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**Written submission from the
Canadian Environmental
Law Association**

**Mémoire de l'Association
canadienne du droit
de l'environnement**

**Regulatory Oversight Report for
Canadian Nuclear Laboratories
(CNL) sites: 2018**

**Rapport de surveillance
réglementaire des sites des
Laboratoires Nucléaires Canadiens
(LNC) : 2018**

Commission Meeting

Réunion de la Commission

November 7, 2019

Le 7 novembre 2019

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**Canadian
Environmental Law
Association**
EQUITY. JUSTICE. HEALTH.

**SUBMISSION BY THE CANADIAN ENVIRONMENTAL LAW ASSOCIATION
TO THE CANADIAN NUCLEAR SAFETY COMMISSION REGARDING THE
REGULATORY OVERSIGHT REPORT FOR CANADIAN NUCLEAR
LABORATORIES SITES: 2018**

October 7, 2019

**Prepared by
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I. INTRODUCTION

These submissions are filed in response to the Canadian Nuclear Safety Commission's ("CNSC") revised notice of meeting dated April 10, 2019 concerning the presentation of the *Regulatory Oversight Report for Canadian Nuclear Laboratories: 2018* (herein "ROR") released on September 5, 2019.¹ A meeting in Ottawa with respect to this matter is scheduled for November 6-7, 2019.

CELA is a non-profit, public interest law organization. For nearly 50 years, CELA has used legal tools to advance the public interest, through advocacy and law reform, in order to increase environmental protection and safeguard communities across Canada. CELA is funded by Legal Aid Ontario as a specialty legal clinic, to provide equitable access to justice to those otherwise unable to afford representation.

CELA has an extensive library of materials related to Canada's nuclear sector which is publicly available on our website.² CELA has engaged in detailed research and advocacy related to public safety and environmental protection by seeking improvements to the oversight of Canada's nuclear facilities and sites, and is engaged in all of the federal environmental assessments for projects proposed by Canadian Nuclear Laboratories (CNL).

II. FINDINGS

In response to the above referenced ROR, CELA raises a number of issues relating to the report's scope and content and provides the following comments relating to CNL's sites and activities. Our findings are set out below, accompanied by either requests or recommendations to the Commission and CNSC Staff.

¹ Canadian Nuclear Safety Commission, "Canadian Nuclear Laboratories – Regulatory Oversight Report for Canadian Nuclear Laboratories Sites: 2018" (16 August 2019) [ROR for CNL]; Notice: <http://www.nuclearsafety.gc.ca/eng/the-commission/pdf/Notice-MeetingPFP-ROR-CNL-2018-Revision1-e.pdf>.

² Canadian Environmental Law Association, online: www.cela.ca.

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A. Scope and Process for Regulatory Oversight Reports

Generally, CELA is supportive of the CNSC's decision to release a ROR for CNL sites. As a review of the report demonstrates, there is a wide range of activities – each with varying levels of risk, timelines, scope and environmental assessment applicability – demonstrating the crucial need for opportunities to review CNL activities and sites.

However, as further enumerated below, there are deficiencies in the report which detract from the potential of this ROR. A number of our recommendations are aimed at making the ROR more accessible and informative, and enhancing the data and analysis in support of the CNSC Staff's conclusions. These recommendations are based on the ROR's recognition that:

The NSCA mandates the CNSC to disseminate objective scientific, technical and regulatory information to the public concerning its activities and the activities it regulates. CNSC staff fulfill this mandate in a variety of ways, including the publishing of RORs and through 'Meet the Regulator' sessions.³

We also make the following general comments about the efficacy of the CNSC's regulatory oversight review process. First, CELA submits that intervenors who provide comments on an ROR should have an opportunity to present orally before the Commission. Currently, intervenors are precluded from presenting and thus the opportunity to engage in dialogue with Commissioners and CNSC Staff does not exist. This maintains the high-level nature of RORs and does not facilitate critical review.

