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**Written submission from the
Nuclear Transparency Project**

**Mémoire du
Nuclear Transparency Project**

**Regulatory Oversight Report for
Uranium Mines and Mills in
Canada: 2021**

**Rapport de surveillance
réglementaire des mines et usines
de concentration d'uranium au
Canada : 2021**

Commission Meeting

Réunion de la Commission

December 15, 2022

Le 15 décembre 2022



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Submitted via email

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To President Velshi and Members of the Canadian Nuclear Safety Commission,

Re: Canadian Nuclear Safety Commission Staff's Regulatory Oversight Report
for Uranium Mines and Mills in Canada: 2021

We would like to begin by thanking the Commission for this opportunity to provide comments on this Regulatory Oversight Report (ROR). We would also like to recognize the efforts of Canadian Nuclear Safety Commission (CNSC) staff, multiple Canadian civil society organizations, and Indigenous Nations for their informative publicly available materials and submissions on this matter.

About NTP

The Nuclear Transparency Project (NTP) is a Canadian-registered not-for-profit organization dedicated to supporting open, informed, and equitable public discourse on nuclear technologies. NTP advocates for robust public access to data and other types of information and helps to produce accessible analysis of publicly available information, all with a view to supporting greater transparency in the Canadian nuclear sector.

NTP is comprised of a multi-disciplinary group of experts working to examine the economic, ecological, and social facets and impacts of the Canadian nuclear sector. The organization produces public reports, academic articles, and other publicly accessible resources. It also regularly intervenes in nuclear regulatory decision-making processes. The organization seeks to support youth and early career scholars, especially those from underrepresented communities in their respective disciplines. NTP also recognizes a responsibility to model the transparency and accountability practices for which it advocates. We are committed to interdisciplinary, cross-sectoral, and equitable collaborations and dialogue between regulators, industry, civil society, members of host and potential host communities, as well as academics and professionals from science, technology, engineering and math (STEM) fields, the social sciences, and humanities.

About this intervention

NTP's intervention was made possible by CNSC funding through its Participant Funding Program (PFP). These submissions were drafted by NTP founder and coordinator Pippa Feinstein, JD LLM in collaboration with biologist and PhD candidate Tamara Fuciarelli MSc and Alan Rial, M. Eng. who performed NTP's data analysis.

Our submissions have been divided into three parts: the first part contains a review of the current ROR; the second part contains more general findings and recommendations relating to publicly accessible data on which this ROR relies as part of its evidentiary basis; and a third part which contains recommendations to improve the ROR intervention process for future ROR meeting proceedings.

PART ONE: NTP's review of the ROR

This ROR was clear and descriptions of this sector and individual mines and mills were all informative. The ROR's explanation of the uniquely cooperative interjurisdictional regulation of this sector between multiple federal and provincial government departments and agencies was particularly helpful.

NTP also reviewed the 2020 ROR for mines and mills that contained descriptions of mines and mills that have been decommissioned or are being remediated, as these facilities are discussed in mines and mills RORs every three years. In NTP's recent submissions as part of the ROR proceedings for Canadian Nuclear Laboratories (CNL), we proposed the possibility of an ROR for waste and decommissioning activities rather than one only focusing on CNL-operated facilities.¹ A grouping of facilities around waste management and decommissioning would help to illustrate for the public how wastes are managed, and decommissioning activities are undertaken, at facilities at multiple stages of the nuclear fuel chain.

Recommendation 1: For CNSC staff to consider the establishment of a new waste and decommissioning ROR, and the inclusion of decommissioned and remediated mines and mills in such an ROR.

CNSC staff also note that due to Covid, the vast majority of inspections of mines and mills have been virtual.² They assert that this has had no impact on their ability to assess licensees' compliance. However, the data they provide comparing inspections and identified instances of non-compliance over the last five years seems to indicate the potential for virtual inspections to be less effective than in-person ones. As the table below illustrates, approximately 50% fewer instances of non-compliance were identified in 2020 compared with previous or subsequent years, though 2021 instances appear to be

¹ See NTP's submissions online: <https://www.nuclearsafety.gc.ca/eng/the-commission/meetings/cmd/pdf/CMD22/CMD22-M33-9.pdf> at p 2.

² Regulatory Oversight Report for Uranium Mines and Mills: 2021, CMD 22-M32, 16 August 2022, online: <https://www.nuclearsafety.gc.ca/eng/the-commission/meetings/cmd/pdf/CMD22/CMD22-M36.pdf> at p 20.

relatively lower as well. A potential correlation between (or evidence refuting a correlation between) virtual inspections and lower non-compliance findings may merit further explanation than what is included in the ROR:

Table 1.2: Inspections at uranium mines and mills

	2017	2018	2019	2020	2021
Number of inspections	30	26	20	17	18
Instances of non-compliance	23	31	23	11	19

Source: CMD 22-M36 at p 7

Recommendation 2: That CNSC staff explain whether there is a correlation between virtual inspections and fewer instances of identified non-compliance. If there is a potential correlation, NTP requests that CNSC staff provide any lessons learned that may help ensure any future disruptions will be less likely to impact the efficacy of regulatory compliance inspections.

