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Written Submission from the Athabasca Chipewyan First Nation

In the matter of the

Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2024

Regulatory Oversight Report for Canadian Nuclear Power Generating Sites for 2024

Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2024

Commission Meeting

March 2026

Mémoire de la Athabasca Chipewyan First Nation

À l'égard du

Rapport de surveillance réglementaire des mines et usines de concentration d'uranium au Canada : 2024

Rapport de surveillance réglementaire des sites de centrales nucléaires au Canada : 2024

Rapport de surveillance réglementaire des installations de traitement de l'uranium et des substances nucléaires au Canada : 2024

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Canada

Review of Regulatory Oversight Reports 2024

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ACFN is an Athabascan speaking Dené people called Dënësųłinḗ ("People of the Land"). For countless generations, members of ACFN have lived and sustained themselves, their families, and their community in ACFN territory in northern Alberta by hunting, trapping, fishing, and gathering – carrying out their distinctive way of life and passing down their culture.

ACFN's lands radiate north, east, west and south from the Peace-Athabasca Delta, including the Lower Athabasca River and lands to the south of Lake Athabasca, extending to the lands around Fort McMurray and Fort MacKay. ACFN has eight reserves set aside for the use and benefit of its members: Chipewyan No. 201 and 201A-201G inclusive.

Chipewyan No. 201, otherwise known as Jackfish Reserve, is a mere eight kilometers from the proposed project boundaries. ACFN homeland zones are identified as areas of critical importance to the past, present, and future practice of ACFN Treaty and Aboriginal rights. They are the places where ACFN history, culture, and livelihood are most firmly rooted. The homeland zones are presented as the places ACFN members are most likely to rely on and require priority access to. As ACFN's population continues to grow, the resources needed to sustain our practices and rights have increased and will continue to increase. Yet, ACFN lands are being overtaken by industry development from numerous of natural resource sectors which directly impact members protected Treaty and Aboriginal rights. ACFN's interests are in protecting treaty rights and the traditional territory of the Dene people across treaty 8 and beyond. The review of the RORs stems from increased development on Dene lands and growth of the nuclear sector that will undoubtably affect ACFN people's overall way of life for generations to come. To ensure our voices and recommendations are valued we ask for witting or verbal response to issues raised throughout this submission.

This intervention was established by the ACFN Dene lands and Resource Management office and trusted subject matter experts to provide comments the ROR 2024.

ROR 2024 ACFN intervention report will focus on three Regulatory Oversight Reports 2024

1. Nuclear Power Generation sites
2. Uranium mines and Mills
3. Uranium and Nuclear substance Processing Facilities

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1.0 Nuclear Power Generation sites

From reviewing the "Regulatory Oversight Report for Canadian Nuclear Power Generations sites for 2024" there are comments ACFN and team has identified and made recommendations to the CNSC.

ACFN emphasizes the importance of safeguarding Indigenous peoples by implementing environmental monitoring practices that account for industrial hazards associated with traditional and contemporary land use. The goal is to ensure potential risk to Indigenous traditional practices such as hunting, fishing, gathering, or cultural practices tied to the land and waters are identified correctly by impacted Nations and people to protect all Treaty and Aboriginal rights. By working closely with these communities, valuable insights are gained and the specific ways environmental hazards could disrupt cultural practices, livelihoods, and wellbeing.

S 1.2 States that new nuclear plants are described briefly but that oversight activities are not included. It is not stated as to why this is the case, considering that new plants need decommissioning plans and have impact on the environment. ACFN recommends expanding the report to further include new builds or create a separate report for new builds that focus on developing sites, consultation processes, finalizing designs during the environmental assessment phase that would create strong foundation for protection of Treaty rights, environmental protection and waste management plans before licensing are granted.

S1.7.4 The data from table 4 in 2024 represents an 18% increase in event reports driven by DNGS, PNGS, and BNGS. The report does not mention if there are any factors associated with the increase, such as an increase in physical work at the stations, and further details are required to understand the factors. 18% may or may not be significant yet, it is unknown how many events reports would prompt review and such trend. The non-compliant and compliant findings are identified for each station/license considered. For the NPP, the percentage of non-compliant findings ranges from 24-30%. Even though the findings are mostly negligible or low, the percentage is concerning. ACFN would recommend a trend analysis to be done to identify any common factors for the increase. Further discussion on the conclusions of what percentage of non-compliance is deemed acceptable and clearly define the term. If the percentage of non-compliance is only of concern for medium and above, then perhaps a different metric would be useful. CNSC should identify compliant, negligible, and significant findings were significant. This would bring clarity to what is truly an issue of concern.