Second, we submit 30 days is an insufficient amount of time for members of the public and civil society to review the material of the ROR and provide value-added comments to the Commission. The public's ability to weigh-in during the ROR process can be further constrained due to the time lag in requesting and receiving references or supporting material, or, as in this case, other competing CNSC review deadlines. While CELA is not opposed to this ROR being reviewed by the Commission in tandem with other RORs (as will occur during the scheduled November 2019 meeting), the length of time granted for review should be extended in light of the other matters also open for public comment. Should the Commission choose to have multiple comment opportunities with the same closing date, at least 60 days should be provided as a recognition of the importance and value of public comments, and to further fairness and respect for adequate procedural rights.

Third, we recommend the ROR include an explanation of the rationale informing the report, its benefits, scope and the issues it seeks to address. The ROR should comment upon why the Commission chose to commence an ROR for CNL, how long it aims to continue this ROR, and whether it may result in CNL being excluded from other, related oversight reports.

Fourth, given the uniqueness of this report to CNL specifically, we submit there could have been greater discussion of overarching conclusions and findings related to CNL's actions. For instance, regardless of location or site, how does CNL compare to other licensees? Is there a best practice at one CNL site which

³ ROR for CNL, p 37.

could be transferred to other sites or like-licensees? CELA submits the ROR is in an ideal format for review such as this but as currently drafted, it makes only limited use of this critical review opportunity.

Recommendations

1. CELA remains of the view that ROR meetings are not a replacement for relicensing hearings⁴ and the CNSC must remedy the discrepancy in participation rights among public intervenors and licensees by providing oral presentation opportunities.
2. The CNSC should extend the amount of time provided to the public for the review of RORs and ensure a minimum 60-day timeframe is provided.
3. As this is the first ROR for CNL, the CNSC should more clearly set out its rationale for initiating this report and its aim moving forward.
4. The ROR should include greater discussion of overarching conclusions and findings related to CNL's actions and how they compare to other licensees' undertakings and sites.

B. Risk Classification at CNL Sites

In relation to the ROR's comments on the Fuel Cycle Program Risk Classification accompanying each of the CNL licenced facilities,⁵ CELA provides the following remarks.

i. Basis of Risk Decision

First, the ROR states that the "Fuel Cycle Program Risk Classification" of licenced facilities "is determined based on considerations such as the safety of workers and the public (ie. radiation protection and conventional health and safety), the safety of the environment, and security."⁶ CELA **requests** the CNSC more clearly set out the rationale informing the basis for the risk classification decision. As currently drafted, the ROR does not define how the factors listed (ie. radiation protection, conventional health and safety), were balanced nor who made the decision, and whether its discretionary or reviewable.

Further, CELA **requests** the CNSC clarify if there is a timeline or trigger points, requiring the classification per facility to be reviewed and updated. For instance, the ROR states that "CNSC staff have classified CRL as 'high' risk due to the diversity of activities currently carried out on the site, the storage of large quantities of radioactive waste including spent nuclear fuel and legacy liabilities from past activities." However, it notes that with the National Research Universal (NRU) being shut down, the level of risk as that site decreases.⁷ Specifically:

⁴ See CNSC "Bruce Power Hearing Transcript – May 29, 2018," p 188.

⁵ ROR for CNL, p 3-4.

⁶ *Ibid.*

⁷ ROR for CNL, p 7.

The cessation of molybdenum-99 production in 2016 and the permanent shut down of the National Research Universal (NRU) reactor in 2018 have significantly lowered the risk profile of the site.

CELA **recommends** including more information in the ROR which clarifies why the risk is now lower and what actions were taken to either reduce or eliminate this risk.

ii. Small Modular Nuclear Reactors

A second aspect not considered in the review of CNL sites' risk classification is the potential development of a Small Modular Reactor (SMR) at CRL. While recognizing this plan is still undergoing preliminary assessments for both licensing and environmental assessment, this foresight and precautionary discussion would have been helpful. CELA submits that a consideration of SMRs would have fit within the ROR's discussion since it already considered a "diversity of activities" in its profile of CRL the site.

