliance tied to fitness-for-service conditions that are directly relevant to long-term containment performance (e.g., ponding water, subsidence, and slope failures) and sets expectations for corrective action.

Observation 4: 2024 report also documents at least one clear gap in radiation protection - the RP Plan indicates daily radon and radon progeny monitoring in active work areas, whereas CNSC observed a periodic, risk-based monitoring approach - which is a useful finding for ACFN to track because it speaks to whether controls are being implemented as described in the approved program basis. CNSC's inspection report does not specify this, but if locations are in enclosed or semi-enclosed areas then potential unmonitored worker exposure levels could be higher.

Observation 5: In CMD 26-H102 – CNSC Staff Submission (Section 3.7 Radiation Protection), the document appropriately identifies the key effective-dose contributors as gamma radiation, long-lived radioactive dust and radon gas, and it states these are controlled through ventilation, contamination control, dust abatement and PPE, but it does

not provide enough detail for ACFN to understand the strength of the internal-hazard controls in practice (e.g., what “long-lived radioactive dust” is being monitored as, what monitoring frequency/locations are used, what action levels apply, and what internal dosimetry methods are relied upon beyond generic “dosimetry/contamination control”).

Observation 6: The same section indicates weekly contamination surveys are performed in areas like camp, construction trailers and truck cabs to verify contamination controls are working, but the submission does not describe the measurement basis (alpha-capable versus beta/gamma-only, direct frisk versus smears, count times/background handling, or the criteria used to conclude “working as designed”), which makes it difficult for ACFN to evaluate whether alpha/beta contamination pathways are being explicitly verified rather than inferred.

Observation 7: In CMD 26-H102 – APP (Follow-up Monitoring Program, May 2024), the HHERA update discussion states that “the primary risk for human site use is related to exposure to gamma radiation,” and emphasizes cover effectiveness in reducing gamma; that framing risks under-communicating the continuing importance of contamination-related pathways (dust resuspension, ingestion pathways, radon/radon progeny in the event of future camping, etc), especially if covers are disturbed, eroded, or impacted by extreme events.

Observation 8: The Follow-up Monitoring Program indicates air quality trends (dustfall radionuclides/COCs and ambient radon) have been low since 2019 and proposes that, if trends continue, the air monitoring scope may be revised or discontinued after 2–3 years of follow-up monitoring; ACFN may view this as a potential gap unless there is a clear, risk-informed rationale and re-trigger criteria tied to site disturbance/landform performance, estimates specific to dry conditions or forest fires (i.e., not just “trends stayed low”).

Observation 9: The appendix provides explicit radiological objectives for gamma dose rates (per-hectare average and point limits above background) and describes an automated gridded gamma survey approach, but it does not present explicit, publicly legible objectives/action levels for contamination metrics (e.g., surface contamination criteria, dust activity metrics linked to actions) in the same way; for ACFN, that imbalance can make it harder to see how internal/alpha-related hazards are being managed and communicated with the same clarity as external gamma dose rates.

Observation 10. In the CMD 26-H102 – CNSC Staff Submission, there is a clear indication that worker dose is being monitored in the sense that SRC designates key workers as Nuclear Energy Workers and tracks/report “average” and “maximum individual effective

dose" for 2016–2024, and the submission states the work program includes "radiological monitoring, dosimetry, and contamination control." It also explicitly identifies internal-pathway contributors (long-lived radioactive dust and radon gas) alongside gamma as contributors to effective dose. What is not shown is *how* internal dose is quantified: there's no explicit mention of an internal dosimetry program (e.g., bioassay/urinalysis, in vivo counting, derived air concentration approaches, etc).

Questions relating to above observations

Observation 1 (gamma-heavy inspection measurements; limited contamination-pathway verification)

- In inspection reports SRC-GMRP-2023-01 (and the June 2022 inspection), what specific contamination verification methods did CNSC use on site (direct scans, smears/wipes, instrument type/probe, scan protocol), and what parts relied on review of SRC program records rather than independent measurement?
- When CNSC reports gamma dose-rate spot checks in inspection reports, what is the intended conclusion those measurements support?
- Does CNSC have inspection guidance for uranium remediation sites that specifies minimum expectations for verifying contamination controls (alpha/beta surface contamination and internal exposure pathways), and can CNSC provide that guidance or describe how it was applied at Gunnar?

