



Oral presentation

Exposé oral

**Written submission from
Northwatch**

**Mémoire de
Northwatch**

In the Matter of the

À l'égard des

Canadian Nuclear Laboratories Ltd.

Laboratoires Nucléaires Canadiens Ltée

Application for the renewal of the nuclear
research and test establishment
decommissioning licence for the Whiteshell
Laboratories site

Demande visant le renouvellement du permis de
déclassement d'un établissement de recherche
et d'essais nucléaires pour le site des
Laboratoires de Whiteshell

Commission Public Hearing

Audience publique de la Commission

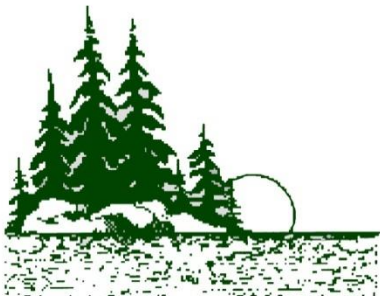
October 23-24, 2024

23-24 octobre 2024

**Comment on an Application from
Canadian Nuclear Laboratories Ltd. to renew its
Nuclear Research and Test Establishment Decommissioning
Licence for the Whiteshell Laboratories**



Ref. 2024-H7



Submitted to the Canadian
Nuclear Safety Commission by

Northwatch

9/16/2024

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PRÉCIS

- The CNL application was incomplete and inadequate
- Northwatch’s interest and the focus of this intervention is with respect to the transportation by CNL of radioactive wastes from Pinawa, Manitoba to Chalk River, Ontario
- Northwatch supports a three-year license period, with appropriate hold-points inserted
- Northwatch is requesting that the Commission convene a hold-point hearing with respect to several transportation related matters, including certification of a modified transportation package, a transportation security plan, and CNL’s licence to transport application
- CNSC staff should prepare and distribute a discussion paper on Emergency Response
- CNL should be required to provide detailed information about the radioactive wastes on-site at WL and to be managed during the license period

1. PROJECT SUMMARY

On March 4, 2024 the Canadian Nuclear Safety Commission issued a notice that the Commission would conduct a public hearing on an application from Canadian Nuclear Laboratories Ltd. for 3-year renewal of decommissioning licence for Whiteshell Laboratories site.

The notice described the Whiteshell Laboratories site as being located in the municipality of Pinawa, Manitoba and in the homeland of the Red River Métis, Treaty 1 and Treaty 3 territories and the traditional territory of the Anishinaabe and Ojibway Peoples and indicated that the current decommissioning licence for CNL's Whiteshell Laboratories site is valid until December 31, 2024.

The current licence authorizes CNL to conduct decommissioning activities at the Whiteshell Laboratories site, including the decommissioning of the Whiteshell Reactor #1 (WR-1), waste management areas, storage facilities, and other nuclear and non-nuclear buildings. The notice stated that CNL is not requesting the authorization of any new licensed activities.

The notice also indicated that for the decommissioning of WR-1, the decommissioning approach authorized under the current licence is a complete dismantlement and removal of the facility, but that CNL intends to submit a separate licence amendment application related to the potential in-situ decommissioning of WR-1.

The notice states that “As such, consideration of the potential in-situ decommissioning of WR-1 is out of the scope of this licence renewal hearing” but provides no legal or other rationale in support of this exclusion. Nor does it reference the assessment process that has been underway for several years with respect to CNL's substitute strategy which is the “potential in-situ decommissioning”. The most recent update on the CNSC web site is dated September 2022¹.

¹ As posted at <https://www.cnsccsn.gc.ca/eng/resources/news-room/feature-articles/update-on-the-whiteshell-reactor-1-project/>

2. NORTHWATCH'S INTEREST

Northwatch is a public interest organization concerned with environmental protection and social development in northeastern Ontario. Founded in 1988 to provide a representative regional voice in environmental decision-making and to address regional concerns with respect to energy, waste, mining and forestry related activities and initiatives, we have a long term and consistent interest in the nuclear chain, and its serial effects and potential effects with respect to northeastern Ontario, including issues related to uranium mining, refining, nuclear power generation, and various nuclear waste management initiatives and proposals as they may relate or have the potential to affect the lands, waters and/or people of northern Ontario. These nuclear waste related proposals and activities include various efforts to relocate into northern Ontario radioactive wastes that have been generated elsewhere and the transportation of radioactive materials – primarily waste, but also uranium in various stages of processing – through the region.

The decommissioning of the operations at the Whiteshell Laboratory, including decommissioning activities, are outside Northwatch's geographic area, which is comprised of the six federal districts of northeastern Ontario, however the project and its approach – if approved by the CNSC – has the potential to impact Northwatch and Northwatch's interest due to the ongoing and intended transportation of radioactive wastes from Whiteshell to Chalk River. At least three (and potentially five) of the six districts in northeastern Ontario will be directly affected by CNL's intended transportation of radioactive wastes from Whiteshell to Chalk River. The application identifies Chalk River Laboratory as the destination for low, intermediate and high-level radioactive wastes, meaning the transportation routes will transverse northern Ontario, directly affecting our region and members.

Notwithstanding that there are multiple issues related to the onsite management of radioactive wastes that warrant scrutiny and comment, the focus of Northwatch's submission is on the transportation of radioactive wastes from Whiteshell to Chalk River.

3. RADIOACTIVE WASTE TRANSPORT

CNL'S PROPOSED WASTE "CONSOLIDATION" AND RADIOACTIVE WASTE TRANSPORTATION

As set out in their 2019 application², the transportation of radioactive wastes formed a very large part of CNLs intended activities during that licence period:

CNL has made a strategic decision to transport the majority of WL's current and decommissioning generated radioactive wastes to either CRL or other authorized storage/disposal facilities for long-term storage and/or disposal. Certain wastes may be sent to licensed waste processing facilities (e.g., liquid waste processing facilities or metal-melt facilities) as appropriate.

The Transportation of Dangerous Goods (TDG) Program will provide program management and administrative services to enable the safe and efficient shipment of radioactive waste and materials from WL, supporting the closure mission of WL. The TDG Program responsibilities, in coordination with the CNL Waste Management Program, includes the procurement and distribution of reusable waste containers for LLW and ILW (e.g., intermodal containers and shielded over-packs), and the leasing (or other similar arrangements) of an appropriate, certified spent-fuel transportation flask for HLW. The TDG Program will also manage the logistical aspects of the transportation, for example, the establishment of transportation corridors, the establishment of contracts with licensed waste shipping companies, and the provision of all required Radioactive Material Shipping/Transport of Dangerous Goods documentation, including any CNSC approvals.