S2.1 Table 8 provides the status of integrated safety review-IIP tasks. There is a statement that several of these tasks are related to mitigating measures and follow up program activities from the environmental assessment. The environmental assessment referred to is not identified but likely the one used for refurbishment. There is no reference to what these measures are or how concerning they might be. It is also unclear if any of these issues are related to section 2.1.9 on environmental protection. Thus, it is not possible to ascertain if there are environmental concerns here or not. While the progress on completing

tasks is very good, what would really be helpful is to identify if there are any lessons learned here useful for other projects. If there are improvements to environmental protection or currently identified weaknesses, it would be nice to know what they are and how significant they are.
Based on the need to provide mitigation and avoidance measures under the duty to consult having these document is very important to Nations as this sector advances in Canada. ACFN recommends that amendments to future RORs include health of Indigenous peoples in site preparation. ACFN recommends the applicant work directly with local Indigenous groups to understand their concerns and risks that may arise during site selection and preparation.

S2.1.9 There are two identified instances of exceeding action levels. While this is true, the action levels are very low in comparison to limits and these are not a real concern. As an example, the total residual chlorine exceeded the 0.01 mg/l action level with values of 0.016 mg/ and 0.029mg/l. The drinking water standard for Ontario is that the value is less than 0.25 mg/l so this is well below any level of concern. ACFN recommends that monitoring programs include Indigenous indicators, measures, and/or criteria that works towards addressing the nations concerns and interests. ACFN has community specific criteria (Water Quality Criteria for Indigenous Use [WQCIU]) for ensuring its land users are protected from contaminants in water. For example, the report utilizing "typical" consumers of land and water resources to assessing hazards to humans.

S2.2 The storage capacity is identified for the Darlington Waste Management Facility, and the proposed expansions are also identified. However, the current fill capacity and residual margin are not identified so it is difficult to ascertain if the capacity is an issue or not. There is also the issue of whether the capacity represents a full life supply of used fuel or an equivalent number of operating years. This information is useful to determine what would be required for a new build and how much space is needed for dry storage. This report does not discuss the new builds and so it is a concern about what capacity would be required for the DNNP, Bruce C, or other new reactors around the country. The fill capacity of these needs to be identified. While trivial in the context of this report, the issue here is that this section forms some of the best available input for ACFN when considering new projects in ACFN Traditional Territory. This example shows the original facility was not sized sufficiently to handle the waste storage needs and a doubling of capacity was required or possibly more. This means you can expect a similar facility with 4 storage structures that might be necessary.

S2.2 Event Initial Reports are identified. In this case a neutron exposure to workers, however it is unclear whether the event is serious or not as it is not really discussed further in the report. Identifying the level of events helps determine if the event is something that is serious and should be watched by the Nations and the public, if it is minor and handled by the Utility and the CNSC. Unexplained neutron exposure to workers could be a dose issue and it could have an environmental impact. While it is unlikely that this is an environmental impact, it cannot be determined from this report. In this case, CMD 24-M35 is

referenced where it is found that the neutron dose is 2 microsieverts/hour which is very low. This issue is not the dose, but the fact that the source term is not expected.

S2.2.13 reference a second IAEA unsatisfactory report in same year. As a warning to other it would be relevant to identify the common cause. ACFN would recommend identifying where the event falls under the INES scale; Level 1 anomaly, or Level 2 incident, etc. to adequately evaluate the impacts to environmental and human health.

S2.3.9 From the finding in this section, while doses are identified as acceptably low at the Pickering does to the public, it is higher than DNGS or BNGS. While the number itself is not an issue, the fact that it is different than the other stations mean a different environmental impact and it would be nice to know why so that ACFN could ensure new plants in their area have better designs or address whatever the issue is. This is important to downstream communities and could have bigger implications for the health of all living beings. When it comes to the fish impingement report it mentions conditions are being met, this statement is vague and would expect further limits be provided.