Further, CELA **recommends** that prior to licensing new activities, like an SMR, it should be expressly set out how the existing classification of a site informs the decision to licence new developments. Especially in cases where the risk is already high, such as at CRL, the CNSC should expressly set out how the pre-existing risk classification of the site is considered. We ask the Commission identify where this is considered within its licensing decision and whether there is a specific Regulatory Document ("RegDoc") setting out this framework.

iii. Transference of Risk

CELA **requests** further clarification from the CNSC with regards to its representation of site risk. While the ROR describes activities, which may lessen the risk at a site (ie. the shutdown of the NRU), the ROR lacks a discussion of what CELA believes should be an overarching goal, namely that licensees should always work towards the reduction of risks. We therefore **recommend** making risk reduction an aim inherent within the risk classification of a site that all licensees actively work towards.

Further, as this ROR is CNL-wide, it would be particularly helpful to review the accompanying transference of risk when one site, such as Whiteshell, reduces risk but potentially at the expense of another (ie. CRL). Some of the transference of risk alluded to in the ROR, but not framed as such, includes the following:

At NPD, CNL conducted geological, structural, and radiological characterization activities in support of their proposed in-situ decommissioning plan; and, ceased routine batch releases of effluent to the Ottawa River. CNL now ships all contaminated water from the NPD sumps to CRL for treatment [emphasis added].⁸

⁸ ROR for CNL, p 18.

We further **recommend** the CNSC include a projection of risk at each of the CNL sites, including CRL, given new wastes are arriving from the decommissioning of other nuclear facilities, such as Whiteshell. Further, we **request** the Commission review whether the arrival of new wastes at CRL - and its classification as high, intermediate, or low upon arrival - triggers a re-evaluation of the site's risk classification. These are the types of questions which CELA **recommends** should have been included within the ROR's discussion.

iv. Waste Management

An additional element not clearly defined within the text's discussion of risk, is the acceptance of new wastes at CNL sites. As the ROR states:

As of the end of 2018, CNSC staff conclude that CNL's repatriation work continues safely. To date, CNL has repatriated upwards of 95% of HEU in spent fuel from the CRL site, and upwards of 75% of liquid HEU. The movement of HEU has led to increased monitoring from the International Atomic Energy Agency (IAEA), which will continue for the duration of the repatriation project.⁹

What is not reflected in this waste profile, however, is the extent to which new wastes arriving on site at CRL will change these levels. We **request** the Commission review to what extent these levels will change in the future, given the approved scope of licenced activities across CNL sites.

v. Public Disclosure and Environmental Data

CELA submits there is an opportunity to advance the availability of publicly accessible environmental data within the text of the ROR. As the report notes, Whiteshell is classified as medium risk given "CNL's ongoing decommissioning work, and the legacy of past research operations at the site."¹⁰ In reference to the legacy activities, CELA submits the ROR should reference CNL's Environmental Data Management System, which is a consolidated storage location for historic and current environmental data across all CNL sites.¹¹ Including this data within the scope of the ROR, and ensuring its public availability, would be specifically within scope of this ROR given its CNL-wide comparisons.

CELA reiterates its support for a public, data portal which comprehensively stores environmental data. We submit that CNL's Environmental Data Management System should be publicly available to facilitate the public's right to information, or "right to know." This principle is based upon a basic human entitlement to information which directly impacts health and bodily integrity.¹² The right to know includes public information frameworks, inventories and databases which require the identity of chemicals to be disclosed, alongside their hazardous properties and potential health impacts. Through these mechanisms, the right to know increases the transparency and accountability of the licensee's

⁹ ROR for CNL, p 8.

¹⁰ ROR for CNL, p 9.

¹¹ CNL CMD, p 43.

¹² Richard M. Brown, 1982 "Canadian Occupational Health and Safety Legislation" (1982) 20:1 Osgoode Hall LJ.

operations. Having accessible, high-quality information also raises the expectation of more rigorous oversight.

A persistent barrier to the right to know are claims of security sensitivity or data being proprietary. CELA submits that this Management System should be publicly available and at a minimum, provided in redacted form. The CNSC should – in exercising its authority as a public interest regulator - require it be publicly disclosed to advance the public’s right to know.