CNL has determined that approximately 25,500 m³ of LLW, 1560 m³ of ILW, and 92 baskets of irradiated fuel material exist, or will be created during future decommissioning work. This translates into approximately 1500 shipments of LLW from WL. It is anticipated that the inventory of ILW will be shipped from WL in either Type A containers or a Type B cask, depending on the nature and radioactivity level of the waste. An estimated 500 shipments of ILW is expected. Present plans for the shipment of the HLW from WL are that 2 fuel baskets will be accommodated within the certified shipping flask, resulting in a total of 46 shipments of HLW. Additionally, the remediation of the Standpipes may generate additional FM or HLW totaling a volume equal to approximately 2-4 baskets. This will require an additional 1-4 shipments of HLW.

Further, during the next licensing period, there may be a need to transport intermediate level liquid waste (ILLW) not processed on-site and/or the residual solid waste from on-site ILLW processing, as well as an estimated 500 m³ of hazardous and mixed wastes, to be shipped off-site to licensed waste receivers for treatment and/or disposition.

For the current licensing review, CNL applied for a 3-year licence renewal on November 21, 2023, proposing to continue current activities without changes.³ As such, we understand that the strategic decisions CNL made prior to the 2019 application persist, including the decision to transport the majority of WL's current and decommissioning generated radioactive wastes to

² Attachment D "Plans for the Proposed Ten Year Period of the Renewed Licence", CNL Application dated 15 November 2018, page 43

³ CMD 24-H7, page 1

either Chalk River or “other” authorized storage/disposal facilities for long-term storage and/or disposal.

As was the case with the 2019 license application, based on Northwatch’s review of the available documents submitted as part of or in support of the CNL application, we make the following observations with respect to the proposed transportation of radioactive wastes:

- There appears to have been no risk assessment undertaken by CNL with respect to the transportation of radioactive wastes and provided in support of their application
- The documents assume that the transportation of radioactive materials is straightforward and the lack of detail suggests that CNL is not assigning an appropriate level of attention.
- The documents do not provide specifics regarding routes, unique local conditions, response preparation, or coordination with local communities.
- The documents provide inadequate descriptions of the waste types, volumes and characteristics, and of the transportation packaging and overall transportation systems
- The documents provide only very generalized estimates of the shipment numbers and types and no timetable or seasonal estimates of the shipments
- The documents do not provide specific descriptions of the radiological hazards associated with each waste type, the basis for container selection, the shielding the selected container will provide, or the estimated dose – including to transportation workers and bystanders – of the wastes as packaged for transportation
- There is no discussion of the uncertainties associated with the very large volume of shipments of radioactive wastes envisioned by CNL, including uncertainties associated with failures in packaging, or with road conditions, weather, driver error, vehicle failure or *en route* delays
- There is no comparison of the transportation impacts (including and particularly dose for workers, drivers and bystanders) of transporting the waste within the next decade as compared to transportation at a later time; this absence is particularly notable with respect to intermediate and high level wastes, and when considering the differences in time of transfer between the approved decommissioning plan approach of deferred decommissioning (2002) and CNL’s “strategic vision” of accelerated decommissioning (2018).

The CNSC staff CMD in 2019 described the transportation of radioactive wastes as a routine activity, whereas in 2024 the CNSC staff describe it as a continued and already permitted activity.

The following statement is from the 2019 CNSC CMD:

The transportation of nuclear substances has been a frequent and routine activity at the WL site during the current licence period. In 2018 alone, 303 radioactive transport packages were safely sent offsite [43]. This included the transportation of 1,333.8 m³ of low-level waste and 7.9 m³ intermediate-level waste to CRL.⁴

The following statement appears three times in the 2024 CNSC CMD:

CNL is currently planning to perform a fuel consolidation project to have spent nuclear fuel baskets from the WL retrieved, packaged and transported to CNL's Chalk River Laboratories (CRL) for consolidated storage. The activities related to the fuel consolidation project are permitted as authorized activities per the current WL licence and would continue to be permitted under the proposed renewed 3-year licence, as CNL is not requesting any amendments to the licence in its licence renewal application.⁵

In its first occurrence it is followed by the statement “As a result, all spent fuel will be consolidated and safely stored at the CRL site thereby reducing the risk at the WL site” but the application and supporting documentation provide no description of the storage or management system that will be in place at the CRL site. While it might be the case that the removal of the high-level waste from the WL site will reduce risk at Whiteshell – this is dependent on how much risk is created in the extraction of the wastes, which is not described - in so doing it transfers and imposes risk to those along the transportation route and then to the Chalk River site.⁶

In its second and third occurrence, it is followed with the statement that “This fuel consolidation project has security implications regarding the transportation of spent nuclear fuel between the 2 CNL sites” but these security implications are not addressed in the application, with the exception of a note that CNSC staff expect CNL to submit safety documents prior to the retrieval

⁴ CMD 19-H4 page 52

⁵ CMD 24-H7 pages 30, 36, and page 76

⁶ CMD 24-H7 page 30

of the fuel waste and that CNL is required to submit a transportation security plan in 2025 prior to commencing transportation.⁷

Notable in their absence from the CNL documents in both 2019 and in 2024 were the following areas of assessment:

- We found no discussion of the potential releases from a severe accident, a failed container, or a transportation vehicle that is stopped for an extended time (for example, due to road closures as a result of weather, forest fires, highway accident, road construction, etc.)
- We found no indication that CNL had assessed the effect to a Maximally Exposed Individual under normal or upset conditions
- We found no indication that a risk assessment had been undertaken, and in particular there was no indication that CNL had undertaken a risk assessment specific to the various waste shipments they propose to undertake, including the specific wastes, specific containers, specific routes, and estimated travel conditions

Such an assessment is essential to the responsible consideration of radioactive waste transportation. We would expect such an assessment to be undertaken, and to address the following questions:

- What are the specific radiological characteristics of each of the waste forms proposed for transportation?
- What will be the effects along the routes?
- What are the potential routes, including potential congestion points?
- What are the estimated routine doses and occupational doses?
- What are the consequences of the worst foreseeable accident?
- Given current heavy truck accident rates, how many CNL shipments will be in accidents?
- Who is affected by the shipments?
- What will it cost to recover from a severe accident or sabotage?
- What unique local conditions may affect the level of risk?

⁷ CMD 24-H7 page 36 and 76

The following sections set out more specific areas of concern related to the anticipated transportation campaign proposed / anticipated for the next licence period.

REQUEST: that the Commission engage directly communities - including residents, municipal councils and First Responders - along the transportation route, inviting their participation in a hold-point hearing specific to the radioactive waste transportation and the proposed (and continued) transfer to Chalk River site.

