



**Final submission from the
Greenspace Alliance of
Canada's Capital**

**Mémoire définitif de la
Greenspace Alliance of
Canada's Capital**

In the Matter of the

À l'égard des

Canadian Nuclear Laboratories (CNL)

Laboratoires Nucléaires Canadiens (LNC)

Application from the CNL to amend its
Chalk River Laboratories site licence to
authorize the construction of a near surface
disposal facility

Demande des LNC visant à modifier le permis
du site des Laboratoires de Chalk River pour
autoriser la construction d'une installation de
gestion des déchets près de la surface

**Commission Public Hearing
Part 2**

**Audience publique de la Commission
Partie 2**

May and June 2022

Mai et juin 2022

Final submission from the Greenspace Alliance of Canada's Capital on the Public hearing for the Canadian Nuclear Laboratories' Near Surface Disposal Facility (NSDF)

6 June 2023

As noted in the Greenspace Alliance of Canada's Capital intervention at the 11 April 2022 hearing included below this final submission, the Greenspace Alliance requests the Canadian Nuclear Safety Council (CNSC) that it live up to its own stated paramount commitment to protecting the health and environment of Canadians and not approve the Canadian Nuclear Laboratories' proposed Near Surface Disposal Facility (NSDF).

In addition to the arguments highlighted below, we ask the CNSC to elevate the final decision of approval of the NSDF proposal to Cabinet, as specifically allowed by Section 52 of the Canadian Environmental Assessment Act 2012, as it would be proper for elected government officials to decide if reduced costs of a disposal facility for radioactive waste can justify increased risks to people and the environment.

The Greenspace Alliance submits that as per Section 52, article 2 of the Canadian Environmental Assessment Act 2012, "the decision maker must refer to the Governor in Council the matter of whether those effects are justified in the circumstances". It is therefore allowed and incumbent on the CNSC to not approve the proposed NSDF and elevate the decision on whether to approve it to the Federal Cabinet.

As noted in the original submission's points 1 and 2, it is profoundly immoral to approve a facility that is known will poison a drinking water source and the environment for future generations. The proposal presented is fully expected to leach radioactive effluents and disintegrate over time, releasing radioactive substances onto the environment, including a major source of drinking water for millions of Canadians now and for future generations.

The proposal also goes against the direction of international instruments which Canada has ratified and which indicate that no disposal of radioactive waste should take place above ground and near bodies of water, and represents a wasted opportunity for Canada to develop advanced and reliable management systems for radioactive waste -something that would protect the health and environment of

current and future generations, while creating high-paying, long-term jobs and opportunities for Canada to provide such expertise to other countries' growing need for it.

Two points that the Greenspace Alliance would like to stress in this final submission that stem from points 3 and 4 of the original submission are:

The proposed approach from CNL to protect soil and groundwater from leaching and other effluents during its initial decades is unacceptable: the proposed containment design, including a plastic liner below the accumulated waste, is expected to break down and fail over time; also, there is no actual real-life experience with such an approach that can confirm a plastic liner's resilience and effectiveness over the span of several decades in the foreseeable conditions, nor is there any indication that it would be possible to successfully detect and repair any failures of a plastic lining placed under a million tons of radioactive waste.

In conclusion, we ask that the CNSC not approve the NSDF proposal and, as per Section 52, article 2 of the Canadian Environmental Assessment Act 2012, that the final decision on whether to approve it be elevated to the Federal Cabinet.

Ottawa, 6 June 2023

=====

11 April 2023

**Submission from the Greenspace Alliance of Canada's Capital
Public hearing regarding the Canadian Nuclear Laboratories
Application to amend its Chalk River Laboratories site licence**

The Greenspace Alliance of Canada's Capital is an association of citizens, residents and groups from both sides of the Ottawa river working since 1997 to protect and enhance natural areas, including wetlands and waterways in the National Capital Region. Out of concern for the health and well-being of the present and future inhabitants and the environment of this watershed, we hereby ask the Canadian Nuclear Safety Commission to reject the application to amend the Chalk River Laboratories site licence as presented, for reasons explained below.

We also request that, instead of approving a site licence amendment that would allow the proposed Near-Surface Disposal Facility (NSDF) to proceed as the CNL/CNEA consortium is currently proposing, the CNSC demand from them a better approach to manage radioactive waste at the site in question -one that aligns with international instruments and ensures leak- and leaching-proof holdings, with continuous access for their monitoring, servicing and upgrading as needed, until a time when safer and longer-lasting systems exist.