Further related to public disclosure is the ROR’s observation that “CNL maintains up-to-date information on all decommissioning projects on their website, and ensures appropriate public disclosure following the occurrence of unplanned events.”¹³ CELA **requests** the Commission direct CNSC Staff to review the appropriateness of CNL’s disclosure. We also seek clarification regarding the frequency of these checks, should they already occur. In conducting these reviews of licensee compliance with public information disclosure, CELA also asks, how does the Commission determine an appropriate level of disclosure? What factors are included within this determination?

Recommendations

5. The ROR should more clearly set out the considerations and rationale informing a site’s risk classification.
6. The impact of new licensed activities on a site’s pre-existing risk classification should be considered by the Commission in its vendor review process and review of licence applications.
7. CNL’s Environmental Data Management System should be publicly available to facilitate the public’s access to information regarding environmental releases and emissions.

C. Projects Undergoing Federal Environmental Assessment

In order to fully capture the extent of changes at CNL sites, CELA **recommends** that Table 4, which contains a helpful summary of changes to CNL Licences and Licence Conditions Handbooks (LCH) in 2018, be amended to include updates reflective of ongoing federal environmental assessments. In a number of instances, CNL sites are undergoing federal environmental assessments per the *Canadian Environmental Assessment Act, 2012* (CEAA 2012) and yet, there are few comments in the ROR which mention the EAs, and no comments, which describe the effect of these EA decisions on existing licences and LCHs.

Recommendations

8. In addition to summarizing changes to CNL Licences and Licence Conditions Handbooks, the ROR should present updates, where applicable, regarding ongoing federal environmental

¹³ ROR for CNL, p 39.

assessments.

D. Whiteshell Site and Surveillance

The ROR could be a helpful tool to detail areas which are below expectations and a forum to discuss plans for improvement. As the ROR notes, the Whiteshell Laboratories site in the SCA of Security is ‘below expectations.’¹⁴ What is unclear from the ROR, however, is what component of Security is lacking. As surveillance is a component of security, and thus potentially the area which was below expectations, CELA **recommends** the Commission require CNL to review the and implement the most recent decommissioning RegDoc, RegDoc 2.11.2, immediately following its final publication.

Unlike existing guidance, section 6.1 of RegDoc 2.11.2 contains greater detail pertinent to surveillance and requires that licensees detail their surveillance strategy. Accordingly, the details which are to be provided within a surveillance plan include:

- responsibilities
- functional services and systems
- maintenance, inspection and surveillance
- building hazard identification
- hazard control measures
- activities envisioned or planned to reduce the risks
- access control and zoning
- environmental protection control measures
- emergency plan and procedures
- usage boundaries during storage with surveillance
- facility change or modification process
- waste management
- quality assurance
- qualification and training program
- records

Recommendations

9. If CNL’s ‘below expectation’ rating for Security relates to surveillance, we recommend the Commission review the proponents most recent surveillance plan to ensure conformance with (draft) RegDoc 2.11.1.

E. In Situ Decommissioning Projects

Two CNL *in situ* decommissioning projects are currently undergoing federal EAs. CELA makes the following comments specific to the Whiteshell Laboratories Reactor (WR-1) and the Nuclear Power Demonstration (NPD) projects.

¹⁴ ROR for CNL, p 29.

Regarding WR-1, the ROR notes, “In 2016, the CNSC received an application by CNL to change the decommissioning approach for WR-1 from full dismantlement to in-situ decommissioning.”¹⁵ As was discussed at the recent decommissioning relicensing hearing for the Whiteshell site, the basis for this change in decommissioning planning was that of economic feasibility.¹⁶ This explanation, however, is not apparent from the text of the ROR and CELA **recommends** the ROR include the reasons why CNL is requesting a change in decommissioning approach (e.g. monetary or time constraints, difficulty in achieving full dismantlement, or revised assessments of the risks posed by the two competing decommissioning approaches) and secondly, evidence how CNL and the Commission, respectively, weighed economic, environmental, human health, risk and safety considerations.