CNL'S PROPOSED USE OF NWMO USED FUEL TRANSPORTATION PACKAGE

In our 2019 submission we had noted with interest CNL's stated intentions to use the Nuclear Waste Management Organization's (NWMO) Used Fuel Transportation Package (UFTP):

The fuel baskets will be retrieved from the canisters (see Figure 3-3) and transferred to the Used Fuel Transportation Package (UFTP) (see Figure 3-4 and Figure 3-5), for transport to and storage at CRL. The UFTP is a CNSC-certified Type B(U) Transportation Package, leased by CNL from its owner, the Nuclear Waste Management Organization (NWMO), for transporting CNL fuels, including the WL fuel materials. The UFTP is undergoing a comprehensive licensing process for CNL-specific fuels and configurations. Concrete canisters to contain the WL spent fuel baskets are being constructed at CRL. CNL will remain in communication with CNSC staff at all stages of this process, and regulatory oversight by CNSC staff will remain in effect.⁸

As described in CNL's 2019 CMD, nuclear fuel currently on-site at Whiteshell – which CNL intends to transport using the NWMO's UFTP – includes both intact, irradiated fuel bundles and sealed storage cans of defective fuel and fuel fragments.⁹

The UFTP was first certified in the 1980's as a contribution by Ontario Power Generation (then Ontario Hydro) to Atomic Energy of Canada Limited's Geological Disposal Concept. In 2013, the UFTP was recertified by the Canadian Nuclear Safety Commission staff, without public review.

⁸ CMD 19-H4.1 Page 21

⁹ CMD 19-H4.1 Page 20

Ontario Hydro's Used Fuel Transportation package was adopted by the NWMO and has been used as reference transportation package for such purposes as conducting "generic" assessments of radiation dose for use in report being produced as part of their "Adaptive Phased Management" program.¹⁰

When the CNSC issues a certificate for the package design, the certificate specifies procedures for the manufacture, operation and maintenance of the transportation package. It also defines the authorized contents that may be carried in the package. The certificate is valid for five years.¹¹ As set out in the certificate issued by the CNSC in 2013, the UFTP is designed for intact fuel bundles.¹² The UFTP was recertified in 2018, 2022 and 2023.¹³

Of note, neither CNL's license application nor CNL's 2024 Commission member document contained any mention or reference to the intended use of the Nuclear Waste Management Organization's (NWMO) Used Fuel Transportation Package (UFTP).

Despite the significance of the transportation package to the CNL's "consolidation" campaign and the fact that the CNSC is currently engaged in the review of a modified version of the NWMO's UFTP for the purpose of the CNL transportation of mixed high-level radioactive waste from Whiteshell to Chalk River, the CNSC CMD also failed to report to the Commission on this development or on the status of the review process for the modified used fuel transportation package.

This partnership was, however, described in the Nuclear Waste Management Organization's summary of their 2022 technical program which stated that Canadian Nuclear Laboratories (CNL) has "leased" NWMO's Used Fuel Transportation Package (UFTP-1) and that NWMO is collaborating with CNL to develop a new application which was to have been submitted to the

¹⁰ NWMO TR-2014-17 December 2014, Generic Transportation Worker Dose Assessment

¹¹ Safe and Secure Transportation of Canada's Used Nuclear Fuel MAY 2015 NWMO, page 14

¹² Canadian Nuclear Safety Commission (CNSC). 2013. Certificate for Transport Package Design. CDN/2052/B(U)-96 (Rev. 7). CNSC File 30-H1-118-0. July 29, 2013.

¹³ As found at <https://nuclearsafety.gc.ca/eng/nuclear-substances/certification-transport-packages-special-form-radioactive-material.cfm?pedisable=true>

CNSC in 2023, the purpose being to permit the UFTP which was designed solely for CANDU fuel to be used for the mixed high-level wastes CNL intends to transport from Whiteshell to Chalk River:

3.2.5 Whiteshell Fuel Transfer Project

NWMO is currently collaborating with Canadian Nuclear Laboratories (CNL) to support the Whiteshell Fuel Transfer Project aimed at consolidating used fuel storage. Used fuel currently stored at Whiteshell Laboratories in Pinawa, Manitoba, will be transported to the interim waste management facility in Chalk River, Ontario. To accomplish this, CNL has leased NWMO's Used Fuel Transportation Package (UFTP-1).

As part of this project, it is anticipated that CNL will use the UFTP to transport mixed fuel types (MFT) from the Concrete Canister Storage Facility at Whiteshell Laboratories to CNL. NWMO will be engaging in additional work to expand allowable contents of the UFTP transport certificate to include MFT. As such, NWMO is collaborating with CNL to develop a new application which will be submitted to the CNSC in 2023 to include such contents¹⁴.

Through an email exchange with CNSC staff Northwatch established:

- The application had been submitted by the NWMO, but following certification transportation packages can be used by other parties, provided they adhere to the certificate and the regulations.
- As of February 2024 the application had been received and was in the early stages of review by a CNSC senior certification engineers; the review process would be comprised of the technical assessment by a certification engineer followed by a peer review by another certification engineer with a final review and approval by a designated officer
- The review was, according to the CNSC “service standard” expected to be completed within 365 days of receipt of the application; we did not establish the date of receipt of the application through our communications with the CNSC, but understand via the redacted application document that it was submitted in July 2023

¹⁴ NWMO-TR-2023-01, Section 3.2.5 titled "Whiteshell Fuel Transfer Project, published May 2023, as posted at https://www.nwmo.ca/-/media/Reports-MASTER/Technical-reports/NWMO-TR-2023-01-Technical-Program-for-Long-Term-Management-of-Canadas-Used-Nuclear-Fuel-2023-05.ashx?sc_lang=en

- Due to what CNSC deemed to be proprietary nature of some parts of the application, CNSC determined that the CNSC was not in a position to share the application and directed Northwatch to make the request for a copy of the application to the NWMO

Northwatch requested a copy of the application from NWMO on March 15th and received a heavily redacted version of the application from the NWMO on August 2nd.

Northwatch appreciates that there may be some instances where information is redacted for security purposes, i.e. information that could assist rogue players in accessing nuclear materials or gaining access to a nuclear site. Northwatch also accepts – on a limited basis – that some information may be of a proprietary nature. However, these considerations should not form a barrier to information that it in the public interest being available, particularly during the course of a government or public agency’s review process.

In providing the heavily redacted version of their application, the NWMO offered the following explanation for excluding information which Northwatch and our advisors deem to be essential to the public review of this application:

As per our Transparency Policy, we have reviewed the documentation requested considering a variety of factors in determining what information we publish or provide, including amongst others:

- *whether the release of information would infringe on any third-party rights, such as personal privacy, labour relations or employment information, intellectual property and/or confidentiality;*
- *whether the information contains financial, commercial, scientific or technical information of a third party, unless the third party consents;*
- *whether the information is legally privileged, protected from disclosure by law, or protected for security reasons¹⁵.*

Included in the application was a (heavily redacted) Safety Analysis Report (SAR)¹⁶ prepared in support of the application by the Nuclear Waste Management Organization (NWMO) to utilize the Used Fuel Transportation Package (UFTP), currently authorized for transportation

¹⁵ Email communication between from the NWMO to Northwatch

¹⁶ UFTP SAR-MFT: Volume 1, Calian Report CNL-0003-30, Version 5.0, 1 June 2023

of used CANDU fuel bundles, for shipment of Mixed Fuel Types (MFT) and various types of used nuclear fuel with different compositions and enrichments of fissile materials.

