



**Final submission from the  
Concerned Citizens of Renfrew  
County and Area**

**Mémoire définitif de  
Concerned Citizens of Renfrew  
County and Area**

In the Matter of the

À l'égard des

**Canadian Nuclear Laboratories (CNL)**

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**Laboratoires Nucléaires Canadiens (LNC)**

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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 Written Submission on the NSDF Project

### Concerned Citizens of Renfrew County and Area (CCRCA)

June 6, 2023

Concerned Citizens of Renfrew County and Area (CCRCA) is an incorporated, non-profit organization that has been working for the clean-up and prevention of radioactive pollution from the nuclear industry in the Ottawa Valley for 40+ years.

We begin this final written submission on the NSDF Project by quoting from the *Revised Notice of Public Hearing and Procedural Guidance for Final Submissions* - May 17, 2023 - Ref. 2022-H-07 Revision 2:

Intervenors who made oral submissions during Part 2 of the public hearing have the option to make written final submissions to the Commission. Final submissions may reference **any material on the record, including the specific additional information on engagement and consultation submitted on May 1 and May 8, 2023**. (emphasis added)

We note that this revised guidance was changed significantly from the previous guidance issued on January 31, 2023. In our view, significantly changing procedural guidance for final submissions so close to the deadline was inappropriate. The earlier guidance implied that no new information could be presented and that intervenors could only summarize their own previous work. This likely resulted in some final submissions being based on the earlier guidance.

This is just one of many flaws in the Environmental Assessment process; additional flaws are presented in Section 4, below.

We next quote from CNSC staff CMD 22-H7:

The NSDF project is subject to a licensing regulatory review under the *Nuclear Safety and Control Act* (NSCA) and to an environmental assessment (EA) under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012).

Both the EA and licensing decisions trigger the Crown's duty to consult, and where appropriate, to accommodate Indigenous peoples whose potential or established Indigenous and/or treaty rights, under section 35 of the *Constitution Act, 1982*, have the potential to be impacted by the proposed NSDF project.

Therefore, we note that the Commission has three (3) decisions to make with respect to the proposed NSDF Project: a decision on whether the honour of the Crown has been met in fulfilling the CNSC's duty to consult, an EA decision under CEAA 2012, and a licensing decision under the NSCA.

In this submission, our comments are organized according to the three decisions, with one additional section on deficiencies in the Environmental Assessment process for the NSDF.

## **1. Has the CNSC dealt appropriately with Algonquin Anishinaabe First Nations on whose unceded, unsurrendered traditional territory the NSDF would be constructed?**

### **The Crown's Duty to Consult**

At minimum, the CNSC must ensure that the Crown's Duty to Consult has been met. This legal requirement strikes us as paternalistic, colonialist and rooted in a very Western-centric worldview. The location of the proposed NSDF is in unceded, unsurrendered Algonquin traditional territory. The question arises, is it really appropriate to use the "Crown's Duty to Consult" in dealing with Algonquin Anishinaabe Peoples who have occupied their unceded, unsurrendered traditional territory — the Ottawa River watershed — for thousands of years, or in their view, since time immemorial.

Our group read with considerable interest the submissions from the Kebaowek First Nation (KFN) in [CMD 22-H7.111C](#) and the Kitigan Zibi Anishinabeg (KZA) in [CMD 22-H7.113B](#).

Both submissions contain sobering accounts of the impacts of colonization on these peoples, including on their rights, cultures, languages, and traditional practices. To cite the Kebaowek First Nation submission, "nuclearization on the Kichi Sibi" is only the latest in a series of cumulative effects.

These cumulative effects began with missionaries who intended to convert Algonquins to Catholicism, followed by non-indigenous settlement and exploitation of wildlife, failure to respect treaties, state control of First Nations' way of life through the notorious *Indian Act*, and industrial development – notably, the 50 dams within the Kichi Sibi watershed that have altered bird habitat, blocked migratory species like American shad and eels, and caused siltation and trapping of pollution from upstream agricultural and industrial use -- meaning that "few First Nations people can depend on the river for fish or on the vegetation around it for food."

