



**Oral presentation**

**Exposé oral**

**Submission from  
Ottawa Riverkeeper**

**Mémoire de  
Garde-Rivière des Outaouais**

In the Matter of the

À l'égard des

**Canadian Nuclear Laboratories**

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**Les Laboratoires Nucléaires Canadiens**

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Application for the renewal of the Nuclear  
Research and Test Establishment Operating  
Licence for the Chalk River Laboratories

Demande de renouvellement du permis  
d'exploitation d'établissement de recherche  
et d'essais nucléaires pour les Laboratoires  
de Chalk River

**Commission Public Hearing**

**Audience publique de la Commission**

**January 23-25, 2018**

**23-25 janvier 2018**





Submission from Ottawa Riverkeeper | Garde-Rivière des Outaouais

Intervening in the

**Operating Licence Renewal Hearing for Chalk River  
Nuclear Laboratories (CNL)  
Ref. 2018-H-01**

Before the  
**Canadian Nuclear Safety Commission**

Submitted via email by Meredith Brown  
December 11, 2017

## **I. Overview of the licence application for Chalk River Nuclear Laboratories**

On June 9, 2017 the Canadian Nuclear Safety Commission (CNSC) issued a notice to inform the public of a public hearing in January 2018 to consider an application from Canadian Nuclear Laboratories (CNL) for the renewal of its nuclear research and test establishment operating licence for the Chalk River Laboratories (CRL). This facility is located on the banks of the Ottawa River, near Chalk River, ON, approximately 200 kilometres northwest of Ottawa, ON. The facility lies within the Ottawa River Watershed, renowned for ecotourism, navigation, recreation, fish and fish habitat, as well as a source of drinking water for over 2 million people. Our federal government and Ontario government has designated the Ottawa River a Canadian Heritage River and the Quebec government has designated the river a “Lieu historique”.

The current licence, which expires on March 31, 2018, authorizes CNL to operate the CRL site, composed of a range of nuclear facilities, radioisotope labs, waste management facilities and other supporting facilities. On March 30, 2017 CNL submitted an application to the CNSC Secretariat for renewal of the site operating licence. With the request for licence renewal, CNL is seeking approval to continue operation of the site for a 10-year period during which it will modernize and consolidate its CRL operations, including the shutdown of the National Research Universal reactor and various infrastructure and site improvements. CNL is applying for a 10 year operating licence with a proposed expiry date of April 1, 2028. To date, all previous licence renewal applications have been 5 years or less. A 10 year licence renewal is unprecedented for this site.

The most recent major renewal of the CRL operating licence was approved by the Commission on 2011 October 27, for a period of 60 months. The licence was extended by 17 months following an appearance before the Commission in 2016 April. The extension was requested by CNL in order to reflect the permanent shutdown date (2018 March 31) for the National Research Universal (NRU) reactor, as directed by the Government of Canada. In addition, requested changes were incorporated into the licence regarding the extended shutdown process for the reactor.

Based on CNSC staff review of the recent CNL application, performance history, and supporting information, CNSC staff support CNL’s request for a licence period of 10 years. Over the proposed 10 year period, CNSC staff would provide annual reporting on regulatory oversight conducted at CRL.

In parallel with CNL’s application for the site operating licence renewal, a separate application has been provided by CNL to the CNSC to construct an engineered facility at CRL to provide a

safe and permanent solution to the disposal of radioactive waste at CRL. It is pertinent to note that a permanent waste disposal facility is not included in the license renewal hearing set for January 2018.

In determining whether to grant CNL its requested licence, the Commission must be satisfied that CNL will adequately protect the environment, as well as human health and safety. As such, the Commission will determine the allowable extent of continuing environmental impacts of the CNL facility by imposing licence conditions on its operations.

## **II. Overview of Ottawa Riverkeeper's Intervention**

Ottawa Riverkeeper, a Canadian charity, is a champion and collective voice for the Ottawa River Watershed, providing leadership and inspiration to protect, promote, and improve its ecological health and future. We inspire action and collaboration in order to achieve a healthy Ottawa River in which every person can safely swim, drink, and fish.