If approved by the Canadian Nuclear Safety Commission (CNSC), the modified Used Fuel Transportation Container would be used to make an unspecified number of MFT shipments from the Whiteshell Laboratories (WL) to the Chalk River Laboratories (CRL).

The UFTP would be transported by road, mounted on a flatbed road trailer. Because of the hazardous nature of the MFT, the length and duration of the shipments, and the likely use of shipping routes near and/or through highly populated areas and important natural resources, Northwatch is concerned about the potential for adverse impacts to the public, workers, and the environment.

The NWMO application to the CNSC, dated July 24, 2023, seeks to assure the Commission and members of the affected public that *“this application provides information demonstrating that the UFTP can safely transport MFT contents without any adverse impact to the public, workers, or the environment.”*

The SAR executive summary and conclusion further states: *“This SAR demonstrates that the UFTP design meets or exceeds all regulatory requirements and can safely transport its used fuel load as described in Section 1 without any adverse impact to the public workers or the environment.”*¹⁷

In planning for review of the SAR, Northwatch members have asked:

- is sufficient information included in the application to allow an informed decision by the CNSC?
- what are the radiological risks?
- what will be the resulting exposures (dose) to the travelling public and / or bystanders?
- is the potential for criticality addressed?
- is the shielding adequate to the waste types?
- what is the potential for release due to transportation accidents?

¹⁷ UFTP SAR-MFT: Volume 1, Calian Report CNL-0003-30, Version 5.0, 1 June 2023, page 4

- what is the potential for release due to malevolent acts / terrorist activity / security breaches?
- what security measures are described in the application and are they adequate?

The heavily redacted version of the SAR provided to Northwatch does not answer the safety questions raised by Northwatch members. Nor does the heavily redacted version of the SAR allow an independent and objective review to confirm the assertion that “*the UFTP can safely transport MFT contents without any adverse impact to the public, workers, or the environment.*”

Overall, the redactions in the SAR are unwarranted. What possible concerns about proprietary information, or physical protection of shipments, would require the redaction of mere cross references between the regulatory requirements of SSR-6 and sections of the SAR in which the requirements are provided¹⁸, or mere entries about General Information in the Table of Contents?¹⁹

The redaction of virtually all information about the radiological characteristics of the MFT used fuels prevents any meaningful evaluation of the radiological impacts that would result from routine shipments, severe transportation accidents involving loss of shielding or loss of containment, and/or successful terrorist attacks or radiological sabotage incidents during transport.

- On page 22, the most basic descriptive information about the various MFT used fuels and allowed baskets is redacted.
- On page 28, all information in Table 1-8 about the reference radionuclide inventory used to establish a bounding scenario for “over 3 000 items to be transported” is redacted.
- On page 30, all information about actinides present, and activity and mass per loaded UFTP, is redacted.
- On page 33, all information about fission gas release fractions, later used to estimate releases during normal and accident conditions of transport, is redacted.

¹⁸ UFTP SAR-MFT: Volume 1, Calian Report CNL-0003-30, Version 5.0, 1 June 2023, page X

¹⁹ UFTP SAR-MFT: Volume 1, Calian Report CNL-0003-30, Version 5.0, 1 June 2023, page XI

These are just a few examples of how the redaction of General Information in Section 1, prevents a credible evaluation of the SAR radiological safety claims throughout the remainder of the document.

Hundreds of other redactions undermine the credibility of discussions important to safety in the SAR Structural Evaluation (Section 2), Thermal Evaluation (Section 3), Containment Evaluation (Section 4), Shielding Evaluation (Section 5), and Criticality Evaluation (Section 6). Significant redactions also undermine the credibility of the discussions regarding package operations, acceptance testing, and maintenance programs, in Sections 7 and 8.

It is Northwatch’s assessment that a not-yet-determined number of the redactions were simply vexatious in nature. For example, in Section 1.2.1.2 the description of the impact limiter is redacted, including what we expect – although cannot confirm, due to the redaction – was a simple description of the materials in the impact limiter is constructed from. However, in a later section – Section 1.1.1.3 - the impact limiter is described as being made of redwood encased in stainless steel.²⁰ This description can be found elsewhere in the public domain and we can conceive of no reason – for security or proprietary purposes – why this very basic description would have been redacted.

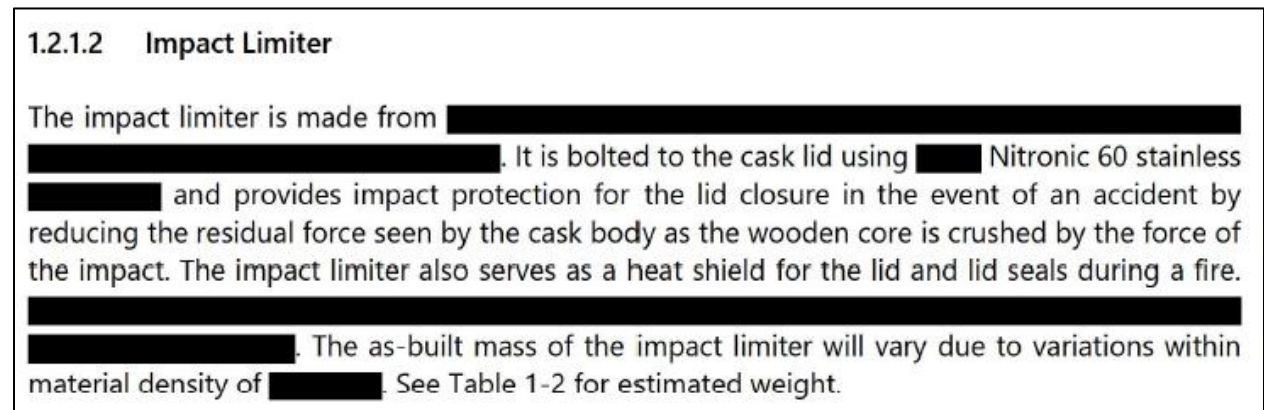


Figure 1, UFTP SAR-MFT, SECTION 1.2.1.2

²⁰ UFTP SAR-MFT: Volume 1, Calian Report CNL-0003-30, Version 5.0, 1 June 2023, pages 7 and 44

2.1.1.1.3 *Impact Limiter*

The impact limiter is made of redwood encased in stainless steel. It is bolted to the upper end of the UFTP to reduce shock loadings in the event of an accident. The impact limiter also serves as a heat shield to protect the lid seals during a fire.

Figure 2, UFTP SAR-MFT, SECTION 2.1.1.1.3

As discussed in more detail in Section 5, the application itself fails to meet the regulatory requirement to provide information in the application about the name, quantity, form, origin and volume of any radioactive waste ... that may be stored, managed, processed, or disposed of at the site of the activity to be licensed, and the proposed method for managing and disposing of that waste.²¹

The UFTP Safety Assessment Report fails differently, in that it seems that important information about the waste characteristics, including and particularly about dose rates, appear to have been included in the report but are wholly redacted in the copy provided to Northwatch.