The KFN submission says:

Despite the cultural importance of this area to Algonquin peoples, the CRL site and Point au Baptheme was appropriated from them without any consent (let alone consultation). KFN (like other Algonquin First Nations) have historically been excluded from decision-making about the site. Currently, the CRL site is fenced off and there is no public access available. This site is important in terms of Algonquin Anishinaabeg ceremonial jurisdiction.

The NSDF Project is one of the more recent incidents in a nearly 80-year history of nuclearization on the Kichi Sibi. Consultation with First Nations and Indigenous communities has been an afterthought.

KFN and KZA do not believe the duty to consult has been met or that it can be discharged by a regulatory body such as the CNSC.

### **Free, Prior and Informed Consent under UNDRIP**

Beyond the “Crown’s Duty to Consult”, there is the more recent directive to obtain free, prior and informed consent of Indigenous Peoples before radioactive waste is stored or disposed of on their land as laid out in Article 29(2) of the *UN Declaration on the Rights of Indigenous Peoples*. In 2021, Canada affirmed the *UN Declaration* as a universal international human rights instrument with application in Canadian law.

Per the KZA and KFN submissions, Algonquin First Nations have not given their free, prior and informed consent to “nuclearization” of the Chalk River site over the past 80 years, nor to ongoing imports of radioactive waste to the Chalk River Laboratories site, nor to the proposed NSDF.

### **Nation to Nation Relationship**

Also important to consider is the move to establish Nation to Nation relations between agents of the Crown and Indigenous Peoples as described by Canada’s first Indigenous Justice Minister, Jody Wilson Raybould, in a [talk given in 2017](#). According to the Honourable Ms. Wilson Raybould, Nation to Nation relations will be built on self-governance for Indigenous communities, recognizing them as nations within a nation, with their own language, customs, traditions and historical experiences.

She suggests we are at a turning point where young people today, and generations to come, will experience growing up in a Canada where the Nation to Nation

relationship exists within the borders of a united Canada, where groups of peoples with different legal traditions co-exist side-by-side within an evolved constitutional framework. This will engender a respect for legal plurality and social diversity that will be, in many ways, a beacon of hope in an otherwise troubled world.

While the realization of this vision will be a few years down the road, the CNSC could bear this vision in mind and let it begin to take shape in its own relations with Indigenous peoples.

## **2. Would the NSDF result in significant adverse environmental effects that cannot be mitigated?**

### **The NSDF is highly likely to cause significant adverse environmental effects**

The position of Concerned Citizens of Renfrew County and Area is that the NSDF is highly likely to cause significant adverse environmental effects. This is supported by five sets of comments that we submitted prior to the final opportunity for members of the public and civil society groups to have comments on the Environmental Impact Statement posted on the Impact Assessment Registry (in August 2017). We also provided two sets of comments for the May/June 2022 CNSC licensing hearing:

[Comments on the project description for the NSDF, June 24, 2016](#)

[Comments on the revised project description for the NSDF, November 18, 2016](#)

[Comments on the revised project description for the NSDF, November 21, 2016](#)

[Comments on the Environmental Impact Statement for the NSDF, May 26, 2017](#)

[Comments on the Environmental Impact Statement for the NSDF, August 3, 2017](#)

[CMD 22-H7.74 – Submission from CCRCA, published April 19, 2022](#)

[CMD 22-H7.74A – Presentation from CCRCA, published May 18, 2022](#)

Significant adverse environmental effects that cannot be mitigated include:

- Emissions of greenhouse gases from forest clearing at the NSDF site;
- Loss of the carbon sink potential of the NSDF footprint;
- Loss of significant habitat for wildlife, including for many species at risk;
- Deposit of deleterious substances into water frequented by fish;
- Spread of contaminated materials beyond the Local Study Area owing to a tornado or microburst during waste emplacement
- Human intrusion for recovery of radioactive scrap metal from the mound;
- Contamination of the Perch Creek Basin and the Ottawa River with radioactive and hazardous substances

## Proposed mitigation measures - the “Consolidated Commitment Lists”

According to CNSC staff, mitigation measures proposed by CNL in its “[Consolidated Commitments Report](#)” will successfully mitigate all of the significant adverse environmental effects that would be created by the NSDF. We find this conclusion by CNSC staff to be irresponsible and not based on evidence.