The objects of our registered charity are:

- to achieve a healthy, ecologically sustainable Ottawa River available for the enjoyment and benefits of its Ontario, Quebec and First Nations communities;
- to employ a professional Riverkeeper to facilitate the maintenance and enhancement of Ottawa River ecological integrity through monitoring, original research, public and agency communications and support for enforcement;
- to work independently as well as co-operatively with individuals, businesses, community groups and all levels of government on both sides of the river;
- to develop and maintain an expert understanding of:
  - the river's ecological values, processes and special features, and
  - the protective framework offered by various federal, provincial and municipal jurisdictions and rights of First Nations;
- to facilitate the enforcement of existing ecological protection regulations;
- to encourage, where appropriate, the creation of additional measures to sustain and enhance the ecological health of the river; and
- to encourage and develop programs and projects that increase community awareness, stewardship and habitat restoration along the Ottawa River.

Ottawa Riverkeeper is a member of Chalk River Nuclear Laboratories' (CNL) Environmental Stewardship Council (ESC). The ESC was started by Atomic Energy Canada Limited – Chalk River in 2006 on a recommendation of the Canadian Nuclear Safety Commission. Through participation in the ESC Ottawa Riverkeeper has learned a great deal about operations at CNL

and the wastes that have accumulated at the site over its lifetime. Learning from experts about the legacy wastes buried on site, contaminated groundwater plumes and the contaminated riverbed has been distressing yet extremely important to inform our comments and interventions. It has opened our eyes to the importance and urgency around dealing with all wastes at this site in a responsible and safe manner.

Ottawa Riverkeeper would like to make it clear that our organization has not been granted federal funds to intervene in this licence application hearing. Reviewing and comparing the current operating licence with the proposed new operating licence takes considerable time and expertise. It is with regret we have not been able to hire an independent expert to thoroughly review all documents on behalf of Ottawa Riverkeeper and our thousands of supporters. However, given our decade of experience studying the situation at CNL and our own review of the licence application we have confidence the concerns our organization raises and our recommendations will be of interest to the people of the Ottawa River Watershed and to the CNSC.

This written submission comprises one part of our intervention. The second part of this intervention will involve oral submissions before the Commission at public hearings January 24-25 in Pembroke, ON.

Our written submission includes recommendations to improve opportunities for meaningful public information-sharing and engagement with regards to the operations at the CNL facility. We submit first and foremost that should the Commission choose to renew CNL's licence, a three-year licence term for CNL would be in the public's best interest.

### **III. Ottawa Riverkeeper's Major Concerns**

1. The **licence renewal conditions** are not easy to understand nor easy to compare with the current licence conditions. It appears that approximately half of the current 56 licence conditions will be removed. It also appears that many of the licence conditions are being simplified, referring to Canadian standards that are guidelines, not legally binding. It is unclear if the changes being made are in the public's best interest. We have concerns about having standardized conditions for all Class 1 nuclear facilities in Canada. The documents provided for review fail to describe or reference the standard licence conditions for Class 1 nuclear facilities. Nor do the documents explain the process through which these conditions were developed. Given the unique site conditions at Chalk River Nuclear Labs we are concerned that standardized licence conditions will not address some of the risks associated with the site's proximity to the Ottawa River and being located in the seismically active Ottawa-Bonnechere Graben.