Finally, CNSC staff assert all unplanned releases from mines and mills are considered to be of low significance. However, little information is provided to support these assertions. For example:

- a) In June 2021, 3,000L of contaminated tailings water spilt to the ground at Key Lake. The cause of the release was attributed to low temperatures resulting in a split to a pipe containing the contaminated water. CNSC staff note that the leaked liquids were “largely recovered” with the use of a vacuum truck. However, there is no information concerning how long the water was left to permeate the ground before vacuum removal, or how soil in the area of this spill was monitored to ensure contamination concentrations were not above regulatory limits.³
- b) That same month at McClean Lake, approximately 150,000L of partially-treated pit water was released into the environment due to a hole in Sue C’s pond liner. The amount was reported in the ROR in cubic meters (m³).⁴ Appendix I notes contaminated water was vacuumed and the pond liner’s hole repaired.⁵ However, again, there is no information concerning how long the leak went unnoticed, how much water permeated the ground before vacuum removal, or how soil in the area of this spill was monitored to ensure contamination concentrations were not above regulatory limits.

These and other examples illustrate that more information is ultimately required to support CNSC staff findings relating to the significance of unplanned release events at mining and milling facilities.

Recommendation 3: that for future RORs, CNSC staff provide more information to support claims relating to the significance of unplanned release events at mining and milling facilities.

³ *Ibid* at p 93.

⁴ *Ibid* at p 110.

⁵ *Ibid* at p 142.

Recommendation 4: that quantities of all releases be reported using consistent units that facilitate comparison.

PART TWO: NTP's review of publicly accessible data for facilities covered by the ROR

NTP is still in the process of consulting with CNSC staff about the radionuclide release data currently posted to the Open Government Portal. In order to avoid any potential misrepresentations of this data, we will not provide full summaries of preliminary queries and findings at this time. However, NTP does recommend that groundwater, stormwater, and ambient air quality data as well as results of toxicity/acute lethality testing (where available) be added to the Open Government Portal.

Recommendation 5: that groundwater, stormwater, and ambient air quality data and acute lethality/fish toxicity testing results be disclosed via the Open Government Portal

Further, specific baselines, relevant Derived Release Limits, and Action Levels should be posted in separate columns in data tables reported on the Open Government Portal. This allows for a better contextualized reading of reported data by members of the public and public interest organizations.

Recommendation 6: specific baselines, relevant Derived Release Limits, and Action Levels should be posted in separate columns in data reported on the Open Government Portal.

The ROR regularly references Environmental Risk Assessments (ERAs) for uranium mines and mills throughout the report. To date, NTP has only found high-level public summaries of these reports available online, despite the fact that REGDOC 3.2.1 requires all facilities to post their ERAs to their websites.⁶

Recommendation 7: that CNSC staff ensure all mines and mills' most recent ERAs are posted online, and that future ERAs are proactively posted as well.

NTP is also in the process of reviewing the data available via the website for the Northern Saskatchewan Environmental Quality Committee, which is proving very helpful in understanding more general impacts of mining in the region. This monitoring initiative and the high quality of data it produces helps to conceptualize potentially cumulative effects of industrial and extractive sectors in the region of which uranium mines and mills are a part. This approach in turn provides an example and sets a higher standard for other regions in which nuclear facilities are a part of larger industrial infrastructures.

⁶ REGDOC-3.2.1: Public Information and Disclosure, s 2.2.4.

PART THREE: NTP's recommendations for future ROR intervention processes

The Commission should reinstitute opportunities for intervenors to present their interventions, ask and answer questions before the Commission on the record during meeting proceedings. This opportunity can be extended for virtual attendance only and thus not require the CNSC to cover any travel costs associated with in-person attendance. With relicensing hearings on a 10-year basis for most facilities, Commission meetings are a particularly important avenue for the public to engage with Commissioners.

Recommendation 8: that the CNSC Registry and Commissioners allow intervenors to virtually attend and present at future ROR meetings.

More transparency is required around the criteria being used to determine who receives funding, how much each intervenor receives, and what kinds of analysis are ultimately funded over others. Funding is a key factor that determines who can intervene, and by extension, which questions and issues are ultimately brought to the Commission. The way “value added” contributions and “expertise” are defined effectively works to scope (in part) the content that can be addressed during Commission meetings. While general guidance is provided to interested members of the public and public interest organizations in the CNSC’s Participant Funding Program Guide⁷ and eligibility criteria⁸, both these materials are silent on the intersection between funding and the substantive scope of Commission proceedings. NTP encourages the development of more specific funding criteria, in consultation with members of the public and public interest organizations.

Recommendation 9: that the CNSC’s PFP develop more specific intervenor funding criteria, in consultation with members of the public and public interest organizations.

⁷ CNSC, “Participant Funding Guide”, online: <http://www.nuclearsafety.gc.ca/eng/pdfs/participant-funding-program/CNSC-Participant-Funding-Guide-eng.pdf>.

⁸ CNSC, “Eligibility Criteria”, online: <http://www.nuclearsafety.gc.ca/eng/the-commission/participant-funding-program/eligibility-criteria.cfm>.