Further, given the CNSC’s mandate to ensure the adequate protection of human health and the environment, per section 24(4) of the *Nuclear Safety and Control Act*, CELA submits it is appropriate for this range of factors to be requirements in reviewing requests to amend decommissioning or other licenced activities. If there is a RegDoc which guides this weighing of considerations within CNSC deliberations, we **request** it be referenced in the ROR.

A subheading in the ROR references the “accelerated” decommissioning proposals for WL and NPD. The text which follows demonstrates that it is not just a proposal to shorten the timeline, but also deviate from existing decommissioning plans.¹⁷ It is stated that the proposal is for in-situ decommissioning, but it is not mentioned what the existing/currently approved decommissioning plans consists of. In this regard, CELA **recommends** amending the heading to reflect the fact that this is not merely an accelerated decommissioning, but more importantly a different decommissioning method. This also applies to various references to Section 5.9 and where referenced in other parts of the ROR.

CELA furthermore **recommends** including a description of the current decommissioning plans (i.e. full dismantling of WL is mentioned on page 9 of the ROR, and full dismantling of NPD is mentioned on page 17) to provide some context in Section 5.9 for the proposed changes to in-situ decommissioning.

Furthermore, we recommend the ROR function as a comprehensive and evergreen document, to ensure updates are made to the text when available. For instance, the ROR states, “For this reporting year, CNSC staff rated all SCAs as “satisfactory” with the exception of the security SCA at Whiteshell Laboratories which was rated as ‘below expectations’. This will be elaborated upon during the October 2/3, 2019 Whiteshell relicensing hearings.” In response, CELA **recommends** the ROR be updated accordingly, either through an amendment or addendum to the text, once this information becomes available following the Whiteshell hearing.

The ROR also cites the removal of asbestos as a ‘major activity’ having occurred at WL in 2018. Given Canada’s prohibition on asbestos and products containing asbestos (which went into effect on December 30, 2018), CELA **recommends** it would have been timely for the ROR to discuss measures taken by nuclear facilities to (1) phase out asbestos use in nuclear facilities by December 31, 2022 and (2) pursue

¹⁵ ROR for CNL, p 9.

¹⁶ Based on the personal notes of Kerrie Blaise, Counsel, CELA pending release of transcript from CNSC.

¹⁷ ROR for CNL, p 47-48.

technically and economically feasible asbestos-free alternatives.¹⁸ CELA **recommends** a discussion of this issue be included at the upcoming ROR meeting and subsequent RORs.

Recommendations

10. The ROR should present the reasons why CNL is requesting a change in decommissioning approach (e.g. monetary or time constraints, difficulty in achieving full dismantlement, or revised risk assessments) and secondly, provide evidence of how CNL and the CNSC, respectively, weighed economic, environmental, human health, risk and safety considerations.
11. The ROR meeting should include submissions from CNL and CNSC Staff on measures being taken by nuclear facilities to (1) phase out asbestos use in nuclear facilities by December 31, 2022 and (2) pursue technically and economically feasible asbestos-free alternatives.

F. Port Hope Area Initiative

In regards to the Port Hope Area Initiative (PHAI), the ROR states “CNL continued to sample and analyze groundwater for radiological and hazardous contaminants at the PHAI, CRL, and WL. Results in 2018 were consistent with historical data, and in some cases concentrations of contaminants have decreased.”¹⁹ However the aim of this monitoring is unclear and we **request** the CNSC clarify its goal or intended objectives. For instance, is the goal to maintain historical levels or improve conditions? As currently drafted, this is unclear.

Furthermore, it would have been more insightful had the text discussed whether the results were consistently low, or consistently elevated. This would demonstrate the extent to which improvements could be made. Further, did the CNSC do any sampling of its own, as part of the IEMP? If so, CELA **recommends** mentioning or referencing those results within this section. If the CNSC has not conducted its own sampling, then CELA **recommends** carrying out such sampling to confirm the levels reported by CNL.

Recommendations

12. The ROR should explain how the CNSC verifies environmental monitoring results conducted by licencees.

G. Radiation Protection

Our first comment in regard to radiation protection pertains to the ROR’s statement that “For 2018, CNSC staff rated the radiation protection SCA at all CNL licensed sites as “satisfactory” based on regulatory oversight activities.”²⁰ These ratings, accordingly, were based on the As Low As Reasonable

18 Prohibition of Asbestos and Products Containing Asbestos Regulations: SOR/2018-196

¹⁹ ROR for CNL, p 29.

