



Oral presentation

Exposé oral

**Written submission from
Shaughn McArthur**

**Mémoire de
Shaughn McArthur**

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

CHALK RIVER – Request to Intervene

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Request to intervene by way of written submission and oral presentation

To the attention of the Senior Tribunal Officer, Commission Registry, Canadian Nuclear Safety Commission:

With this letter, I formally request to intervene, by way of written submission and oral presentation, in CNSC's public hearing on Canadian Nuclear Laboratories' application to amend its Chalk River Laboratories site licence to authorize the construction of a near surface disposal facility.

The issue-based session(s) during which I prefer to present are as follows, and in this order of priority:

- 1- Environmental assessment and environmental protection, including potential impacts on the Ottawa River;
- 2- long-term safety case, including waste characterization, waste inventory, and waste acceptance criteria;
- 3- The requested licence amendment, including other matters of regulatory interest.
- 4- Indigenous consultation and engagement, including duty to consult and accommodate.

Comments to the Canadian Nuclear Safety Commission (CNSC) in the context off its public hearing on Canadian Nuclear Laboratories' application to amend its Chalk River Laboratories site licence to authorize the construction of a near surface disposal facility (NSDF)

I am honoured to address the CNSC from the unceded traditional territories of the Algonquin Anishinaabek people, who have inhabited and stewarded the lands and waterways of this vast watershed since time immemorial.

My comments to the Commission reflect my views as a resident of Pontiac, a member of our region's paddling community, a former federal election candidate, an environmental and social policy analyst and advocate, and as someone who recently participated in a study tour of Chalk River, including extensive meetings with executives and scientists associated with the Canadian Nuclear Laboratories (CNL) and the Atomic Energy Agency of Canada (AECL).

My name is Shaughn McArthur, and I am a happily married, hard-working father of two kids living in the town commonly known today as Wakefield, Qc. I have lived next to or close to the Ottawa River for most of my life. As a former canoe trip guide and lifelong tripper, I have paddled thousands of

kilometres along the rivers that feed into the Ottawa River from both present-day Ontario and Quebec. Nowadays, I spend much of my free time between April and October paddling the Ottawa River's world-renowned whitewater section, just south of present-day Deep River Ontario. My teenage son and his friends are impressive paddlers. My wife and daughter also love the thrill of paddling. We are proud to be part of a thriving whitewater community that lives for the river and takes its stewardship of these waters seriously. Every one of us counts on our government to protect the environmental and ecological safety of the river and its surrounding areas without compromise.

Last summer, I had the honour of serving as the Green Party of Canada candidate for Pontiac, Qc, and the 2021 Federal Election. One week of my campaign consisted of a 150km "Paddle for a Livable Future" from Kitigan Zibi, along the Gatineau River, and up the Ottawa River to Parliament Hill. I spoke with thousands of Pontiac people from all walks of life. I answered hundreds of emails, participated in live debates and townhalls, and answered countless reporters' questions. Chalk River consistently featured in the top issues of concern for Pontiac people. Residents spread out across the riding's 27 thousand square kilometres were clear and consistent:

- 1- Pontiac people and the Ottawa River paddling community love our rivers and vast ecological landscapes, and want it preserved for future generations;**
- 2- Pontiac people and the Ottawa River paddling community do not give their social license to the proposed amendment to Chalk River Laboratories site licence to authorize the construction of a near surface disposal facility.**

This view is reinforced by the tenacious and tireless work of civil society groups across the region – including Concerned Citizens of Renfrew County and Area, Old Fort William Cottagers' Association and Ralliement contre la pollution radioactive, and others - who for years have gathered science, read hundreds of pages of documents and minutes, analyzed legal frameworks, and followed regulatory processes related to Chalk River and played a vital role in informing citizens about an extremely complex and often-inaccessible issue. These groups are clear:

- 3- Canada's ability to properly manage nuclear waste disposal writ large, and the NSDF at Chalk River specifically, do not stand up to science, public scrutiny or international standards.**

Civil society groups are joined by Municipal councils in Ottawa, Gatineau, Montreal and more than 140 municipalities downstream from Chalk River, who have [expressed concern](#) with the proposed NSDF. The Anishinabek Nation and the Iroquois Caucus, Assembly of the First Nation of Quebec and Labrador (AFNQL) and Bawating Water Protectors have clearly stated their [opposition of the transportation and abandonment of radioactive waste in their territories](#). The Kebawek First Nation, supported by hundreds of signatories - including the environment critics from the Bloc Quebecois, New Democratic Party and Green Party of Canada - have asked for these CNLC's public hearing on CNLCs' application to amend its Chalk River Laboratories site licence be postponed until a framework for consultation between their Nation and the Canadian Nuclear Safety Commission is in place.

- 4- Elected representatives of the people across this region expect the Government of Canada to exercise its jurisdiction over nuclear waste management in a transparent and responsible manner and with regard to future generations.**
- 5- It is difficult to conclude, in good conscience and with regard to numerous statements and declarations made by First Nations and Indigenous communities, that the proposal for a NSDF**

at Chalk River, or the processes leading to this point, meet Canada's obligations – and in particular the principle of Free, Prior and Informed Consent (art 10) - under the [United Nations Declaration on Indigenous Rights](#).