²¹ CNL Application, *supra* note 3, Attachment B: Compliance Material for 2018 Chalk River Laboratories Site Licence Renewal

Table 5-1: [REDACTED]

Normal Conditions of Transport (NCT)						
	UFTP Surface (mSv/h)			2 m from Outer Vehicle Surface (mSv/h) ¹		
Gamma	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Neutron	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Regulatory Limit ²	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
	Vehicle Surface (mSv/h) ²			Occupied Positions (µSv/h)		
Gamma	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Neutron	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Regulatory Limit ³	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]						
	1 m from UFTP Surface (mSv/h)					
Gamma	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Neutron	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Total	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Regulatory Limit ³	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Notes:

1. The dose rates at [REDACTED] from the UFTP surface are reported and are bounding of the dose rates at [REDACTED] from the [REDACTED] (see Annex E-2 in Volume 2 for details).
2. The dose rates at the [REDACTED] are reported and are bounding of the dose rates at the vehicle surface (see Annex E-2 in Volume 2 for details).
3. The regulatory limits are set in Paragraph 573 of SSR-6 for NCT and Paragraph 659 of SSR-6 for HAC. The suggested limit for the occupied positions is set in RD-364 and SSG-26 [50].
4. All dose rates are presented with two significant figures and thus some total dose rates may not add up exactly to the gamma dose rate plus the neutron dose rate (i.e., due to rounding).
5. Relative errors for all calculated dose rates are under 3.5%.

The values for all calculated dose rates are well below the regulatory limits identified in Table 5-1. Under normal conditions of transport, [REDACTED]



Figure 3 Table 5.1 from UFTP-SAR, page 117

REQUEST: that the Commission should convene a hold-point hearing specific to the certification of the modified UFTP and a risk assessment of the radioactive waste transportation and ensure that adequate information is provided in advance of the deadline for written interventions – including the UFTP Safety Assessment Report and other related documentation - and that support is available to allow the public and Indigenous intervenors to retain technical and legal assistance.

REQUEST: that the prior to the hold-point hearing specific to the certification of the modified UFTP the Commission direct that both an unredacted (or minimally redacted) version of the application, including the UFTP SAR, and CNSC staff assessment and communications with respect to the UFTP SAR in specific and the application more generally be made available to public interest intervenors.

TRANSPORTATION ACCIDENT RECORD

Both CNL and CNSC staff make blanket claims of transportation safety.

CNL proclaims that “*Transportation has been demonstrated to be safe. Atomic Energy of Canada Limited, and now CNL, has been transporting wastes safely and without incident for over 50 years.*”²² Technically this may be the case, but it is not the case that waste shipments from CNL sites have been without incident.

CNSC staff declare in their Commission Member Document that “*There are no concerns with CNL’s implementation of its packaging and transport program.*”²³ The latter statement – that there are no concerns – is particularly at odds with the recent incident of a waste container that was transported from the WL site was not adequately assessed which resulted in some of its content not being listed in the records.²⁴

As noted in a report²⁵ by Dr. Fred Dilger commissioned by Northwatch in 2017

²² CMD 24-H7.1 page 116

²³ CMD 24-H7 page 82

²⁴ CMD 24-H7, Section 4.14.3.2, Regulatory Focus, page 82

²⁵ CEAR Reference, “Review of Ontario Power Generation’s “Additional Information” in Support of their Proposed Deep Geologic Repository for Low & Intermediate Level Nuclear Wastes, Appendix 2, “Review of Ontario Power Generation’s Report: Cost and Risk Estimate for Packaging and Transporting Waste to Alternate Locations” by Dr.

“It is important to recognize that millions of shipments of radioactive materials are shipped around the world. These shipments are made in robust containers that prevent release of the materials. It is equally important to recognize that each shipping program, each shipment is unique. The record of successful shipment is only possible due to extensive, sustained effort. Only constant vigilance enables radioactive materials shipments to be successful and there is no guarantee for future performance.”

Experience in Canada with the long-distance shipment of high-level waste has been very limited.

While having had no major accidents during road accidents that resulted in significant radiological contamination in Canada to date is certainly a positive, it is not an assurance of future success. Each shipment is unique, and the past may not be a predictor of the future, particularly since the volume and the type of shipments increase and change dramatically.

Third, it would not be factually correct to say that there have been no accidents or releases of radioactive material during transportation of radioactive goods or waste to date. Nor would it be reasonable to not acknowledge that there are significant risk factors.

While there is no public record of accidents during waste shipments by Atomic Energy of Canada Limited or more recently CNL, there are many instances of accidents during the transportation of nuclear materials – including radioactive waste – in Canada over the last 25 years.

The following are road transportation accidents that took place in Canada between 2016 and 2018 and were publicly disclosed by the Canadian Nuclear Safety Commission:

- In January 2018 a tractor trailer hauling uranium concentrate to Cameco's Blind River refinery was in an accident on Highway 17 between Wawa and Sault Ste. Marie, ON.
- In May 2017 there were two separate transport incidents involving the shipment of low-level radioactive loads from the Bruce Nuclear Generating Station hauling waste to an unidentified off-site facility.

Fred Dilger, as posted at <https://registrydocumentsprd.blob.core.windows.net/commentsblob/project-17520/comment-2525/118324E.pdf>

- In December 2016 there was a transport trailer accident just west of North Bay involving a truck hauling uranium concentrate from Montréal to Cameco's uranium refinery in Blind River
- In April 2016 a tractor trailer hauling uranium concentrate from Cameco's Blind River refinery to its Port Hope conversion facility was in an accident on Highway 17 near Massey
- In January 2016 a truck hauling uranium on Highway 4 near Swift Current Saskatchewan was in an accident, the container was breached, and there was a spill of uranium yellowcake onsite, resulting in the highway being closed for the cleanup^{26, 27}

The CNSC has also disclosed two marine shipping accidents. In 2011 a sea shipment containing uranium yellowcake was returned to Canada after encountering rough seas enroute from Canada to China that resulted in a loss of containment. Cleanup took from January to May 2011, but the ship remained in dry dock for much longer due to legal disputes between the carrier and Cameco, who was the shipper, with both parties arguing that the other was at fault.

