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Mémoire du Projet de transparence nucléaire

Canadian Nuclear Laboratories

Regulatory Oversight Report for Canadian Nuclear Laboratories Sites: 2023

Laboratoires Nucléaires Canadiens

Rapport de surveillance réglementaire des sites des Laboratoires Nucléaires Canadiens : 2023

Commission Meeting

Réunion de la Commission

November 7, 2024

7 novembre 2024

Canada

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Submitted via email

September 30, 2024

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

Re: Canadian Nuclear Safety Commission Staff's Regulatory Oversight Report for Canadian Nuclear Laboratories Sites: 2023

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, Canadian civil society organizations, and Indigenous Nations for their informative publicly available materials and submissions on this matter.

NTP is also grateful for the comments in writing we received from CNSC staff in response to our ROR intervention last year. We look forward to continuing our dialogue with CNSC staff as our understanding of the licensees covered by this ROR deepens.

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 who work to examine the economic, ecological, and social facets and impacts of Canadian nuclear energy production. We are committed to interdisciplinary, cross-sectoral, and equitable collaborations and dialogue between regulators, industry, Indigenous nations and communities, civil society, members of host and potential host communities, and academics from a variety of disciplines.

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 Dr. Tamara Fuciarelli, data analyst and engineer Alan Rial, M. Eng., and student researcher Alexandra Chernoff.

Our submissions have been divided into three parts. The first part contains a review of the current ROR for Canadian Nuclear Laboratories' (CNL) facilities and projects. The second part contains recommendations to increase the amount of publicly accessible data collected by CNL facilities. The third part contains NTP's more general recommendations to improve the ROR intervention process for future ROR meeting proceedings. Our comments in these three parts have been drafted to build on the last two years' worth of recommendations we have made during ROR proceedings, elaborating further on some of them and reporting on the progress of implementing others.

PART ONE: NTP's review of the ROR

Over the last two years, NTP has expressed some concerns about CNL having its own ROR. All other RORs are scoped around particular licensed *activities* rather than the *licensees*. The inconsistency in this case remains a curious one. In our first intervention, two years ago, we recommended a more transparent practice of labelling this ROR a "waste and decommissioning" report as this is the primary activity undertaken at all facilities covered by this ROR. Since then, we have met with the CNSC staff responsible for drafting the CNL ROR to discuss this and other issues. At that meeting, we acknowledged how all RORs necessarily cover the management of specific wastes associated with the licensed activities they address. As such, NTP amended its recommendation last year to instead rename the CNL ROR a "legacy waste and decommissioning" ROR. This year, we resubmit this recommendation to CNSC staff and Commissioners.

Recommendation 1: that this ROR be renamed as a "legacy waste and decommissioning" ROR

As we urged in our intervention from last year, the CNSC should take a strong stance against public communications that diminish the significance of waste management in the nuclear fuel chain. We expressed concerns over a perceived trend in licensee communications that sought to marginalize and minimize waste-related issues in ways that could potentially mislead the public. Our comments on this issue are worth sharing again in their totality:

> Last year, NTP intervened in Ontario Power Generation's (OPG) application to renew its Darlington Waste Management Facility where OPG applied to rename it "Nuclear Sustainability Services – Darlington". In those submissions, we expressed concerns with this name change as it had the effect of misleading the

public my minimizing or obscuring the fact that nuclear generating facilities produced wastes that needed to be responsibly stored and managed.[1] CNSC staff and the Commission Tribunal ultimately agreed with NTP and other intervenors' concerns on this issue and denied OPG's requested name change. Commissioners noted that principles of transparency required the facility's name to align with its licensed activities.[2] NTP has similarly become concerned that no ROR titles mention nuclear waste. The ROR that most concerns waste and waste management is instead labeled as "Canadian Nuclear Laboratories", despite the fact that its primary licensed activity is waste management, not laboratory research. As was the case for OPG's waste management facility, the disconnect in this ROR's title poses an unhelpful and unnecessary potential barrier to public understanding.

