



*Ottawa* RIVERKEEPER®  
GARDE-RIVIÈRE *des Outaouais*

Submission from Ottawa Riverkeeper | Garde-rivière des Outaouais

Intervening in

## **Canada's Radioactive Waste Policy Review**

Presented to  
Natural Resources Canada

March 24, 2021

# 1. About Ottawa Riverkeeper

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 cooperatively 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.

## 2. Overview of Ottawa Riverkeeper involvement with nuclear waste management

Ottawa Riverkeeper has been engaged in the nuclear waste management issue as it pertains to the protection of the Ottawa River for a number of years. In 2017, Ottawa Riverkeeper received funding to hire experts to review the draft Environmental Impact Statement (EIS) for Canadian Nuclear Laboratories' (CNL) proposed Near Surface Disposal Facility (NSDF) at the Chalk River Laboratory (CRL) site and formally submitted comments on the project. Ottawa Riverkeeper has also participated in Regulation Oversight Review and Licensing renewal for CRL. Currently, Ottawa Riverkeeper has received funding to once again work with experts to review the CNL's proposal for the NSDF once the final Environmental Assessment (EA) is available.

Ottawa Riverkeeper has also been a member of the Environmental Stewardship Council (ESC) since 2006 when this council was first formed. This council was started by Atomic Energy Canada Limited – Chalk River 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 types of wastes at this site in a responsible and safe manner.

### 3. Policy recommendations for the Radioactive Waste Policy Review

This current consultation for developing radioactive waste policies by Natural Resource Canada (NRCan) provides a unique opportunity for Ottawa Riverkeeper to make recommendations for a policy regulating non-fuel related radioactive wastes based on years of experience studying and commenting on the situation at CRL. These proposed recommendations consider how policies will function across jurisdictions, the importance of transparency and clarity for all projects that will produce radioactive waste, as well as guiding principles to ground the recommendations. Ottawa Riverkeeper also has a number of concerns regarding this current process, how members of the public are being engaged and how comments and submissions such as this one will be used as policies regulating radioactive waste are developed.

Based on these considerations, our recommendations are therefore broken down into four areas of concern.

#### I. Issues with the consultation process and implementation of changes to policy

The current consultation process was only launched in November, 2020 and discussion papers meant to guide consultations were only released more recently. We would highly encourage NRCan to ensure that current and future consultation processes are long enough to allow for fulsome public involvement. Further, industry and government roles in this consultation were not clearly communicated at the consultation's launch.

**Recommendation 1:** that the roles and responsibilities of government and industry be clearly defined. While industry (NWMO) may consult with the public about potential approaches it could take to fulfilling its regulatory responsibilities, NRCan must clearly communicate that it alone is responsible for determining the allowable parameters and applicable standards to which the NWMO will be held.

**Recommendation 2:** that any substantive changes to future radioactive waste management policy concerning technologies and environmental release limits be made according to a scientifically-reviewed process where multi-disciplinary perspectives are included.

**Recommendation 3:** that NRCan clarify how updated radioactive waste management policy will interact with ongoing remediation, decommissioning, and waste management initiatives. NRCan should also ensure that all new processes, including licensing and relicensing proceedings, incorporate all updated radioactive waste management policies.

#### II. That new policy ensures interjurisdictional cooperation

While the federal government has primary jurisdiction over nuclear matters, provinces (and by extension municipalities) are still responsible for regulating non-radiological contaminants associated with nuclear processes and facilities. In practice, provincial and municipal agencies have deferred to federal regulatory agencies on matters related to nuclear technologies, but this practice should not be permitted by updated radioactive waste policy.

**Recommendation 4:** that future radioactive waste management policy explicitly confirms that radioactive waste management facilities and operations must comply with all applicable federal and provincial legislation, regulations, and guidelines.

**Recommendation 5:** that future radioactive waste management policy explicitly require federal and provincial cooperation with municipal authorities responsible for conventional landfills and wastewater treatment plants receiving “clearance/exemption level” radionuclides and other contaminants associated with nuclear energy wastes to ensure against potentially cumulative impacts.

**Recommendation 6:** that the CNSC institute a systemic process to evaluate and ensure its conformity with international requirements for nuclear waste regulation – as already recommended by the IAEA’s Integrated Regulatory Review Service report to Canada in 2019. This process should also elicit and incorporate public feedback and be subject to periodic review every 3 years.

**Recommendation 7:** that future radioactive waste management policies explicitly require that environmental performance and release limits for nuclear waste facilities always meet the stricter standard when multiple regulatory standards apply. This direction would be consistent with the precautionary approach.

### **III. That updated radioactive waste policy integrates the public’s right to know**

Members of the public have the right to know how nuclear waste, waste management facilities, and policies affect the health of their environment. Public access to environmental performance data, and the clear and uniform application of regulations and guidance documents are crucial components of this public right to know.

**Recommendation 8:** that future radioactive waste management policy explicitly affirm the public’s right to know how nuclear waste, waste management facilities and policies affect the health of their environment.

**Recommendation 9:** that updated radioactive waste policy employs clear and specific science-based distinctions between High Level Waste, Intermediate Level Waste and Low Level Waste, and that this process elicits and incorporates public feedback.

**Recommendation 10:** that updated radioactive waste management policy takes a more prescriptive approach concerning waste characterization and acceptance criteria. Neither should be left to waste owners or facility proponents to determine.

**Recommendation 11:** if the CNSC and any other applicable regulators refer to CSA standards when setting licence limits for facilities, future radioactive waste management policy must require these agencies to include a discussion of their interpretation and application of CSA standards to these specific scenarios (including accompanying release limits and how they are calculated). CSA documents are extremely difficult for the public to navigate and broad reliance on them frustrates public access to meaningful information.

**Recommendation 12:** that future radioactive waste management policy prohibits the use of a “graded approach” when determining how to interpret relevant regulatory guidance documents. Updated radioactive waste management policy must ensure all projects’ safety cases meet the same rigorous standards.

**Recommendation 13:** that future radioactive waste management policy requires environmental monitoring and ensures disaggregated monitoring results are always shared with the public in real-time. Where monitoring is impossible, modelling should only be relied upon until monitoring can be done to verify the accuracy of modeling. Should modelling be used, accompanying documentation that clearly outlines the criteria and assumptions used when designing the model must also be provided.

**Recommendation 14:** that NRCan must collect and assess the cumulative effects associated with the production of radioactive waste, through programs such as the environmental effects monitoring (EEM) studies used by ECCC for various industries. There is a need for an iterative system of monitoring and interpretation to help assess the effectiveness of environmental management measures, by evaluating the effects on aquatic environments.

#### **IV. That foundational principles of environmental law are included in updated radioactive waste policy**

There are several foundational principles for environmental law in Canada, but current radioactive waste policy only explicitly recognizes the polluter pays principle. The precautionary approach and pollution prevention principles are equally important under Canadian environmental law, and as such all three principles should guide future radioactive waste management policy.

**Recommendation 15:** that the precautionary principle and pollution prevention approach be given the same dominance in future radioactive waste management policies as the polluter pays principle.