S2.5.9 The Active Liquid Waste had a sample where the pre-release criteria were met but the acute lethality testing resulted in 80% for daphnia magna (a water crustacean) exceeding the 50% provincial regulatory limit. While two other events were identified there appears to be some explanations as to the cause yet for the ALW the report simply states that Bruce Power's response was acceptable. Why the release sample said it was acceptable but still managed to kill 80% of the crustaceans is a bit odd. ACFN would request further information on the response, and cause of this event.

S2.8 Gentilly-2 is in safe storage and surveillance which is a non-operational state. While regulatory oversight is important, it is unclear what work activities are being performed in this state for which oversight is being reported. An explanation of the activities performed in that year would be useful to provide some guidance. Note also that it would be better to have the decommissioning oversight of all reactors including NPD, DP, and G1 in one report for a proper comparison of the important issues. All such reactors produced power and the findings from oversight are more related than with those units that are operational. Canadian National Labs is doing a lot of work at the various shutdown units for which some lessons learned could be applied to the larger units. Both Pickering A and gentilly-2 could benefit from the findings. The issues that the regulator has in conducting the oversight, especially with respect to environmental protection, waste management and Indigenous engagement would be useful to have compared in one document.

S2.8.10 As an example of approaching a decommissioning unit differently, the fire services are now provided by the community instead of the station. This is a change that the community needs to be aware of and would impact communities of other stations in the future. The point being that seeing these issues ahead of time would give the communities time to prepare for the change in responsibility due to the

change in nature of scope. There may be lessons learn for better preparation in emergency management and public knowledge when creating safety protocols and responsible parties.

S3. Need to implement UNDRIP into Consultation strategy with affected Nations based on their protocols and policies. ACFN recommends enhancing engagement by reassessing timelines to allow for adequate participation and find effective methods to communicate operational activities and updates. Strengthening engagement processes will enable Indigenous groups to make more meaningful contributions, particularly by integrating Indigenous knowledge into decision-making. This will play a critical role in identifying and reducing potential risks and impacts on Indigenous communities throughout the entire lifecycle. Improved communication and collaboration will not only foster trust but also support outcomes that align with the values and priorities of Indigenous communities.

Table 29, This list provides a useful list of important topics raised by Nations; it would be good to see the items raised related to environmental protection and waste/decommissioning to be further explained in the ROR reports. They are covered somewhere and having a comprehensive roadmap of where these issues are covered would go a long way to identifying where Indigenous Nations need to do their review and help focus efforts.

2.0 Review Uranium Mines and Mills

From reviewing the "Regulatory Oversight Report for Uranium Mines and Mills for 2024" ACFN and subject matter expert Mark Gerchikov has found several issues related to the recognize four themes below. The review includes supporting regulations and the values of ACFN in the findings.

Focus area for this review is on four related themes:

1. Worker radiation doses and action level exceedances
2. Spills, releases and environmental protection
3. Reliance on averages and guideline comparisons
4. Monitoring program and the conclusion of "no evidence of long-range transport"

A summary of major events review from the report is provided below.

Cigar Lake:

- Two dose action level exceedances in 2024 (4.41 mSv and 3.01 mSv committed effective dose)
- 18.92 mSv max dose (2023 exposure reclassified).

McArthur River:

- two radiological action level exceedances from poor ventilation during backfilling (doses 5.1 and 5.8 mSv),
- two industrial water releases (170 m^3 total, good quality per Saskatchewan Environmental Quality Guidelines), and

- two injuries.

McClean Lake:
- spilled 3 m³ uranium concentrate “yellowcake” slurry (contained, remediated) and
- had two injuries, including a lathe-related arm pull-in.

Rabbit Lake:
- a mine water pond liner failure leading to an environmental release (repaired) and
- one fall injury.

All events saw CNSC-accepted fixes, but trends in significant events, such as exceedance of dose action levels, spills, and injuries merit ACFN scrutiny, including cumulative effects on health and environment.

2.1 Worker does and radiation action level exceedances

As stated, “No NEW1 at any facility exceeded the individual dose limit of 50 mSv in 1 year, or 100 mSv in a 5-year dosimetry period.” However, report documents several action level exceedances (including 18.92 mSv at Cigar Lake from 2023) and 9.06 mSv at McClean Lake. Seven action level exceedances occurred altogether, including:
- 2 LLRD2 at Cigar Lake (4.41/3.01 mSv committed from PAPR3 misuse)
- 3 LLRD at Key Lake (1.21-1.76 mSv from scaffolding),
- 2 RnP4 at McArthur River (5.1/5.8 mSv from backfill ventilation lapses).