In a second marine accident in 2014 a flat rack containing four cylinders of Uranium Hexafluoride (UF₆) composed of low-enriched uranium, each weighing 4.5 tonnes was accidentally dropped back into the ship's cargo hold from an elevation of about 7 metres (23ft) when two connectors on the crane let go and the container then swung down and snapped off, dropping back into the hold.²⁸

Two additional incidents had their origin in Canada, but occurred in the U.S. In 2013, a truck hauling uranium hexafluoride caught fire near Troy, Ohio. The driver – recognizing the danger of exposing the UF₆ to fire - managed to disconnect the rig from the trailer and drove the truck two miles down the road, leaving the load of uranium hexafluoride unattended but avoiding the

²⁶ As posted June 2021 at <https://nuclearsafety.gc.ca/eng/acts-and-regulations/event-reports-for-major-nuclear-facilities/event-reporting/transport-intransit-events.cfm?pedisable=true>

²⁷ UF₆ Drop at <https://atlantic.ctvnews.ca/container-in-radioactive-scare-was-improperly-secured-nuclear-safety-agency-1.1748578>

²⁸ CNSC's Regulatory Efforts for Improvement in Response to Transport Events E-DOCS-#5728486 2019-09-03 1:06 PM, as found at https://resources.inmm.org/system/files/patram_proceedings/2019/a1148_3.pdf

trailer being engulfed in the fire. There was no requirement to report the incident to either Canadian or American nuclear regulators.²⁹

In 2017, one of the first shipments of high-level liquid radioactive waste from Chalk River in Canada to Savannah River Site (SRS) in South Carolina was found to be “hot” upon arrival at SRS, meaning that it was above allowable radiation limits due to a failure in the packaging.³⁰ The party responsible for the shipping was not identified in the documents made available by the U.S. Defense Nuclear Facilities Safety Board but the Chalk River Nuclear Laboratories was the point of origin for the shipment.

In a potentially related earlier incident the bottom of a “caddy” manufactured by the same company (and which are part of the equipment that goes with the NAC-LWT cask) had unexpectedly failed, dropping highly radioactive spent nuclear fuel rods to the bottom of a storage pool at Chalk River. The failure of the caddy was caused by poor welds, a manufacturing defect that was also evident on a number of other caddies designed to serve the same purpose.³¹

Canada has no registry or publicly accessible database of radioactive shipments, or of accidents or incidents involving the shipment of radioactive wastes and other materials.

Transport Canada does provide summary statistics of emergencies, which they describe as an incident in which “the release or anticipated release (e.g. spills, accidents), loss or theft of dangerous goods that is or could be in excess of a quantity or concentration specified by regulation from the means of containment if it endangers, or could endanger, public safety”. A Class 7 emergency is one in which there is a “level of ionizing radiation greater than the level established in section 39 of the "Packaging and Transport of Nuclear Substances Regulations, 2015".³²

The following transport-related radiological emergencies were reported by Transport Canada:³³

²⁹ https://www.thestar.com/business/2013/10/31/burning_truck_hauling_nuclear_load_flies_under_radar.html

³⁰ www.dnfsb.gov/sites/default/files/document/11571/Savannah%20River%20Week%20Ending%20April%2021%202017.pdf

³¹ <https://mailchi.mp/17d0e40b7103/nsr>

³² <https://tc.canada.ca/en/dangerous-goods/canutec/annual-statistics/>

³³ <https://tc.canada.ca/en/dangerous-goods/canutec/annual-statistics/>

Year	2023	2022	2021	2020	2019	2018	2017	2016	2015
# of Incidents	9	2	7	14	5	5	8	13	11

FIRST RESPONDERS AND RADIOLOGICAL EMERGENCIES

With the support of the Ontario Law Foundation, Northwatch conducted an investigation during 2017 and 2018 of the information needs of small municipalities, volunteer fire fighters and First Responders around emergency response / right to know issues in the case of accidents and unintended releases related to the transportation of hazardous goods more generally and with respect to the transportation of radioactive materials and response to accidents and accidental releases in particular.

The following observations are a summary of responses from front line responders:

- The range of experiences and outlooks varies greatly among firefighters, both within a particular service, but even more so between the professional forces and the volunteer forces; further differences are in evidence between volunteer fire services in organized municipalities versus unorganized townships (with Local Service Boards)
- Volunteer forces generally appear to rely more on in-house training and passing expertise from senior more experienced members to younger members, while municipal forces appeared to rely more on formal training; that taken into account, respondents from both types of forces described some members as being more specialized, including in the area of responding to situations involving hazardous materials
- Particularly for volunteer forces, time constraints were noted as the key challenge in expanding training; force members regularly do three hours a week of training and equipment maintenance, outside of response to fire calls

- First responders consistently identified the Emergency Reference Guide 2018 as their primary information source for identifying hazards and developing appropriate responses
- There is a specific training module related to transportation, and most on the force would have Level 1 of this training which addresses how to read the truck placard and respond accordingly; in situations where hazards are unknown, likely approach for volunteer forces would be to secure the site and invoke the Mutual Aid Agreement to bring in support from a larger community with more specialized expertise, or from professional hazmat team
- Respondents indicated that there is no training provided specific to radiological events, with the exception of several pages in the Emergency Reference Guide

The Office of the Fire Marshall and Emergency Management Ontario were consistent both across agencies and internally in terms of the chain of command in emergency response and training and information transfer. Both agencies were also consistent in being largely silent on the training and tools being provided to fire fighters to respond to transportation accidents involving hazardous materials, and even more so with respect to radiological events.

Available training and training materials were also consistent with this, generally providing minimal attention to these risk areas. In particular, these gaps were evident in the Incident Management and the Basic Emergency Management training. Several references were made during interviews to the 2018 Emergency Response Guidebook³⁴ as the go-to resource when responding to a hazardous materials event.

³⁴ “Emergency Reference Guide 2018”, as found at <https://www.tc.gc.ca/media/documents/tdg-eng/EnglishERGPDF.pdf>

EMERGENCY RESPONSE

During Northwatch’s engagement with first responders (described above) the 2018 Emergency Response Guidebook³⁵ was frequently referred to as the go-to resource when responding to a hazardous materials event.

The Emergency Response Guidebook had now been updated to the Emergency Response Guidebook (ERG) 2024.³⁶

The 392-page guide is largely a listing of materials with relatively general instructions in how to respond in a fire situation. Eleven pages deal with six different groupings of radioactive materials, ranging from low level to high level (in terms of radioactivity) and including wastes, fissile material, and uranium hexafluoride.

Disconcertingly, each of the six sections begins with the statement “Radiation presents minimal risk to transport workers, emergency response personnel and the public during transportation accidents. Packaging durability increases as potential hazard of radioactive content increases.”

The descriptions go on to say that undamaged packages are safe, that the materials are seldom flammable and that the “presence of radioactive material will not influence the fire control processes and should not influence selection of techniques”.

The key difference between the 2016 version of the handbook and the 2024 version is that under “Public Safety” direction to “CALL EMERGENCY RESPONSE Telephone Number on Shipping Paper first” has been replaced with the direction to “CALL 911” followed by the direction to call the emergency response number on the shipping paper.