As the nuclear industry attempts to position itself as offering a "green" and "sustainable" solution to climate change, it is paramount for Canada's nuclear regulator to ensure transparency around the fact that nuclear processes, like any other industrial processes, inevitably produce waste. Further, as nuclear infrastructure ages over time it requires decommissioning. CNL's facilities and projects highlight the real and unique challenges posed by managing legacy nuclear wastes and decommissioning decades-old nuclear facilities. The significant geographic and temporal scope of this work also highlights the significance of these undertakings. As such, NTP believes transparency would be best served by naming this ROR according to the licensed activities it covers and not the licensee performing them. This would help to ensure that the public can understand the true contours of comprehensive nuclear regulation by the CNSC.[3]

As you will read in NTP's interventions relating to this year's other RORs, we recognize that maintenance and refurbishment, like waste management more generally, features in all RORs that span the nuclear fuel chain. As such, there are opportunities for all RORs to more transparently recognize maintenance, refurbishment, and the production and management of wastes at the facilities they cover. For example, you will read NTP recommendations in its intervention in the ROR for facilities that use nuclear substances, where we advocate for CNSC staff to better communicate the activities of waste nuclear substance licensees: the only facilities under that ROR that conduct routine environmental monitoring.

Recommendation 2: that all RORs address waste issues more prominently and transparently, whether in their respective report titles or else the ways these reports are structured.

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[1] Nuclear Transparency Project, CMD 23-H9.25, "Written Submission Re: Ontario Power Generation's request to relicense the Darlington Waste Management Facility", December 5, 2022, online: https://www.nuclearsafety.gc.ca/eng/the-commission/hearings/cmd/pdf/CMD23/CMD23-H9-25.pdf.
[2] Canadian Nuclear Safety Commission, DEC 23-H9, "Record of Decision in the Matter of Ontario Power Generation Inc.'s Application to Renew the Class IB Waste Facility Operating licence for Ontario Power Generation in Darlington, Ontario", April 19, 2023, at paras 169 – 173, online: https://api.cnsc-ccsn.gc.ca/dms/digital-medias/Decision-OPG-DWMF-23-H9-e.pdf/object?subscription-key=3ff0910c6c54489abc34bc5b7d773be0.
[3] *Supra* note 1 at p.3.

Apart from this central ongoing concern of NTP's, we have further feedback specific to this year's ROR.

Firstly, NTP appreciates the new standardized format of this ROR. While this new format is easier to navigate than previous RORs, we can also see how this change will facilitate easier comparison between this year's ROR and future RORs for CNL-managed legacy waste and decommissioning facilities and projects. The new format will also assist with comparisons between RORs for different types of licensee each year. In this way, the new format is a positive development that improves both the accessibility and public utility of CNSC RORs.

Secondly, NTP noticed that all non-compliances discussed in this year's ROR are deemed by CNSC staff to pose no risk to the public or environment. However, no data is provided to support and contextualize these risk characterizations. For example, on page 13 of this year's ROR, CNSC staff note that CNL began soil remediation activities at Chalk River Laboratories without having provided the regulator with a remedial action plan for that activity. It remains unclear how a licensee performing works without requisite or adequate regulatory approval can be labelled essentially as an activity with no associated risks. In another example, on page 20, CNSC staff noted there were numerous non-compliances relating to fire safety at Chalk River (with fire protection reviews not being performed, non-compliance fire extinguisher installation, improper fire dampeners identification, egress aisles obstruction, non-compliance flammable storage containers, etc.). However, none of these identified non-compliances were deemed to pose any risk. Again, it remains unclear how multiple poor safeguards against fires – in contravention of regulatory standards – could be considered circumstances that pose no risk.

Further, in Appendix E to this year's ROR, no quantitative information or data were provided to accompany the following reportable events:

- At Chalk River Laboratories: event ERM-23-3521, where a corroded pipe and possible leak of unspecified substances were discovered; and event ERM-23-373 where a 'large portion' of a hydraulic tank reservoir was spilled onto frozen ground;
- At Whiteshell Laboratories: event HSSE-23-0058 where an Action Level exceedance was noted, but neither event duration nor released amounts of any contaminants are provided; event ERM-23-3435 where a "small amount' of material falling during transport apparently did not result in "high dose" exposures though the actual measured exposure is not disclosed; or event ERM-23-1756 where a copper exceedance found, but no values are provided for this exceedance or any applicable Action Level or Derived Release Level.