This is concerning to ACFN as these are meant to be early warning triggers well below the legal limits to keep workers safe. Repeated exceedances mean that, for some tasks, actual conditions are not as well controlled as the licence basis assumes. In CMD-26 these events tend to be framed as isolated incidents, but the pattern (LLRD and radon progeny spikes at multiple sites) suggests an underlying issue with:

- ventilation management during certain underground activities,
- respiratory protection practices and training, and
- staffing/over-time pressures.

Although there are no direct downstream impacts, is a leading indicator on how radiological hazards are being controlled overall and raised issue to whether similar operational stresses could affect environmental systems. This is essential to mitigate and adapt to these issues to avoid large-scale impacts in the future. ACFN would request that a root- cause analysis be carried out:

- How frequently have action levels been exceeded over the last 5 years by site and by exposure pathway (LLRD, radon progeny, gamma)?
- What changes in procedures, ventilation design, or staffing have been implemented to prevent recurrence?

2.2 Spills, releases and environmental protection

There were multiple reportable spills and unplanned releases at several operations over the year. All are described as having "no lasting impact" following cleanup and as being within the normal range of operating experience. The definition for this would need to be explored and defined by potentially affected Nations and public with the compounding about of these releases can invoke long term impacts not yet identify by traditional knowledge and impact to treaty rights being exercised by rightsholders. CMD-26 tends to consider spills individually, often focusing on:

- immediate containment (e.g., berms, sumps),
- localized soil excavation, and
- near-field monitoring results.

From our perspective, the key issues are:

- frequency and trends (e.g., are spills becoming more frequent/severe over time?),
- mass and load (how much contaminant is released each time, and cumulatively?), and
- potential for downstream transport, and aquatic changes

CNSC is using feel good non-quantitative phrases like "normal range" and "no lasting impact to the environment". These do not answer cumulative downstream risk.

Spills contribute to the overall contaminant load entering regional watersheds, which ultimately flow toward ACFN territories. Even if each individual event seems minor, the cumulative number and volume of spills over decades matter for sediment quality in key fish habitats, and perceptions of risk among community members and to Treaty rights. ACFN would request a multi-year trend analysis by spill, volume, contaminant type, and pathway (surface water, groundwater, soil). Clarification of the criteria used to conclude "no lasting impact" and whether those criteria include downstream receptors.

2.3 Reliance on annual average and guideline comparison

Effluent and environmental monitoring results are typically presented as annual average

concentrations compared against MDMER5 limits, and CNSC licence limits or generic guidelines. The narrative emphasizes that averages are well below limits, and that therefore environmental and human health risks are acceptable. This is a methodological issue that is recognized in environmental assessment. Averages can mask peaks and variability. Short-term spikes, seasonal maxima, or localized "hot spots" can be important for ecological and human receptors but are invisible in broad annual averages. For ACFN members or people who harvest fish and wildlife in specific locations at certain times (e.g., during high-flow events), timing and location can matter more than the annual average at a station.CMD-26 does not show:

- distributions (e.g., percentiles, maximum/95th percentile values);
- detailed spatial patterns (upstream vs downstream, cross-sectional differences); or
- how monitoring results translate into exposure estimates for specific Indigenous land-use

ACFN community members do not experience risk as an "annual average at a monitoring station"; they experience it as a result of exposure to actual water, fish, and game at particular locations and times. Heavy reliance on averages against MDMER limits may be adequate for compliance reporting but is insufficient for answering community questions, especially about rare but important events. ACFN would request further information on maximum and percentile values not just annual averages. Information on short-term peaks and seasonal patterns and how they are evaluated in terms of fish and wildlife health, and human exposure during typical land-use activities (e.g., fishing, hauling water, berry picking at specific sites).

2.4 EARMP

EARMP is a valuable program, but CMD-26 uses it in a very conclusive way without clearly presenting:

- which species and tissues are monitored,
- detection limits and statistical power (i.e., what levels of change EARMP can actually detect), and
- key uncertainties or data gaps.
- If the design of the program followed any recognized standards (such as CSA N288.4)

It is not that EARMP is wrong; rather, CMD-26 does not provide enough detail to independently assess whether EARMP results are:

- representative of ACFN land use patterns, and
- sensitive enough to detect changes that would matter for health and cultural practices.