2. **A 10 year licence is too long.** Given recent major changes with the governance model at Chalk River Nuclear Facilities (government-owned-contractor-operated, GoCo) it would be prudent to grant a shorter term licence. The consortium of private companies running CNL (only one company, SNC-Lavalin, is Canadian) has been operating the facility for only three years. There are only 7 years remaining in their “GoCo” contract with AECL. The new consortium has made significant changes to the decommissioning plan for the CNL site. Their new 10-year strategic plan includes a permanent waste disposal facility that is contentious with the public and they plan to develop small modular reactors that have not been vetted with the public. Waste will continue to be generated on-site from these reactors and the largest environmental liabilities (intermediate and high level nuclear waste) have not been addressed – there is no plan to safeguard intermediate and high level nuclear waste at the site. The current CRL Handbook says “The licensee shall not produce, in the course of the licensed activities, or accept from outside clients, waste for which there is no identified and approved treatment, or storage, or disposal facility.” It is unclear whether that will change.
3. With significant changes in operations and a new strategic plan there should be opportunities for **meaningful public consultation** every few years. Section 40(5)(a) of the *Nuclear Safety and Control Act (NSCA)* requires the Commission to hold public hearings with respect to its consideration of applications to renew licences. This is an important legal obligation as it recognizes that the public should be informed about, and involved in decisions that may affect, the health and safety of their environment and communities. We must increase the opportunities for meaningful public consultation with respect to operations and decommissioning at CNL. The literature concerning conceptualizations of 'meaningful public participation' shows that there are two main criteria for determining the degree to which public participation opportunities are 'meaningful'. First, public participation opportunities are more meaningful when they allow the public to influence tangible outcomes. Second public participation opportunities are more meaningful when they allow the public to influence the debate, exchange, or process that leads to outcomes. CNL does not provide many meaningful public engagement opportunities. As such, **10 years is too long to exclude the public from any meaningful review of the facility's operations.**
4. A 10 year licence should not be granted when there is **no approved plan to deal with legacy wastes at CNL.** The licence hearing is being decoupled from the parallel process to evaluate plans for building a permanent nuclear waste disposal facility at CNL. In determining whether to grant CNL its requested licence, the Commission must be satisfied that CNL will adequately protect the environment, as well as human health and safety. How will the CNSC determine the proponents’ ability to protect the environment without having results from the **Environmental Assessment for the NSDF?** Some of the proposed

changes to the CNL licence gives us the feeling that the changes are intentional to enable the NSDF. For example, the removal of the prohibition of controlled liquid waste releases to the ground concerns Ottawa Riverkeeper. The proposed NSDF is being designed to collect contaminated leachate from the waste facility and release the polluted water into the ground. Ottawa Riverkeeper is not supportive of the plans to collect, treat and release polluted water from the NSDF into the groundwater table.

## **IV. Conclusion & Recommendations**

To conclude, Ottawa Riverkeeper submits first and foremost that, should the Commission choose to renew CNL's operating licence, a three-year licence term for CNL would be in the public interest. Ten years is too long to exclude the public from any meaningful review of the facility's operations that will be changing significantly over the next decade. Ottawa Riverkeeper respectfully makes the following recommendations:

1. The Commission should take a precautionary approach and decrease the licence renewal term to three years.
2. A document should be made available to the public that clearly compares current and new licence conditions.
3. The section on "Proposed Licence Changes" should be expanded to fully document and explain each licence change being proposed by CNSC staff. Providing an explanation of how each condition is relevant to CNL's 10-year strategic plan would increase transparency.
4. The licence should reflect growing public concern over the long-term management of radioactive and other toxic waste products, including a set of requirements designed to keep dangerous waste materials as far away as possible from the Ottawa River, and to ensure that such wastes are packaged and routinely monitored so that leaks are readily detected and repairs can be expeditiously made for centuries to come.
5. The licence should include a condition that prevents CNL from generating waste, or accepting waste from outside clients, for which there is no identified and approved treatment, or storage, or disposal facility that will safeguard the environment.
6. The Commission ask Environment and Climate Change Canada to initiate and lead a public panel review to address environmental liabilities at CNL. The environmental liabilities include a wide variety of heavy metals and toxic organic chemicals as well as radioactive substances (e.g., tetrachlorodibenzofuran, benzo(a)pyrene), polychlorinated biphenyls, lead, selenium, mercury, arsenic, cadmium, etc.). Their clean-up will require expertise that goes beyond that found within the Canadian Nuclear Safety Commission.