³⁵ “Emergency Reference Guide 2018”, as found at <https://www.tc.gc.ca/media/documents/tdg-eng/EnglishERGPdf.pdf>

³⁶ <https://tc.canada.ca/sites/default/files/2024-04/2024-emergency-response-guidebook.pdf>

GUIDE 165 RADIOACTIVE MATERIALS (FISSILE/LOW TO HIGH LEVEL RADIATION)

POTENTIAL HAZARDS

HEALTH

- Radiation presents minimal risk to transport workers, emergency response personnel and the public during transportation accidents. Packaging durability increases as potential hazard of radioactive content increases.
- Undamaged packages are safe. Contents of damaged packages may cause higher external radiation exposure, or both external and internal radiation exposure if contents are released.
- Type AF or IF packages, identified by package markings, do not contain life-threatening amounts of material. External radiation levels are low and packages are designed, evaluated and tested to control releases and to prevent a fission chain reaction under severe transport conditions.
- Type B(U)F, B(M)F and CF packages (identified by markings on packages or shipping papers) contain potentially life-endangering amounts. Because of design, evaluation and testing of packages, fission chain reactions are prevented and releases are not expected to be life-endangering for all accidents except those of utmost severity.
- The rarely occurring "Special Arrangement" shipments may be of Type AF, BF or CF packages. Package type will be marked on packages, and shipment details will be on shipping papers.
- The transport index (TI) shown on labels or a shipping paper might not indicate the radiation level at one meter from a single, isolated, undamaged package; instead, it might relate to controls needed during transport because of the fissile properties of the materials. Alternatively, the fissile nature of the contents is indicated by a criticality safety index (CSI) on a special FISSILE label or on the shipping paper.
- Some radioactive materials cannot be detected by commonly available instruments.
- Water from cargo fire control is not expected to cause pollution.

Figure 4, Emergency Response Guidebook (ERG) 2024, page 260

On May 25, 2024 submitted an Access to Information Request to Transport Canada requesting information with respect to the 2024 Emergency Response Guidebook and its treatment of Class 7 materials, including:

- the scientific or technical references, information or material relied upon to support the statement “Radiation presents minimal risk to transport workers, emergency response personnel and the public during transportation accidents. Packaging durability increases as potential hazard of radioactive content increases” as it appears in Guides 161 through 166
- the scientific or technical references, information or material relied upon to support the statement “Undamaged packages are safe” as it appears in Guide 162, Guide 163, Guide 164 and Guide 165

- the scientific or technical references, information or material relied upon to support the statement “Released radioactive materials or contaminated objects usually will be visible if packaging fails” as it appears in Guide 162
- the scientific or technical references, information or material relied upon to support the statement “Some material may be released from packages during accidents of moderate severity but risks to people are not great” as it appears in Guide 162
- the scientific or technical references, information or material relied upon to support the statement “Some material may be released from packages during accidents of moderate severity but risks to people are not great” in the context of the statement “Some radioactive materials cannot be detected by commonly available instruments” as it appears in Guide 162
- the scientific or technical references, information or material relied upon to support the selection of a distance of a 300 metre evacuation distance in all directions when radioactive materials with Low to High Levels of External Radiation are involved in a major fire, as set out in Guide 164
- the scientific or technical references, information or material relied upon to support the statement “Radioactive source capsules and Type B packages are designed and evaluated to withstand total engulfment in flames at temperatures of 800°C (1475°F) for a period of 30 minutes” as set out in Guide 164, including documentation of actual tests that have been carried out on packages in Canada, including test or trials during which packages were subject to the total engulfment in flames at temperatures of 800°C (1475°F) for a period of 30 minutes; specifically, provide documentation of when and where such tests or trials took place and which packages were the subject of such tests or trials and how the results of these tests or trials demonstrated that the packages remained fully intact without any loss of containment
- a record of consultation by Transport Canada with Environment Canada and Health Canada during the course of the review of the Guidebook between 2020 and 2024 related to its revision and subsequent publication as the 2024 Emergency Guidebook

On June 26, 2024 Northwatch received a response from Transport Canada, largely comprised of emails between Transport Canada and CNSC staff in 2018, documenting that Transport Canada had inquired if CNSC had any concerns or suggested modifications to the ERG. The response was that CNSC had no concerns or suggested modifications.

The response included one email from Transport Canada to the U.S. Department of Energy referencing a June 2017 meeting in which it had been commented that the suggested distances in the IAEA Guidelines for emergency responders are supposedly different than the ones listed in ERG 2016, but that the IAEA recommendations published in 2002 quoted ERG 2000.

No information was included in the Transport Canada reply citing scientific or technical references, information or material relied upon to support the statement the several statements referenced in our Access to Information Request.

REQUEST: the Commission should direct CNSC staff to prepare and distribute a discussion paper on Emergency Response in which they include discussion as well as scientific or technical references, information or material relied upon that would support or refute the several statements in the 2024 Emergency Response Guide referenced in Northwatch's Access to Information Request.

An emergency response assistance plan (ERAP) describes what to do in the event of a release or anticipated release of certain higher-risk dangerous goods while they are in transport and are required when dangerous goods are being imported or transported.³⁷

- emergency response assistance plan (ERAP) describes what to do in the event of a release or anticipated release of certain higher-risk dangerous goods while they are in transport.
- Each plan is specific to certain dangerous goods, modes of transport (air, rail, road or marine), means of containments, like containers or packaging, used to hold the dangerous goods, and geographical area in which the dangerous goods will be transported.

³⁷ <https://tc.canada.ca/en/dangerous-goods/emergency-response-assistance-plans-eraps>

- A person with an approved ERAP uses the plan to assist emergency responders. ERAPs list specialized personnel and equipment needed for responding to an incident.
- ERAPs may be used along with emergency response plans from other organizations such as carriers and local or provincial authorities. An incident management system, usually the Incident Command System (ICS), ensures coordination between the ERAP and other emergency response plans.

On May 25 2024 Northwatch requested through an Access to Information Request to Transport Canada the “Emergency Response Assistance Plan (ERAP) for Shipments of Radioactive Waste, Pinawa to Chalk River” and supporting and related information, including how the ERAP had been distributed to local emergency and first responders along the route between Whiteshell and Chalk River.

A system-generated confirmation of receipt was received, but no response has been provided by Transport Canada.

5. ADDITIONAL ISSUES

INADEQUATE INFORMATION ABOUT RADIOACTIVE WASTE

The *General Nuclear Safety and Control Regulation Requirement* (herein “*General Regulations*”) sets out in Section 3 that:

- 1) An application for a licence shall contain the following information:
 - [...]
 - (j) the name, quantity, form, origin and volume of any radioactive waste or hazardous waste that may result from the activity to be licensed, including waste that may be stored, managed, processed, or disposed of at the site of the activity to be licensed, and the proposed method for managing and disposing of that waste;³⁸

CNL states in their application that Attachment A presents the information required by the Nuclear Safety and Control Act (the Act) [A-2] and CNSC Regulations made pursuant to the Act, to be included in an application for the renewal of a licence.