The wording "no evidence of long-range transport" is particularly strong. It might be true but requires evidence to demonstrate that the program has been designed and implemented to detect changes of concern to ACFN, in the places where ACFN uses the land and water. EARMP is being used to reassure ACFN and other communities that their foods are safe. If its design does not adequately represent downstream Alberta territories, the reassurance is incomplete. Increased engagement and inclusion are

required. This is central to the community's ability to exercise Treaty rights without fear of contamination. ACFN would request how results are derived by the CNSC to conclude statements such as" no long-range transport" are made and what limitations are used to make such statements.

Based on the observations set out above and the priority topics identified by ACFN, the following questions and comments are proposed for discussion with CNSC Staff as feedback on CMD-26, "Regulatory Oversight Report for Uranium Mines and Mills in Canada: 2024." They are framed as requests for clarification and additional information on issues that are important to ACFN's assessment of uranium mining and milling impacts on downstream lands, waters and rights.

2.5 Discussion questions

ACFN is seeking to understand the significance of recent action level exceedances and higher worker doses, and how these are managed over time.

1. For each uranium mine and mill, please provide a summary of all radiation action level exceedances over at least the last 5 years, broken down by: facility and year, exposure pathway (e.g., long-lived radioactive dust, radon progeny, gamma); and ask or work activity where the exposure occurred.

2. For the higher worker doses highlighted in CMD-26 (including the 18.92 mSv dose at Cigar Lake and the 9.06 mSv dose at McClean Lake), please describe the root causes and contributing factors (ventilation conditions, work planning, staffing levels, equipment failures, procedural issues, etc.); the corrective and preventive actions implemented, and any follow-up monitoring of similar tasks to demonstrate that the risk of recurrence has been reduced.

3. How does CNSC use the frequency and nature of radiation action level exceedances (by pathway and by task) when assigning Safety and Control Area (SCA) ratings for Radiation Protection and Human Performance? At what point would repeat action level exceedances trigger a downgrade in SCA rating or a change in regulatory approach?

4. Does CNSC have performance objectives or targets (formal or informal) regarding the expected frequency of radiation action level exceedances at these facilities? If so, please describe those targets and how performance is tracked against them.

CNSC made several non-quantitative statements in the report, such as "no lasting impact", "within the normal range", "no evidence of long-range transport of contaminants" and "water and country foods are safe for consumption". ACFN is interested in how CNSC and licensees evaluate the frequency, magnitude and longer-term consequences of spills and unplanned releases, including cumulative effects.

5. For each facility, please provide a multi-year summary of all reportable spills and unplanned releases, including date, location and type of release, and volume released and quantity of main contaminants of potential concern (COPCs); environmental media affected (soil, surface water, groundwater, air); and classification of the event (e.g., low/medium/high significance) and rationale.

6. CMD-26 frequently states that spills had "no lasting impact" and were within the "normal range" of operating experience. What criteria and lines of evidence are used to support these conclusions, particularly with respect to downstream water and sediment quality, and Indigenous land use and harvesting in downstream areas?

7. How are repeated "small" spills and releases at a given facility assessed from a cumulative effects perspective? For example, are there estimates of cumulative mass loads to nearby waterbodies over time, and how are these considered in regulatory oversight and in regional monitoring programs?

8. Do CNSC or licensees maintain any specific assessments of whether spills and unplanned releases from Saskatchewan uranium mines and mills could measurably influence contaminant levels in downstream Alberta waters and sediments relevant to ACFN use areas? If so, please provide a summary and key findings.

ACFN would like to better understand how CNSC evaluates temporal and spatial variability in monitoring data, beyond annual averages compared to regulatory limits.

9. For key COPCs in effluent and receiving environment monitoring (water, sediment, biota), please provide for representative stations downstream of the facilities maximum, minimum and selected percentile values (e.g., 95th percentile) over recent years; and a description of seasonal patterns, where present (e.g., differences between open water and ice-cover periods, high-flow vs low-flow periods).

10. How does CNSC assess the potential significance of short-term peaks or "hot spots" that may not be visible in annual average values but could be important for ecological receptors or human exposure (e.g., during particular fishing or harvesting activities)?