A professional policy analyst and social justice advocate, I have studied the history and design of the NSDF project at Chalk River. On March 21 this year, I was honoured to join Pontiac MP Sophie Chatel and Municipality of Cantley Councillor Nathalie Bélisle for a study tour at Chalk River, including extensive meetings with the Presidents and CEOs of both CNL and AECL, and members of their executive and scientific teams.

We walked among old, buildings tainted by low-levels of radiation, which are destined to be demolished. We observed how frightening low-sitting and close to the Ottawa River the remaining radioactive buildings are, including at least one building that houses a decommissioned CANDU reactor and meets the threshold of high -intensity radioactivity. Given the increasing frequency of floods, including devastating floods just downriver of this site in 2017 and 2019, the likelihood and potential severe consequences of the Ottawa River breaking its banks at Chalk River leave only one conclusion:

- 6- Contaminated buildings at Chalk River must be demolished, and the refuse thus produced must be properly disposed of away from any potential flooding, moisture of runoff, with utmost urgency.**

As it stands, the low-level radioactive waste from most of these demolitions will be added to the scores of shipping containers we visited. Stacked up and exposed to the weather, these containers are filled with materials from over 100 buildings that have already been demolished. It was explained to us the material in these containers will make up some 95% of the refuse destined for disposal in the NSDF. The remaining 5% of waste destined for the NSDF will be returned for disposal from foreign buyers of nuclear Canadian materials, as well as from domestically-produced medical waste. Though AECL and CNL insist that only low-intensity nuclear waste is destined for disposal in the NSDF, civil society groups have expressed concern that some of these wastes could include Cobalt-60 or other intermediate-level nuclear waste. When our delegation asked for a detailed list of the types of waste to be included in the NSDF following our visit, CNL pointed us towards a [webpage](#) and [document](#) seeming to confirm that Cobalt-60 is among the materials approved for disposal at Chalk River. This remains a point of ongoing confusion and mistrust towards the CNL-AECL GoCo arrangement among civil society observers.

Public mistrust in the CNL consortium itself, and in AECL's oversight function, is not helped by the fact that SNC-Lavalin, the lead member of the CNL consortium, is known for such corporate corruption around the world that it had been barred from bidding on World Bank contracts. Nor is it helped by the fact that the two other consortium members are the USA-based companies, Jacob and Fluor. My own observation, based on a day of meetings with the CNL and AECL leadership is that they are extremely close, even laudatory of one another.

- 7- In order to ensure public confidence that all of nuclear waste destined for disposal at any site in Canada meets low-level radioactivity criteria, and that proper disposal procedures are followed, Canadians deserve the protection, transparency and oversight that could be provided by a publicly-owned agency created to oversee the management of radioactive pollutants and decommissioning of nuclear facilities, independent of the nuclear industry and government agencies that promote nuclear power.**

During our visit, we viewed from a safe distance a number of concrete silos containing highly-radioactive waste. We saw another structure where intermediate-intensity radioactive waste is warehoused. We also visited a fenced in field where a large metal reactor casing sits exposed to the rain, leaching its intermediate-level nuclear waste into the surrounding soils. Given the uncertain state of climate change and global politics today, one shudders at the thought of the human and ecological consequences if these tonnes of high- and intermediate- intensity radioactive waste – located upriver from some of Canada’s most important and populated areas - were ever subject to an extreme weather event or intentional targeting by a foreign or terrorist entity. Add this to the fact that Canada still does not have adequate, permanent solutions for Canada’s historical high- and intermediate-intensity nuclear waste, and the conclusions to be drawn from these observations are clear:

- 8- High- and intermediate-intensity nuclear waste has no business at Chalk River, and no business anywhere on Turtle Island where it is exposed to the elements.**
- 9- The Government of Canada must take immediate steps to dispose of all high- and intermediate-intensity nuclear waste in a manner that meets the highest standards set by the International Atomic Energy Agency and the Canadian public.**
- 10- The Canadian public cannot possibly have confidence in the Canadian Nuclear Safety Commission, the Atomic Energy Agency of Canada Limited, or any nuclear energy production or nuclear waste disposal project launched under those agencies’ oversight until Canada is able to demonstrate that it is capable of being a responsible steward of all its historical nuclear waste through every rationally reasonable eventuality and for the tens of thousands of years this waste can remain dangerous to human beings and ecosystems.**

We visited the site where the NSDF is to be built. We oversaw the topography of the largely wooded area. I was persuaded that any spillover or leaching from the NSDF would follow gravity towards Perch Lake, which flows into the Ottawa River via Perch Creek. AECL and CNL officials explained that the NSDF is designed to be a “passive” and “permanent” solution. They went on to explain that they had amended their NSDF design to include a means of covering the openings to the NSDF, to minimize the penetration of rain and meltwater and hopefully avoid the ‘bathtub effect’, whereby water accumulating in the NSDF over hundred of years could breach the lip of the facility, releasing contaminated water into the surrounding areas. They explained that the NSDF would be equipped with a pumping and decontamination system to remove water from the NSDF, and that systems would be in place to respond to a breach of wastewater from Perch Lake. To a casual but informed observer, these arrangements do not pass the muster of “passive” or “permanent”. Moreover, it was also explained that tritium, the radioactive form of hydrogen, cannot be removed from wastewater. Tritium has already been detected in downstream of Chalk River.