While risk-informed and "graded approaches" to oversight and public communications remain a central guiding principle in Canadian nuclear regulation, the CNSC should also recognize other complimentary approaches. Where planned and unplanned releases to the environment are known – for example, where sampling results from existing monitoring programs or mitigation efforts are available – this available information and

data should be publicly released regardless of predicted risks to environmental or public and worker health. Members of the public and civil society organizations vary in their science and data literacy. While some prefer to defer to the CNSC for general assurances of safety, wellbeing, and regulatory compliance, others have an interest in seeing and understanding how the CNSC comes to their determinations. A robust ROR would ideally cater to these differing needs, interests, and capacities.

As such, NTP recommends that wherever assessments of the significance of non-compliance events are provided, CNSC staff should endeavour to provide the data in the main text of the ROR, or else hyperlink to publicly available data sources, that can speak to how these CNSC staff assessments were reached.

Recommendation 3: that CNSC staff provide further information and data to accompany assessments of the significance of non-compliance events, including environmental releases.

PART TWO: NTP's review of publicly accessible data for CNL facilities

This year, NTP has continued to audit CNL's proactive online disclosures and we submit a series of recommendations for further disclosure below. This audit has covered the CNSC website, CNL webpages for their facilities and projects, as well as external databases including the National Pollutant Release Inventory (NPRI) data posted for CNL facilities on the Open Government data platform.

At this time, NTP resubmits two general recommendations from our previous two ROR interventions for this year's ROR:

Recommendation 4: that groundwater and stormwater data for all CNL facilities be disclosed via the Open Government Portal.

Recommendation 5: that specific baselines, relevant Derived Release Limits, and Action Levels be posted in separate columns in datasets uploaded to the Open Government Portal – so that the public can better contextualize release values.

NTP understands that the CNSC is in the process of developing the requisite regulatory and technical infrastructure for wider data disclosure and that this will take time. Our organization will continue to support this work through recommendations in our interventions as we learn more, and through our involvement in working groups and other regulatory and public consultation fora elsewhere relating to government open access data.

Further, there are a few immediate practices that may be instituted to facilitate NTP analysis of data already contained in this ROR. One way is for the graphs and tables used to visualize data throughout this year's ROR and appendices to be embedded in the text rather than included as images. This would make the data they contain more machine-

readable and thus potentially exportable to other machine-readable formats for further analysis. Further, the tables provided throughout the ROR could also be provided separately in CSV formats, either via a link or as a separate document that accompanies the ROR. Most of the tables and graphics included in this year's ROR are likely assembled in a version or format that is machine readable, before being included in the PDF version of this report. As such, making that original format available to the public should not require too much CNSC staff time.

Notably, CNSC staff who prepare the RORs for uranium and nuclear substance processing facilities, as well as uranium mines and mills, have begun to provide NTP with machine-readable formats of their graphs which has been incredibly useful and deeply appreciated. Extracting data manually from this year's CNL ROR has been time consuming and the manual input of data always increases the chance of human error (requiring more time to internally audit our work by multiple NTP contributors). NTP has a particular interest in machine-readable formats of tables recording inspection frequencies and reportable events. As such, these would be useful starting points for any future CNL efforts to provide machine-readable data.

Recommendation 6: that CNSC staff ensure graphs and tables included in future RORs are machine-readable either by including data values in ROR text or else by disclosing these tables in separate CSV formats to accompany RORs.

Finally, while conducting our audit of publicly available information relating to the projects and facilities covered by this ROR, we found several instances of potential non-compliance with CNSC requirements for public disclosures of Environmental Risk Assessments (ERAs).