The request is based on four principles:

1. First and foremost, it is profoundly immoral to gather a million tons of radioactive materials in a structure that is fully expected to wear down, fail and disintegrate within a few hundred years, if not sooner, long before the substances within it cease to be radioactive. Approving the amendment would essentially mean allowing the placement of an inter-generational dirty bomb to be unleashed on future generations.

From the proponent's own presentations, it is clear that the proposal is actually designed to weather down and disintegrate over time, thus releasing onto the environment and future generations a million tons of radioactive waste, something completely unacceptable from any moral standpoint.

2. The NSDF project represents a huge opportunity squandered: Canada and the nuclear industry are wasting a golden opportunity to actually design and build radioactive waste management facilities that not only meet but exceed international standards -waste storage facilities that are safe, resilient, serviceable, with retrievable holdings free from leaks and leaching, and with very long-lasting construction that is possible to upgrade and replace as new materials and technologies become available.

The very name of the NSDF makes it clear that its purpose is to *dispose* of radioactive waste, not manage it. The plan is to pile up, cover and abandon radioactive waste, along with other hazardous waste such as dioxins, despite international norms and Canadian legislation that do not allow many of these wastes to be abandoned nor be placed above ground and near water bodies.

The CNSC, the federal government and Canada's nuclear industry promote Canada as a global leader in nuclear affairs, and what is allowed here will likely be emulated elsewhere with even less care and even fewer safeguards than are being proposed here. Instead, we could be developing and building a valuable example of extremely strong and

safe waste management that guarantees safekeeping able to withstand extreme weather and other environmental changes over time, while continuing to be serviceable and replaceable by other better systems when available -a model that can be exported for use by other countries increasing everyone's safety, locally and globally.

What is needed here, and is increasingly needed around the world, is safe storage facilities for radioactive waste that can be cared for through extreme conditions and changes, until a permanent safe solution is invented.

3. The current proposal would have liquid discharges flow onto the Ottawa River watershed during its operation, and in much larger quantities once the liners and structures deteriorate. Even before the proposed 50-year operation and 300-year monitoring are over, the situation could be gravely worsened by tears, breaks and unexpected failures of the underlying liner; the design will make it impossible to detect such failures, much less pin-point and reach their precise location.

The radioactive leachates will enter the watershed and the environment, through Perch Creek and eventually the water table, spreading onto the environment and the water of the Ottawa river that we and future generations will drink. Dismissing the concern, thinking that the eventual dilution of radioactive pollution is an agreeable situation, is not acceptable.

The World Health Organization states clearly that ionizing radiation is a proven mutagen, teratogen and carcinogen. The WHO also states that the probability of radiation's adverse health effects is proportional to the dose received, with no level of radiation exposure being completely safe. Radionuclides can be ingested, absorbed and lodged in tissues, causing continuous radiation exposure of surrounding tissues and organs.

We know that Canada's "allowable limits" of radioactive contaminants and exposure are not the same as "safe" limits or amounts, and indeed we know that there is no allowable or safe limit for infants and pregnant women.

4. The environmental impact assessment being used for this project falls far short of what a proper environmental assessment should be. Changes were made to the recent legislation that created the Impact Assessment Agency of Canada before it passed, so as to keep this project under the old system, keeping it entirely in the hands of the proponent and the CNSC instead of the Impact Assessment Agency of Canada and the new requirements.

The environmental assessment should go beyond the 2012 requirements this project managed to secure, and consider environmental and human health impacts and socio-economic criteria as the Impact Assessment Agency would have required. The decision to be taken by the Commission on this application should be based on what is right, not on what one can get away with.

In conclusion, it is very disappointing to see how far along this approval has come, despite the obvious dangers it will pose to human and environmental health across generations, the risk to Canada's international reputation, and the squandering of a golden opportunity to develop much better alternatives –namely, the development of a properly located and strongly built leak-proof, resilient and serviceable temporary safe-keeping system that meets and exceeds international principles and obligations for managing radioactive waste.

What we are seeing is a business-driven effort to dump the remnants of old nuclear sites and clear areas for a private consortium to erect new buildings for anticipated business lines, instead of cleaning up legacy pollution currently affecting the water resources at the site as fast and thoroughly as possible with the best approaches and means available today, where plumes of radioactive pollutants continue to advance and seep into the watershed. There are much better alternatives. Please do not approve this amendment and its associated project, and demand better.

Ottawa, 11 April 2022

=====