Even if a reasonable observer was to agree that the low-level nuclear waste currently on-site at Chalk River must be properly disposed somewhere; and even if that reasonable observer accepts that so much of Canada is made up of lakes and rivers and sensitive ecologies that finding a site completely isolated from any body of water may be nearly impossible; and even our reasonable observer concedes that the transportation of radioactive waste should be minimized to the absolute extent possible, I believe that our reasonable observer would be hard-pressed not to conclude that the room for system failure or human error at Chalk River is too great, and too close to the Ottawa River, for those consequences to fall within a reasonable risk tolerance threshold.

11- The plan to build a NSDF at Chalk River appears motivated by convenience, more than by safety or science. This seems a poor standard for the selection of the current site.

Earlier during our visit, our hosts proudly showed us a laboratory, where isotopes are being produced to treat cancer. They explained that CNL was doing nuclear research under the expectation that revenues thusly generated would contribute towards cost recovery. The Government of Canada is investing \$800 million in the refurbishment of the laboratories. It was not explained who would ultimately own the patents from any research breakthrough. Pointing at an area of the staff parking, one of our hosts noted workers taking core samples in preparation for the construction of a Small Modular Reactor on site, a mere stone's throw away from the Ottawa River. SMRs are an as-of-yet unproven technology, and will produce high-intensity radioactive plutonium waste. This type of waste has no business in such proximity to the Ottawa River. Without a modular reactor on site, the ability to derive isotopes for medical science and research appears unsustainable. One could not help that the approval of a licencing amendment for CNL already risks unleashing a new era of profit-driven and publicly-financed nuclear activity and waste production, in which the bulk of the scientific and financial returns will accrue to private and foreign interests.

12- Any eventual amendment to CNL's licence at Chalk River must not open the door to additional production or storage of nuclear waste, whether temporary or permanent, at Chalk River.

Policy watchers across the region struggle to understand the logic behind approving the CNL's licence amendment request, even as we await the results of several policy and reporting processes currently underway. These include:

- [A study of Nuclear Waste Governance in Canada by the House of Commons Standing Committee on Environment and Sustainable Development](#),
- [A report on Nuclear Waste Management by the Auditor General of Canada](#) planned for 2022, and
- [Natural Resources Canada's ongoing consultation towards the modernization of Canada's radioactive waste policy](#).

13- Any amendment to the CNL's licence at Chalk River should await and be subject to new recommendations and policies emanating from current and ongoing policy reviews and studies by the House of Commons, the Auditor General of Canada and NRCAN.

For all the reasons laid out above, it seems entirely justified that Pontiac people, paddlers, civil society, municipalities, and Indigenous people across the region are suspicious of CNL, lack confidence in AECL's ability to provide oversight, and of the federal government's commitment to managing its nuclear waste legacy with the responsibility required to uphold the [Seventh Generation Principle](#). Even as the public conversation has been reduced to one about dealing responsibly with low-intensity nuclear waste that is already on-site, the communities I inhabit know that this is about much more than that.

Allow me to end with a story: My wife grew up in a small town on Lower-Saxony, Germany. The town was built on the salt mine. For decades, workers took salt out of the ground. When that industry folded, it was proposed that the hole be filled back up with nuclear waste. Scientists, politicians and other experts were trotted out. They assured Germans that what they were proposing was a world-class approach for dealing with nuclear waste. The salt would crystalize around the waste, and entomb it for all time beneath the earth. The project went ahead, and for years the townspeople earned a living putting nuclear waste into the hole. Being human, they took shortcuts. Cannisters were bulldozed a little

too carelessly into the hole. Some of them ruptured. Humans, after all, are only human. As it would later turn out, scientist are also fallible – particularly if they're selected and paid by the interests who want to see the project go ahead. It was later discovered that the salt had not crystalized to the degree that had been predicted, and nuclear waste oozed into the water table. Today the site is subject to a serious remediation effort. All of this on the public's dime, and at risk to human health.

On behalf of our kids, friends and neighbours, on behalf of the badass paddling community of our National Capital Region, and on behalf of future generations, I implore that:

- **CNSC and the Federal Government immediately halt the hearing of CNL's application to amend its Chalk River Laboratories site licence to authorize the construction of a NSDF; and that**
- **no further action be taken to advance this project until its social licence has been fully earned, and until scientific and governance shortcomings related to this project and Canada's overall nuclear waste management framework and capacity have been fully resolved.**

Thank you for your attention, for your conscience, for your humanity, and for your deep sense of responsibility with regard to this matter.

Shaughn McArthur