CNL’s “*Consolidated Commitments Report*” received essentially no attention during the May-June 2022 hearing on the NSDF. In our view, the commitments in it would do little, if anything, to mitigate the NSDF’s adverse effects. Some could worsen them.

As explained in our [CMD 22-H7.74](#):

- Most of the 856 "commitments" merely repeat statements found in CNL's 1661-page EIS. Some are new, such as the provision that radioactive waste remaining in the Port Hope area after the closure of the two mounds there would be sent to Chalk River for disposal. Shipping additional Port Hope waste to CRL would worsen, not mitigate, the environmental impacts of the NSDF.
- The Consolidated Commitments Lists says that weather cover structure “designs are being evaluated for compatibility with the NSDF Project configuration and if feasible, could be implemented as a mitigation measure...” **An evaluation of the feasibility of a mitigation measure is not a real mitigation measure.**
- The Consolidated Commitment Lists – the supposed mitigation measures if the NSDF is approved – would even allow vegetation clearing activities during the migratory bird nesting period (or bat maternity roosting period) if nest searches are conducted.
- No effective means of mitigating these significant adverse environmental impacts on species at risk is foreseen, or likely even possible. For example, the promise to temporarily suspend blasting activities “if wildlife are [sic] observed in the blasting area” is pathetically weak.
- CMD 22-H7 (p. 290 of 590) says “CNSC staff have found that the NSDF Project is not likely to cause significant adverse environmental effects on the species at risk.” **This assertion is not supported by evidence.** Habitat loss would be long-term and irreversible. Impacts will inevitably be felt well beyond the local study area.

[CMD 22-H7.111C](#), the supplementary written submission from the Kebaowek First Nation (KFN), describes the seeming indifference of CNSC staff to CNL’s proposed

“sustainable forest management plan” -- supposedly the key measure to mitigate the adverse impacts of the NSDF Project on wildlife and species at risk:

Staff have relied too heavily on CNL’s promise to implement a sustainable forest management plan (“SFMP”) to mitigate the deforestation. Staff have not received baseline information on animal populations for the NSDF necessary to determine whether a SFMP would actually address the impacts of deforestation or not. KFN does not understand how Staff can determine the proposed deforestation as minimal or justifiable, when they have not actually assessed the proposed measures to mitigate the impact.

Judging by information in the [Consolidated Commitments Report](#), CNL’s promised sustainable forest management plan – yet to be released – would clear more forest areas in other parts of the CRL site. The notion is that this would allow Large-Toothed Aspen to regenerate in those areas, providing (after several decades) a possible replacement for the bat maternity trees that would be destroyed by deforestation of the NSDF site.

This would have uncertain future benefits for endangered bat species. However, they would suffer immediate losses from removal of their existing habitat. Their current habitat is likely to be of particular importance because of its proximity to Perch Lake and the Ottawa River. Additional removal of mature forests would result in adverse effects on other species, adding to the impacts created by the NSDF itself.

Following the May/June 2022 hearing, KFN conducted on-site field research in the NSDF “footprint”. This research, described in [CMD 22-H7.111C](#), documents the extensive use of the area by wildlife species that have cultural, spiritual, and economic importance to Algonquin peoples, including three active bear dens, winter moose and deer habitat, and eastern wolves:

After starting fieldwork, it quickly became evident to KFN technical staff that there were significant gaps in the baseline environmental work done for the NSDF. Specifically... CNL had not conducted animal population counts in the NSDF for moose, deer, or bear, nor studied prey-predator relations; in particular, there was a lack of documentation of eastern wolf presence, population, and prey-predator relations since the beginning of the NSDF EIS process in 2016.

**Has the Commission adequately studied the proposed mitigation measures?**  
In June 2022 our group submitted the following question to the CNSC registrar:

“Will Commissioners discuss and review the 856 mitigation measures in the 105-page Consolidated Commitment Lists under Licence Condition G.8 prior to prescribing them?”

The CNSC has not responded. There is no indication that the Commission has reviewed these measures. There was virtually no review or discussion of the *Consolidated Commitment Report* in the five days of public hearings in May/June 2022.