Observation 2 (calibration traceability in SRC-GMRP-2023-01 Appendix D)

- Appendix D of SRC-GMRP-2023-01 lists RadEye calibration dates that appear to post-date the Aug 29–30, 2023 inspection; can CNSC confirm the instruments were in valid calibration at the time of the inspection and provide the applicable calibration dates/certificates for that period?

Observation 3 (2024 FFS NNCs tied to cover/landform performance)

- For the 2024 findings on ponding, subsidence, and slope failures, what are the technical acceptance criteria and action thresholds (e.g., magnitude/extent triggering remedial action), and how is recurrence/trending assessed over time?
- How does CNSC verify the effectiveness of corrective actions for these fitness-for-service issues (field verification steps, documentation reviewed, closure criteria), and will ACFN be provided summaries of closures and follow-up results?

Observation 4 (RP Plan says daily radon/radon progeny monitoring in active work areas; observed periodic risk-based approach)

- How does SRC define “active work area” for the daily radon/radon progeny monitoring requirement (does it explicitly include enclosed or semi-enclosed spaces, temporary shelters, equipment cabs, or other low-ventilation locations)?
- What radon/radon progeny monitoring methods are used (instrumentation, measurement duration, frequency

Observation 5 (CNSC Staff Submission lists contributors including long-lived radioactive dust and radon; controls described at high level)

- What specific parameters are used at Gunnar to monitor “long-lived radioactive dust” (e.g., airborne particulate monitoring with radionuclide analysis, DAC-based assessment, dustfall radionuclides), and what monitoring locations and equipment are used during active work?

Observation 6 (weekly contamination surveys in camp/trailers/truck cabs; measurement basis not described)

- Are weekly contamination surveys performed with alpha-capable instruments and/or smear/wipe sampling, or are they primarily beta/gamma frisking? Please specify instrumentation/probes, survey protocol, and criteria for declaring areas “clean.”
- What surface contamination criteria are used for controlled/occupied areas (camp, trailers, cabs), in what units, and how are those criteria communicated in reporting (including exceedance reporting and corrective action)?

Observation 7 (Follow-up Monitoring Program frames primary risk as gamma; contamination pathways may be under-communicated)

- In the HHERA/Follow-up Monitoring Program, what is the basis for stating the primary human-use risk is gamma exposure, and how are contamination-related pathways (dust resuspension, ingestion, radon/radon progeny in certain microenvironments) incorporated into the HHERA conclusions and monitoring plan?
- How will the follow-up reporting communicate residual contamination and internal-pathway risks in a way that is understandable to communities (not just gamma dose-rate maps), especially under disturbed-cover scenarios and extreme events?

Observation 8 (proposal to reduce/discontinue air monitoring after 2–3 years if trends remain low)

- What explicit decision criteria govern reduction/discontinuation of air monitoring (number of years, statistical/trend thresholds, required site conditions), and what are the re-trigger criteria (e.g., cover disturbance, drought, wildfire/forest-fire smoke, high-wind events, major earthworks)?
- How does the program account for episodic high-dust conditions (dry periods, wildfire seasons) that may not be captured by routine trend monitoring, and will there be event-based monitoring requirements?

Observation 9 (explicit gamma objectives but not similarly explicit contamination objectives)

- Can SRC/CNSC provide explicit, publicly legible objectives/action levels for contamination metrics comparable to the gamma objectives (e.g., surface contamination criteria, dustfall radionuclide thresholds, airborne radionuclide indicators), including what actions occur when criteria are exceeded?

Observation 10 (worker dose is tracked, but internal dose quantification method not described)

- What portion of the reported “effective dose” at Gunnar is expected to come from internal pathways (dust/radon progeny) versus external gamma, and how is internal dose quantified in practice (bioassay/urinalysis, in vivo counting, DAC-based methods, radon progeny dosimetry, or other)?
- What triggers require internal dose assessment beyond routine external dosimetry (e.g., contamination events, high-dust tasks, radon progeny excursions), and how are those assessments documented and trended?
- What evidence has CNSC reviewed to confirm internal dose assessment methods are appropriate for site radionuclide mixtures and work conditions (method validation, detection limits, uncertainty, and ALARA decision-making)?