CNSC REGDOC 3.2.1 requires licensees to create and implement specific public information and disclosure programs that structure and delineate requirements for communicating with the public about their operations and activities. This REGDOC is included by reference in Licence Control Handbooks for licensees, making its contents legally mandatory as binding licence terms. Section 2.2.4 of REGDOC 3.2.1 states:

> The public information program shall provide open and transparent means and access for the public to obtain desired operational, environmental and safety information about the licensed facility or activities. As part of this program, if a licensee is required to conduct an environmental risk assessment (ERA) and/or a probabilistic safety assessment (PSA), the ERA and a summary of the PSA must be posted on the licensee's website.[4]

According to our review, a 2018 ERA is posted online by CNL for Chalk River Laboratories, though a 2023 ERA should also have been posted if ERAs are still conducted every five years. For Whiteshell Laboratories, neither their general ERA from 2023, nor their 2023 ERA for their site's lagoon and landfill are posted online. Finally, no ERAs appear available online for the Nuclear Power Demonstration site.

[4] Canadian Nuclear Safety Commission, REGDOC 3.2.1 Public Information and Disclosure, online: https://www.cnsc-ccsn.gc.ca/eng/acts-and-regulations/regulatory-documents/published/html/regdoc3-2-1/.

Recommendation 7: that CNSC should review the availability of licensees' ERAs online and require the immediate upload to CNL's website of ERAs that have yet to be publicly disclosed.

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

Two years ago, NTP had requested more time to prepare our ROR interventions. Last year and this year, the CNSC responded by increasing the amount of time between funding decisions, ROR publication, and the final due dates for intervenors' written submissions. This year, like last, we received a participant funding decision in late June, we received the ROR draft in mid-August, and our comment deadline was again in early October. The consistency between these new timelines from year to year is helpful as it allows our organization to effectively plan how it will undertake its funded work and coordinate tasks between different NTP contributors.

Recommendation 8: that timeframes for ROR interventions continue to provide at least 12 weeks between funding decisions and final submission due dates; at least 6 weeks between the publication of RORs and final submission due dates; and that these dates for each step of the ROR process remain consistent from year to year.

In previous years, NTP has also requested the ability to present oral submissions at Commission meetings to consider RORs. This used to be an automatic aspect of ROR interventions, but in recent years has only been extended to intervenors when RORs coincide with mid-term licensing updates from specific facilities. With longer licence terms being approved for nuclear facilities over the last few years, and smaller panels of CNSC Commissioners being convened for licence hearings, opportunities for civil society organizations to engage with Commissioners has become increasingly limited. However, interacting with Commissioners during meeting and hearing proceedings has the potential to significantly improve the quality of engagement with intervenors' submissions, offering more opportunity for mutual learning and increased familiarity with organizations' advocacy priorities and the CNSC's mandate and approach to related issues.

Recommendation 9: that opportunities to make oral submissions be extended to all intervenors, ensuring more meaningful opportunities to contribute to the public record for these ROR proceedings.

NTP would also recommend that CNSC staff institute a more detailed method to track funded intervenors' concerns from year to year. Currently, Appendix G of this year's ROR outlines general areas of concern for all intervenors according to CNSC-identified themes. As CNSC staff have already undertaken the practice of responding to intervenor information requests and recommendations in writing between RORs, including these interactions or summaries of them, would help Commissioners to understand how CNSC staff address intervenors concerns more specifically. It would also more transparently

convey what progress, if any, is made on individual issues raised by intervenors from year to year.

Recommendation 10: that CNSC staff institute a more detailed method to track funded intervenors' ROR concerns from year to year.

Finally, the review of the PFP funding criteria is an outstanding item that NTP would again like to propose for the CNSC's consideration. The scoping of ROR interventions by the funding grants and conditions intervenors receive can effectively shape the substantive content of ROR proceedings and impact the public record and any outcomes from Commission meetings. Developing a broader definition of the types of analysis and experts eligible for funding could expand the scope of funded interventions while still remaining consistent with the Commission's mandate.

Recommendation 11: that the CNSC's PFP develop more specific and expansive intervenor funding criteria, in consultation with members of the public and public interest organizations.