²⁰ ROR for CNL, p 32.

Achievable (ALARA) principle. Not captured in the ROR however, is any differential between CNL sites. For instance, the ALARA radiation protection rating for a contaminated site might be different than that of a decommissioned reactor. Further, in making this decision, does the CNSC consider the radiation levels of all components or areas of a given a site (ie. often there is more than one licenced activity occurring at a licenced facility)? This level of detail and explanation setting out how the decision was reached is not captured in the ROR and we **recommend** it be updated accordingly.

Secondly, the ROR states “CNSC staff have come to these conclusions on the basis of inspections performed at CNL sites, along with desktop reviews.”²¹ CELA **requests** the Commission confirm whether any of the facilities covered by this ROR were rated solely or primarily on the basis of desktop reviews. As Table 2 suggests,²² it appears that this may be the case at least with regards to DP, G-1 and the NPD Waste Facilities.

Lastly regarding inspections, Table 3 shows that a total of $32 + 15 + 3 = 50$ inspections will be carried out over the next 10 years.²³ It is not clear, however, how this number relates to the numbers presented in Table 2. CELA therefore **recommends** that more specific information be provided to explain the relationship between the numbers in Table 2 and Table 3.

Recommendation

13. The ROR should explain how, in applying the ALARA principle, the CNSC accounts for differential in risk among sites (ie. the ALARA radiation protection rating for a contaminated site might be different than that of a decommissioned reactor).
14. Greater detail is needed to discuss the relationship between the numbers in Table 2 and Table 3.

H. Waste Management

The ROR notes that CNL participated in “Waste Reduction Week in Canada” during October of 2018. The goal of this annual program is to educate, engage, and empower Canadians to reduce, reuse, and recycle waste. During the waste reduction week, CNL conducted various promotional activities to engage employees to learn about waste reduction and environmental sustainability.²⁴

Given the focus on waste reduction and sustainability, CELA inquires whether the messaging or materials disseminated by CNL included a focus on radioactive waste. CELA submits that two timely topics could have been included, such as (1) the proposal for an SMR at the CRL site and the nature and type of waste it will produce and (2) radioactive waste legacies, drawing on the Whiteshell experience. Given the focus on waste reduction, CELA submits the proposal to deploy an SMR at CRL would have been highly

²¹ *Ibid.*

²² ROR for CNL, p 20.

²³ *Ibid.*

²⁴ ROR for CNL, p 47.

relevant since unlike decommissioning activities which in theory lower risk and reduce wastes, the SMR will produce new waste.

The reason for this recommendation is as follows; the passage of the *Nuclear Fuel Waste Act* in 2002 established the Nuclear Waste Management Organization (NWMO), mandated with developing a plan for the management of nuclear fuel waste. To ensure accountability and the consideration of the public interest, the NFWA required the NWMO to consider issues such as the ethics, environmental impacts and risks of different waste management approaches as well as input from Canadians. The fundamental assumption leading this review and comparison of approaches was that ‘the volume of used nuclear fuel which needs to be managed was assumed to be limited to the projected inventory from the existing fleet of reactors.’

Further, when the ethical implications of fuel waste management, including the transfer of risks and burdens to future generations was considered, the NWMO’s Roundtable on Ethics observed that achieving an ethical nuclear waste management approach was an intractable problem and producing additional wastes would be unethical:

Given the large stockpile of high level nuclear waste that already exists in Canada and that will be hazardous for thousands of years, some solution to managing wastes as safely and effectively as possible must be found. Even if no ethically optimal solution exists, it would be ethically justified to adopt the least unacceptable option available. By contrast, to justify new nuclear power plants or even replacing the ones now in place when they reach the end of their serviceable life, one would have to have an ethically sound waste management method, not just a least-bad one.²⁵