In our view, it is not possible for the Commission to render a decision about the appropriateness and adequacy of proposed mitigation measures. The fact that 856 mitigation measures are proposed by the proponent suggests there are indeed significant adverse environmental effects. A cursory review reveals that many of the mitigation measures will do nothing, and some might make matters worse. A prudent approach would be for the Commission to conclude that the project will cause significant adverse environmental effects that cannot be mitigated.

#### **Scope, application and verification of the proposed mitigation measures**

Buried in proposed Revision 3 of the License Conditions Handbook for the CRL site (NRTEOL-LCH-01.00/2028), under the new licence condition G.8, is a statement that CNL would be required to “implement EA regulatory commitment [sic] as outlined in the [Near Surface Disposal Facility Project Consolidated Commitments Report](#), 232-513440-REPT-001 that are **applicable to construction and pre-operation activities.**” (CMD 22-H7, p. 532 of 590, emphasis added)

In essence, mitigation measures would only apply to site preparation and construction activities.

Most of the significant adverse impacts of the NSDF Project will occur during the operation and post-closure phases. By limiting mitigation measures to construction and pre-operation activities, the proposed licence amendment G.8 would not address most of the significant adverse impacts of the NSDF Project. Amending the site licence in this manner would not prevent unreasonable risk to the environment and to the health and safety of persons. The Commission would fail to meet its object found in section 9(a)(i) of the *Nuclear Safety and Control Act*.

Of particular concern is that this proposed amendment would allow serious adverse impacts on the rights of Indigenous peoples who have lived in the project area since time immemorial.



As already noted, evidence is lacking that the conditions in the *Consolidated Commitments Report* have been properly taken into account by the decision maker. Section 53 of CEEA 2012 says it is the decision maker -- either the Governor in Council or the CNSC's Commission, and not the proponent - that must establish the conditions that would permit the NSDF Project to be carried out. These conditions must include:

- (a) the implementation of the mitigation measures that were taken into account in making the decisions under subsection 52(1); and
- (b) the implementation of a follow-up program (for determining the effectiveness of any mitigation measures)

There is essentially no follow-up program in the *Consolidated Commitments Report* to determine the effectiveness of the proposed mitigation measures. Only a small minority of the commitments would be formally tracked (through an environmental monitoring program). The "Commitment Tracking Methods" shown in the *Report* for other mitigation measures are vague phrases or words such as "Good Corporate Responsibility", "Public Information Program", "Maintenance", "Security", etc.

This means that there would be no verifiable means for determining the effectiveness of mitigation measures.

CNSC staff nonetheless assert that CNL's proposed mitigation and follow-up measures – limited to the pre-operation phases of the NSDF Project – would mean there will be "no new impacts" on Indigenous rights. CNSC staff further assert that Indigenous Nations have been thoroughly engaged on this matter:

Taking into consideration the location of the NSDF site and CNL's identified mitigation measures and follow-up program measures, CNSC staff conclude that there will be no new impacts on any potential or established Indigenous and/or treaty rights as a result of the NSDF Project (CMD 22-H7, p. 30 of 590)

Taking into consideration CNL's list of EA regulatory commitments (including mitigation measures and follow-up program measures) identified to address potential impacts and project-specific concerns, CNSC staff have determined that CNL has conducted a thorough engagement process with the public, Indigenous Nations and communities, and other stakeholders. (CMD 22-H7, p. 113 of 590)

Indigenous Nations do not agree. They assert that the engagement process, and the resulting mitigation and follow-up measures proposed by the proponent, will not adequately address the impacts on their established/potential/asserted rights.

In relation to CNL's engagement process and the Crown's Duty to Consult and Governance on the Lands (UNDRIP Articles 18, 29(2), and 32) -- and also in relation to KZA's right to the dignity of its culture (UNDRIP Article 15) -- KZA asserts, under the heading "Mitigation and followup measures (proponent)":

"No suitable accommodation measures have been discussed on this matter. To do so, the consultation has to start back from the beginning, at the project planning phase, to open a window for meaningful consultation and accommodations." ([CMD 22-H7-113.B](#), Table 9.3: Summary of the severity of potential impacts to Indigenous rights for Kitigan Zibi Anishinabeg with respect to the NSDF)

KZA also finds CNL's mitigation measures to be incomplete in relation to impacts on its Traditional activities and the right of enjoyment and occupancy of the land, its Right of maintaining and protecting a healthy environment and wholesome resources, and its Right of harvesting (hunting, trapping, fishing and gathering of natural resources for food, social or ceremonial purposes).