11. Beyond demonstrating compliance with MDMER and licence limits, does CNSC apply any additional benchmarks or precautionary approaches when interpreting monitoring data for sensitive or culturally important receptors (e.g., traditional foods, sites of particular importance to Indigenous communities)? If so, please describe.

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EARMP appears central to CNSC's conclusions about regional and downstream impacts. ACFN would like more transparency on program design, representativeness and limitations.

12. For each major EARMP monitoring component (e.g., water, sediment, fish, berries), please describe the COPCs analyzed and analytical detection limits, sampling frequency and duration of the dataset, and the statistical power or sensitivity of the program to detect changes in contaminant levels over time that would be of concern for human health or ecological receptors.

13. CMD-26 states that EARMP shows "no evidence of long-range transport" of contaminants associated with uranium mining and that water and country foods are safe for consumption. Please explain, in technical terms, how this conclusion was derived, including: the specific metrics or comparisons used; the time periods considered; and the limitations and uncertainties that apply to this conclusion, particularly with respect to downstream Alberta locations used by ACFN.

14. What opportunities exist for ACFN to participate in the design and ongoing refinement of EARMP (e.g., selection of sampling locations, species, tissues, and timing), so that the program more fully reflects Indigenous knowledge and land-use priorities?

15. Does CNSC consider EARMP data, together with site-specific monitoring and spill histories, in any integrated assessment of potential cumulative effects on downstream Alberta environments and on the exercise of treaty rights by ACFN? If so, please describe that integrated assessment and how its conclusions support the reassurances provided in CMD-26.

16. Would CNSC consider establishing a process to allow ACFN technical representatives to attend selected regulatory inspections at uranium mines and mills as observers, subject to normal safety, training and confidentiality requirements? This could include periodic participation in inspections that address priority topics for ACFN such as spills and effluent management, ventilation and dust/radon control, tailings and waste management, and implementation of follow-up actions from EARMP or site-specific monitoring. ACFN's goal would be to better understand site conditions, observe how CNSC verifies licensee performance, and strengthen trust in regulatory oversight related to downstream lands, waters and rights.

3.0 Uranium and nuclear substance processing facilities

This assessment goes over four cross cutting themes; worker radiation doses and action level exceedances, spills, releases and environmental protection, reliance on averages and guideline comparison, and use of monitoring programs and strong conclusions that "people and the environment remain protected".

These themes are not meant to suggest that the processing facilities represent a direct risk to ACFN community members. Rather, they highlight patterns in CNSC's regulatory oversight and communication that may be relevant when ACFN considers how the CNSC approaches evidence, uncertainty, and Indigenous concerns across different parts of the nuclear sector.

3.1 Overall

The UNSPF ROR provides facility-specific data on worker doses, usually as annual average and maximum effective doses for Nuclear Energy Workers (NEWs), together with comparison to the 50 mSv/year regulatory limit for workers and 1 mSv/year for non-NEWs. For example, doses at Best Theratronics and BWXT Medical are reported as small percentages of the applicable dose limits, and non-NEWs are either not allowed in controlled areas or are monitored at very low doses.

The report also summarizes CNSC compliance findings for the radiation protection Safety and Control Areas (SCA). In 2024, Six non-compliances (NNCs) in radiation protection were identified across BRR, CFM, and SRBT, related to ALARA information display, documentation, respirator maintenance, contamination zone demarcation, survey instruments, and training frequency. CNSC staff concluded these NNCs were of low safety significance and rated radiation protection as "satisfactory" at all UNSPFs.

For events and action levels, the ROR notes:

- At Nordion, a worker dose exceeded a radiation protection action level when a badge went through an airport X-ray machine. Nordion investigated and concluded there was no real additional exposure.
- At Blind River Refinery, five radiation protection action levels were exceeded between 2021 and 2023 but were not reported to the CNSC. These were later identified during a 2024 inspection. Blind River concluded that the apparent high doses resulted from dosimeters being left in a work area rather than worn by workers. CNSC staff directed the licensee to correct its reporting practices.

3.2 Spills, releases and environmental protection

UNSPF ROR states that all airborne and waterborne releases remained below regulatory limits in 2024, and that licensees have environmental monitoring and management systems commensurate with the risks of their operations. Specific points include:

- Direct releases from uranium processing facilities are primarily uranium to air; only Blind River Refinery has direct releases to surface water (uranium and Ra-226). For nuclear substance processing facilities, direct releases are limited to air; Best Theratronics has no radioactive liquid or airborne releases.
- For SRB Technologies, there was a 2024 environmental protection action-level exceedance associated with a gaseous tritium effluent release, prompting corrective actions in training and alarm setpoints. CNSC concluded that there was no impact to workers, the public, or the environment.