As acknowledged by the Advisory Council, NWMO’s waste management risk assessment only considered the waste produced by Canada’s existing fleet of CANDU reactors and recognized challenges should there be a nuclear expansion:

A nuclear expansion scenario would likely entail fuel enrichment and new reactor technology, with spent fuel possessing new characteristics. These could affect the performance of the disposal technology and introduce a change in the outlook on reprocessing. Such technical aspects were not considered by NWMO in its study, which focused on existing facilities using natural uranium fuel.²⁶

Thus, as CNL may host a SMR at the Chalk River site – and all proposed SMR designs foresee operating on some form of enriched fuel which typically create wastes that are more radioactive and longer-lived than used-CANDU fuel – CELA **requests** the Commission to direct CNSC Staff to review the materials used by CNL during its waste reduction week to see if these crucial and timely questions about Canada’s radioactive waste were included in CNL’s “Waste Reduction Week.”

²⁵ Nuclear Waste Management Organization (2004) Ethical and Social Framework, June 24 2004.

²⁶ Advisory Council to the NWMO (2005) Nuclear Waste Management Organization - Advisory Council Final Report, 22 September 2005

I. Climate Change Resiliency

CELA is dismayed by the ROR's failure to consider climate change, despite its inclusion of extreme weather events which led to unintended emissions to the environment. As was noted in the ROR:

Due to heavy rainfall events in both 2017 and 2018, CNL restarted the Water Treatment Building to treat excess contaminated water, in accordance with their water contingency plan, and in order to avoid a release of untreated water to the environment. CNL's water management challenges in 2017 were the subject of an Event Initial Report to the Commission. For both 2017 and 2018, there were no exceedances of regulatory limits and toxicity testing showed that the water was not acutely lethal to fish or to aquatic life [emphasis added].²⁷

CELA again **recommends** a review of licenced activities' climate resiliency should be a part of regulatory oversight reporting.²⁸ We ask that the Commission direct CNSC Staff to include this in future RORs.

Further, in response to this specific incident, CELA **recommends** that more information be included on the results of this toxicity testing. While deemed not acutely lethal, the lack of further information leaves some doubt as to the severity/concentration of these releases. Table H-6 notes a release of 110.1kg of Uranium in 2017. This combined with the mention that the releases are related to heavy rainfalls, and the fact that climate change is likely to increase such events, makes it important to include information on whether the discharge of the 110.1kg of Uranium took place during a shorter or longer period of time.

Recommendations

15. Licenced activities should be reviewed against their climate resiliency. The Commission should direct CNSC Staff to include this as a component of regulatory oversight reporting.

11. Radionuclides and the National Pollutant Release Inventory (NPRI)

In previous ROR submissions,²⁹ CELA has discussed the need for consistent, comprehensive data on the releases of radionuclides from CNSC regulated facilities. Radionuclides are not reported to Canada's National Pollutant Release Inventory (NPRI), an online data portal and a key resource for identifying pollution prevention priorities, supporting the assessment and risk management of chemicals, and encouraging actions aimed at reducing pollutant releases.

²⁷ ROR for CNL, p 94.

²⁸ CELA has previously made this submission to the Commission, including in our 2017 comments on the ROR for Nuclear Substances: 2017, online: <https://www.cela.ca/1131-publications/environmental-review-cnscs-2016-regulatory-oversight-report-use-nuclear-substances>.

²⁹ See for instance, Canadian Environmental Law Association, "CELA's Comments on the CNSC's Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2017 - Recommendations to Improve the Oversight of Environmental Protection and Waste Management" (19 Nov 2018), online: <https://www.cela.ca/Review-Uranium-and-Nuclear-Substance-Facilities>; Northwatch and Canadian Environmental Law Association, "Review of the CNSC's Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2016" (20 Nov 2017), online: <http://www.cela.ca/ReviewOfCNSCregulatoryOversiteReport>.

The NPRI is covered under sections 46 – 53 of the *Canadian Environmental Protection Act, 1999*. The legislation enables the NPRI to track pollution using a listing approach and categorize substances by threshold. As radioactive substances are not part of the substance list, CELA has continued to advocate for the inclusion of radionuclides on the NPRI substance list.