In “Attachment A CNL provides only very summary information and references as a substitute response to this legislative requirement:

3 (1)	(j) the name, quantity, form, origin and volume of any radioactive waste or hazardous waste that may result from the activity to be licensed, including waste that may be stored, managed, processed or disposed of at the site of the activity to be licensed, and the proposed method for managing and disposing of that waste;	<p>Specific information on radioactive and hazardous wastes is presented in the annual reports prepared to meet the requirement of SCA “Operating Performance” Licence Condition 3.2 of the current WL LCH [A-3].</p> <p>Relevant requirements for managing and disposing of radioactive and hazardous waste at the WL site are addressed in the Waste Management Program (through the documents referenced in SCA “Waste Management” Licence Condition 11.1 of the current WL LCH [A-3].</p>
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This attempt to substitute information with a reference to potential sources of the required information is a matter of dispute between Northwatch and CNL in this instance, as it has been in

³⁸ CNL Application, *supra* note 3, Attachment B: Compliance Material for 2018 Chalk River Laboratories Site Licence Renewal

previous license reviews.³⁹ Northwatch submits that the licence applicant is required to provide - as part of their license application - information that includes “the name, quantity, form, origin and volume of any radioactive waste or hazardous waste that may result from the activity to be licensed, including waste that may be stored, managed, processed, or disposed of at the site of the activity to be licensed, and the proposed method for managing and disposing of that waste” per s 3 of the *General Regulations*. This requirement has not been met.

The regulatory requirement is not to simply provide a list of documents that may include that information and which the proponent has or will provide to the CNSC; the requirement is to provide the information in the license application itself.

REQUEST: The CNSC should require CNL to provide information which at minimum summarizes the volume, origin, form, quantity and name of any radioactive waste or hazardous waste that may result from the licensed activities; the proposed method for managing and disposing of that waste must be included, as per the regulatory requirements.

SIGNIFICANT DECISIONS TO BE MADE DURING THE THREE-YEAR LICENSE PERIOD

There are several important decisions that will be made during the proposed three-year license period, and in the absence of the Commission clearly establishing “hold-points” in the license accompanying by a public hearing or some alternate mechanism that includes the important elements of public disclosure and scrutiny these important decisions will be internal only, excluding the public, Indigenous peoples and Commission members.

As set out in the CNSC staff CMD, CNL has yet to outline important work areas and methodologies, including important task sets which are central to their “fuel consolidation project”, such as the extraction of the irradiated fuel waste from the Concrete Canister Storage Facility (CCSF). CNSC staff expect CNL to submit revised Criticality Safety Documents (CSDs)

³⁹ See, for example, Northwatch submission with respect to 2018-H-01, Canadian Nuclear Laboratories application for license renewal for the Chalk River Laboratories.

prior to retrieval of spent nuclear fuel baskets from the CCSF for each phase of the project. CNSC staff will review CNL's revised CCSF CSDs for acceptance when they are submitted.⁴⁰

REQUEST: That the Commission should convene a hold-point hearing to consider and render a decision on significant areas of CNL operation during the three-year licence period, including the approach to the extraction of the irradiated fuel waste from the Concrete Canister Storage Facility (CCSF) and the content of the revised criticality safety documents.

CNL is required to submit a transportation security plan in 2025 for CNSC staff review and acceptance, prior to commencing the transportation of spent fuel baskets from WL to its CRL site.

As set out in the CSNC staff CMD, CNSC staff proposes to carry out the review of CNL's transportation security plan once and conduct focused compliance verification activities at a staff level only. While we agree that these are important review steps, in Northwatch's view these are significant enough to warrant an open public process that engages the public, Indigenous peoples and the Commission.⁴¹

REQUEST: That the Commission should convene a hold-point hearing to consider and render a decision on significant areas of CNL operation during the three-year licence period, including the transportation security plan to be submitted by CNL in 2025.

CNSC staff expect to receive a licence to transport application from CNL regarding its plan to consolidate spent fuel to its CRL site in July 2025. CNSC staff indicate in the CNSC staff CMD that staff will review CNL's licence to transport application when CNL submits it.⁴²

As with the transportation security plan, CNSC staff proposes to carry out the

⁴⁰ CMD 24-H7, section 4.4.3.2, page 36

⁴¹ CMD 24-H7, section 4.12.3.2, page 76

⁴² CMD 24-H7, section 4.14.3.2, page 82

review of CNL's licence to transport application at a staff level only. As with the transportation security plan it is Northwatch's view these are significant enough to warrant an open public process that engages the public, Indigenous peoples and the Commission

REQUEST: That the Commission should convene a hold-point hearing to consider and render a decision on significant areas of CNL operation during the three-year licence period, including CNL's licence to transport application

Earlier in this submission Northwatch also requested that the Commission should convene a hold-point hearing specific to the certification of the modified UFTP and a risk assessment of the radioactive waste transportation.

In total, Northwatch has made four requests for hold-point hearings with the opportunity for public comment followed by decisions by the Commission, related to:

- extraction of the irradiated fuel waste from the Concrete Canister Storage Facility (CCSF) and revisions of the criticality safety documents.
- the transportation security plan to be submitted in 2025
- licence to transport application
- certification of the modified UFTP and a risk assessment of the radioactive waste transportation

The public interest and the Commission's functioning would be best served by holding a single hold-point hearing to consider these four interrelated areas.

6. CONCLUSIONS

As set out in this submission, Northwatch has numerous concerns with the application as prepared and submitted by the Canadian Nuclear Laboratories. This is consistent with our conclusions in 2019; CNL's application is incomplete and inadequate.

In 2019 CNL applied for a 10-year license, Northwatch requested a two year license period, and the Commission granted a five year licence. CNL is now requesting a three year license.

Given that management of the site must be continued and some decommissioning activities should be continued, refusal of the license is not an option. Northwatch does not disagree with a three-year license period, with appropriate hold-points inserted, as discussed above.

As indicated in earlier parts of this submission, Northwatch is requesting that the Commission:

- engage directly with communities - including residents, municipal councils and First Responders - along the transportation route, inviting their participation in a hold-point hearing specific to the radioactive waste transportation and the proposed (and continued) transfer to Chalk River site.
- convene a hold-point hearing specific to the certification of the modified UFTP and a risk assessment of the radioactive waste transportation and ensure that adequate information is provided in advance of the deadline for written interventions – including the UFTP Safety Assessment Report and other related documentation - and that support is available to allow the public and Indigenous intervenors to retain technical and legal assistance.
- direct that both an unredacted (or minimally redacted) version of the application, including the UFTP SAR, and CNSC staff assessment and communications with respect to the UFTP SAR in specific and the application more generally be made available to public interest intervenors.
- direct CNSC staff to prepare and distribute a discussion paper on Emergency Response in which they include discussion as well as scientific or technical references, information or

material relied on that would support or refute the several statements in the 2024 Emergency Response Guide referenced in Northwatch's Access to Information Request.

- require CNL to provide information which at minimum summarizes the volume, origin, form, quantity and name of any radioactive waste or hazardous waste that may result from the licensed activities; the proposed method for managing and disposing of that waste must be included, as per the regulatory requirements.

All of which is respectfully submitted on behalf of Northwatch.

September 18th, 2024