- At SRBT, a dedicated monitoring well directly under the active stack area continues to show tritium above the Canadian Drinking Water Guideline (23,701 Bq/L vs 7,000 Bq/L), although this well is not used for drinking water and residential wells show much lower values. The report attributes elevated concentrations to "historical practices."
- For licensees such as PHCF, CFM, BWXT NEC and Nordion, the report emphasizes that environmental monitoring results (air, soil, water, vegetation, gamma, etc.) are below guidelines and demonstrate that effluent releases are effectively controlled

From an ACFN perspective these facilities are geographically distant and do not affect ACFN lands or waters. We understand the effects this may have on other Indigenous peoples communities and impact to inherent and protected treaty rights.

3.3 Annual averages and guidelines comparison

As with the mines and mills ROR, the UNSPF ROR typically presents environmental and public-dose data as annual averages or maximum values compared against regulatory limits, derived release limits (DRLs), or generic guidelines:

- Atmospheric and liquid effluent results are generally summarized as annual maximum or annual average concentrations compared to licence limits; the narrative emphasizes that values remain "well below" limits and thus demonstrate effective control of emissions.
- For public dose, Appendix J gives estimated annual effective doses to the maximally exposed person at each facility for 2020-2024, all well below the 1 mSv/year public dose limit (e.g., 0.009 mSv at BRR; 0.053–0.072 mSv near PHCF; 0.24 mSv at CFM; 0.138 mSv at BWXT Toronto; ≤0.003 mSv at SRBT and Nordion). The text highlights that doses remain well below the regulatory limit and DRL-based expectations.

Where additional details are provided (e.g., maximum monthly gamma measurements at PHCF fence-line, ambient air uranium concentrations near CFM), the key message remains that all values are low relative to DRLs or guidelines and consistent with previous years.

The concern is the ROR does not clearly connect public dose estimates to specific land-use scenarios (e.g., a family living directly adjacent to a facility, using a backyard garden, or fishing in a nearby waterbody), nor does it show the range of modeled doses under different reasonable assumptions. Everything is compressed into one annual point estimate per site. Even though these processing facilities are geographically distant from ACFN, the methodological concern is the same as mines and mills. Further inclusion of Indigenous Nation voices must be incorporated in the UNSPF ERAs and public-dose modeling so the same standard can be met to ERAs and monitoring occurring in ACFN territory.

3.4 Monitoring program and strong conclusions that "People and environment remained protected"

The UNSPF ROR relies on several layers of information:

- Licensee environmental monitoring programs (air, water, soil, biota, gamma);
- Environmental management systems and ERAs;
- CNSC compliance activities and inspections; and
- The CNSC's Independent Environmental Monitoring Program (IEMP).

Based on this body of information, the summary states that in 2024 "all UNSPFs operated safely" and "monitoring data demonstrated that people and the environment remained protected." Facilities are designed and operated to meet the requirements of CSA N288.4 Environmental Monitoring (and related N288 series standards), and CNSC reviews them on that basis.

The ROR does not spend much time on uncertainties in ERAs, limitations of monitoring networks, or gaps raised by Indigenous intervenors (e.g., requests to be more involved in designing monitoring, or concerns about how UNDRIP is operationalized). Instead, it quickly moves to strong reassurance statements.

For ACFN, the main relevance is not the UNSPF facilities themselves but the level of information being shared, particularly on uncertainties. To further improve upon communication sharing the main sources of uncertainty in the ERAs and public dose estimates for UNSPFs and how large these uncertainties are relative to the reported central estimate.

Conclusion

While the three ROR's discussed in ACFNs intervention were filled with valuable data and annual information there is room for improvement and communication of these topics. Inclusion of health impacts by using indigenous indicators will evaluate health to a higher degree based on traditional knowledge. The CNSC and license holders need to elevate communication by creating communication plans with Nations to further engage and increase public knowledge throughout life cycles of mines, plants and other nuclear related activities. Future reports require further evidence to effectively demonstrate findings and create clarity for all readers. ACFN asks for responses to issues brought up thought the report.