CELA again submits that given the threat radionuclides pose to human health and the environment, we respectfully recommend the CNSC support the inclusion of radionuclides on the NPRI's substance list. The lack of comprehensive, accessible publicly-available data minimizes the ability of the public and independent scientific experts to provide valuable insight on relevant considerations to support the decision-making process.

While the ROR notes that the CNSC and NPRI are working together to establish active links between the CNSC and NPRI websites, we submit this is an improper substitute for the inclusion of radionuclides on the NPRI.³⁰ We **request** the Commission seek further direction on the status of this CNSC-NPRI linkage and what means are being proposed to ensure those who actively use and access the NPRI will be made aware of a parallel CNSC-based site. Further, prior to the release of the active beta testing in the latter part of 2019, mentioned in the ROR, we **request** the CNSC make a test site available for public comment and review.

Recommendations

16. Radionuclides should be reportable to Canada's National Pollutant Release Inventory (NPRI), an online data portal and a key resource for identifying pollution prevention priorities, supporting the assessment and risk management of chemicals, and encouraging actions aimed at reducing pollutant releases.

IV. CONCLUSIONS

We respectfully provide these comments to assist the Commission in its review of Canadian Nuclear Laboratories licenced activities and sites.

Truly,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION



Kerrie Blaise, Legal Counsel



Morten Siersbaek, Legal Counsel

³⁰ ROR for CNL, p 90.

Appendix 1 Summary of Recommendations

1. CELA remains of the view that ROR meetings are not a replacement for relicensing hearings³¹ and the CNSC must remedy the discrepancy in participation rights among public intervenors and licensees by providing oral presentation opportunities.
2. The CNSC should extend the amount of time provided to the public for the review of RORs and ensure a minimum 60-day timeframe is provided.
3. As this is the first ROR for CNL, the CNSC should more clearly set out its rationale for initiating this report and its aim moving forward.
4. The ROR should include greater discussion of overarching conclusions and findings related to CNL's actions and how they compare to other licensees' undertakings and sites.
5. The ROR should more clearly set out the considerations and rationale informing a site's risk classification.
6. The impact of new licensed activities on a site's pre-existing risk classification should be considered by the Commission in its vendor review process and review of licence applications.
7. CNL's Environmental Data Management System should be publicly available to facilitate the public's access to information regarding environmental releases and emissions.
8. In addition to summarizing changes to CNL Licences and Licence Conditions Handbooks, the ROR should present updates, where applicable, regarding ongoing federal environmental assessments.
9. If CNL's 'below expectation' rating for Security relates to surveillance, we recommend the Commission review the proponents most recent surveillance plan to ensure conformance with (draft) RegDoc 2.11.1.
10. The ROR should present the reasons why CNL is requesting a change in decommissioning approach (e.g. monetary or time constraints, difficulty in achieving full dismantlement, or revised risk assessments) and secondly, provide evidence of how CNL and the CNSC, respectively, weighed economic, environmental, human health, risk and safety considerations.
11. The ROR meeting should include submissions from CNL and CNSC Staff on measures being taken by nuclear facilities to (1) phase out asbestos use in nuclear facilities by December 31, 2022 and (2) pursue technically and economically feasible asbestos-free alternatives.

³¹ See CNSC "Bruce Power Hearing Transcript – May 29, 2018," p 188.

12. The ROR should explain how the CNSC verifies environmental monitoring results conducted by licencees.
13. The ROR should explain how, in applying the ALARA principle, the CNSC accounts for differential in risk among sites (ie. the ALARA radiation protection rating for a contaminated site might be different than that of a decommissioned reactor).
14. Greater detail is needed to discuss the relationship between the numbers in Table 2 and Table 3.
15. Licenced activities should be reviewed against their climate resiliency. The Commission should direct CNSC Staff to include this as a component of regulatory oversight reporting.
16. Radionuclides should be reportable to Canada's National Pollutant Release Inventory (NPRI), an online data portal and a key resource for identifying pollution prevention priorities, supporting the assessment and risk management of chemicals, and encouraging actions aimed at reducing pollutant releases.