CNL's [Draft Environmental Assessment Follow-Up Monitoring Program for the Near Surface Disposal Facility](#) (232-509220-PLA-001 R0 Revision 0) essentially confirms the lack of monitoring and follow-up programs related to rights of Indigenous Nations:

Since the EIS has not suggested any likelihood of adverse NSDF Project effects on... traditional land and resource use, nor on Indigenous use and enjoyment of private property, monitoring and follow-up programs are not specifically identified for these.

Monitoring and follow-up programs are not specifically identified for traditional land and resource use; rather, monitoring for environmental pathways (i.e., for air quality, surface water quality, groundwater quality and terrestrial biota) will be implemented.

### **What must the Commission do in this case?**

Although not mentioned by the CNSC staff in CMD 22-H7, there is an important option to be followed in this matter. Slide 10 ("Remedies") of the presentation by the Ottawa Chapter of the Council of Canadians ([CMD 22-H7-117.A](#)) points out that if

the Commission decides that the project is likely to cause significant adverse environmental effects, “the matter can be submitted to Cabinet pursuant to section 52 of the *Canadian Environmental Assessment Act*.”

In our view, this is the appropriate course of action for the Commission, given that it has apparently not taken into account the proposed mitigation measures, or considered whether they are appropriate.

### **3. Is a license amendment needed for the NSDF and if so, can the Commission conclude with confidence that the risks that would be created by the facility are justified?**

#### **Is a licence amendment needed?**

Whether or not the Commission is required to make a licensing decision under the NSCA is unclear. To quote from our [CMD 22-H7.74](#):

Construction of a disposal facility and disposal of radioactive wastes are authorized activities under Part IV of the CRL site licence. It appears that the Commission may not actually have to make a decision on licensing of the NSDF.

However, there does appear to be a rationale for amending CNL’s site licence for the Chalk River Laboratories: the CEAA 2012 requirement to implement mitigation measures and a follow-up program if the NSDF Project is allowed to proceed.

#### **Would the NSDF pose “unreasonable risk” to the health and safety of persons?**

Given the need for a licensing decision, the NSCA becomes relevant to the NSDF Environmental Assessment process because of section 5(2) of CEAA 2012.

To paraphrase section 5(2), carrying out the NSDF Project requires the CNSC to exercise a power or perform a duty conferred on it by the *Nuclear Safety and Control Act*. Therefore, the Commission must take into account the effects on health and socio-economic conditions that may be caused by changes to the environment resulting from the NSDF project.

A key “duty or function” of the Commission related to the NSDF Project is found in section 9 of the NSCA: “to prevent unreasonable risk, to the environment and to the health and safety of persons, associated with that development, production, possession or use” of nuclear energy or nuclear substances.

Dr. James R. Walker's submissions [CMD 22-H7.63](#) and [CMD 22-H7.63A](#) strongly indicate that the risks to health and safety of persons associated with the NSDF project are indeed unreasonable:

- The waste acceptance criteria are insufficiently protective for the material permitted to be emplaced in the proposed Engineered Containment Mound to qualify as low level waste — the radionuclides do not decay to an acceptable level during the time that institutional controls can be relied upon. Consequently, the emplaced material is intermediate level radioactive waste that should not be emplaced in a near surface facility because it requires a greater degree of containment and isolation than that provided by near surface disposal.
- No inventory management system is in place to comprehensively verify that waste packages and unpackaged waste accepted for emplacement comply with the radiological parameters of the stated waste acceptance criteria.
- Failure to control and verify the inventory means the safety of the ECM will depend upon active management (security, maintenance, remediation, regulatory controls, etc.) into the far distant future (“in perpetuity”). The cost of active management into the far distant future will continue to be a burden on the public purse and represents a very large long-term financial liability.
- Safety is dependent upon the actions of a regulator who is postulated to exist in the far distant future, beyond the time period in which institutional controls can be relied upon.
- ...only one radionuclide (Tritium) decays sufficiently to meet Canada's disposal criteria by the end of the Institutional Control Period. The other radionuclides take hundreds, thousands, or millions of years to meet Canada's disposal criteria. The WAC are insufficiently protective — permitting material to be emplaced that is unsafe for near surface disposal. This material is intermediate level waste and requires underground disposal.
- ... maximum doses to persons from the Engineered Containment Mound are 0.015 mSv and 0.14 mSv, for the normal evolution and disruptive events, respectively. These maximum doses occur at 4,100 years and 7,650 years, respectively, both of which are significantly beyond the design life of the Engineered Containment Mound... and are non-compliant with the criteria for disposal given in Canadian regulations [8]. Hence, even using the stated inventory of the Engineered Containment Mound (Table 1), the radionuclides have not decayed sufficiently to meet disposal criteria even after several thousand years.
- CNL's proposal is in clear noncompliance with IAEA Safety Standards, e.g., no inventory management system, need for institutional controls into the far distant future.

- It is an understatement to say that this proposal compares unfavourably with near surface disposal facilities in other middle-income and high-income economies such as Bulgaria, France, and Spain.
- It is important for Canada's reputation that our first low level radioactive waste disposal facility withstand comparison to those successfully built and operated by our international partners.
- Approval of CNL's proposal may cause both Canadians and our international partners to question Canada's ability to safely manage our nuclear program and our radioactive wastes.

Dr. Walker has considerable expertise with regard to safe management of the Government of Canada's radioactive wastes, having been Director, Safety Engineering & Licensing, for Atomic Energy of Canada Limited (AECL), as well as AECL's representative for the [Protocol for the Nuclear Legacy Liabilities Program \(NLLP\) Licensing Activities at the Chalk River Laboratories \(CRL\)](#).

#### **4. Deficiencies in the Environmental Assessment process**

We wish to conclude our submission by drawing the Commission's attention to a number of deficiencies in the Environmental Assessment process. These deficiencies, in our view, have led to a poor-quality assessment, leaving the Commission with poor recommendations on which to base its EA decision.

We have already noted that the lack of mention of CEAA 2012 section 52 in CMD 22-H7 is one of several deficiencies in the Environmental Assessment process for the NSDF. Others include:

- The dismissal of critical comments on the project description, submitted by radioactive waste management experts, that should have resulted into a fundamental rethinking of the project design, or at least major changes to the scope of the Environmental Assessment.
- The failure to notify the public of the March 8, 2017 "public hearing" at which the Commission decided that the scope of the factors to be considered in the Environmental Assessment should be limited to those in section 19 of CEAA 2012.
- CNL's release of a draft EIS less than two weeks after that March 2017 decision, making it clear that it had no intention of examining factors other than those in section 19 of CEAA 2012 and that scoping was simply a *pro forma* exercise.
- The lack of meaningful opportunities for public participation required by section 4(1)(e) of CEAA 2012; including a) closure of the record for public comments pursuant to the Environmental Assessment in August 2017

following CNL's release of a draft Environmental Impact Statement, creating nearly a 5-year gap before the May/June 2022 hearing, and b) no opportunity for the public to provide formally recorded comments on the final EIS, despite the numerous changes made to the project that are reflected in it.

- The removal of a provision in the original "Administrative Protocol" (or "Project Management Charter") agreed between the CNSC and CNL to hold a dedicated Environmental Assessment hearing.
- The inability of the CNSC, as responsible authority, to complete the Environmental Assessment in a "timely manner" as required by section 4(1)(f) of CEEA 2012.
- The CNSC's arbitrary decision that written intervenors at the May/June 2022 would not have the right to make final submissions.
- The very late revision of an imprecise statement in the January 31, 2023 *Notice of Public Hearing and Procedural Guidance for Final Submissions* that "new information may not be presented;" it was changed on May 17, 2023 to "Final submissions may reference any material on the record," including "specific additional information on engagement and consultation submitted on May 1 and May 8, 2023" (i.e., by KFN and KZA).