

# Provincial Council of Women of Ontario

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## **Comments re. the Canadian Nuclear Safety Commission (CNSC) Environmental Assessment Near Surface Disposal Facility (NSDF) - Chalk River Laboratories**

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### **Submitted to**

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## **Introduction**

The Provincial Council of Women of Ontario (PCWO) is a member-funded non-governmental, non-partisan, non-sectarian organization, that has been working for more than 90 years to advance the status of women, and improve and enhance the lives of their families and of their communities in Ontario. PCWO is federated with the National Council of Women of Canada and the International Council of Women.

A healthy and safe environment for all Ontario citizens and their families has always been of the utmost importance to our members. Consequently, we have been monitoring the proposed solutions and processes for the safe transport and for the disposal of all types of nuclear waste.

As PCWO is concerned greatly about the dangers and risks to our healthy Ontario (and Quebec) environment, it is opposed to the Canadian Nuclear Laboratories (CNL) proposal for an 18 metre-high, near-surface, “engineered” mound, to store 1,000,000 cubic metres of low and intermediate nuclear waste, and radioactive waste containing hazardous substances, at the Chalk River Laboratories site, within a very sensitive natural area less than 1,000 metres from the Ottawa River. We welcome the opportunity to comment further on this proposal.

We note that many flaws in the project have been identified by a variety of interested parties, former AECL staff,<sup>1</sup> and even by the proponent’s consultant. For example, there will be year-round exposure to the elements until the mound is completely sealed in 50 years; a definite chance of disastrous flooding should the very old Tamiskaming Dam give way; the likelihood of possible human error, operational malfunctions and nefarious action; and, since the site lies in a known area of geologic instability, the considerable risk of strong earthquakes.<sup>2</sup>

Any subsequent release of radioactive elements, particularly those found in some very long lasting, extremely dangerous, intermediate wastes<sup>3</sup> will contaminate the site, the ground water, contiguous lands, and the Ottawa River nearby. Such a disastrous event would very seriously impact the environment and health and welfare of nearby and downstream Ontario and Quebec residents along the Ottawa River immediately and for many years to come.

## **Rationale**

PCWO’s comments to CNSC are based on our established PCWO policies regarding nuclear waste, and on our experience of how very important it is to use a pro-active, precautionary method of judging such a risky project. The Commission moved ahead and made its March 8<sup>th</sup> 2017 *Decision* on the “scope” of CNL’s Environmental Assessment, by relying on CNSC staff and the proponent rather than on independent experts and knowledgeable groups and individuals to make such an important decision.

For its part, CNL and its partner and “operator” of the project, Canadian National Energy Alliance (CNEA), a consortium of businesses<sup>4</sup>, are rushing forward with a 2020 time-frame for site-preparation that is far shorter than its government partner, AECL, had planned in 2014. CNL has also informed the government that it is now “pursuing the fastest, most cost effective way (s) of executing the DWM (Decommissioning and Waste Management) mission including disposal of all waste.”<sup>5</sup> We note as well, that CNL’s public outreach to date has been geared mainly to nuclear groups, such as “the World Nuclear University Site Visit Participants”, The engagement of Aboriginal groups in the area was inadequate. i.e. meetings were recorded, but few, or no, Aboriginal representatives were noted as attending.

We recommend that CNSC be more inclusive, transparent and thorough as it initiates its first independent Environmental Assessment under the 2012 Canadian Environmental Assessment Act (CEAA), and the Canadian Nuclear Safety and Control Act, as a “prerequisite” of the CNL “licencing process”<sup>6</sup>.

PCWO has been an intervenor at several comprehensive, intervenor –friendly hearings of independent Commissions, Boards and Environmental Assessment Panels over many years<sup>7</sup>. Regrettably, the CNSC has not ensured that many of the public who might be most affected would hear about the project, and others received incomplete, shifting, conflicting, and hence, confusing CNL plan reports.<sup>8</sup>

The CNSC decision to undertake a “scoped” and hasty Environmental Assessment itself rather than direct it to an independent arms-length EA panel, leave PCWO with many questions.

### **Questions That Need to be Answered**

Public comments and input to date clearly indicate that there is strong public and professional opposition to the project, with a great deal of excellent information and expertise to back their positions. In contrast, there is the ‘business as usual’ pattern of the CNL, CNEA and CNSC, who downplay or ignore the “precautionary” principle.

PCWO therefore asks the following questions:

- Why has CNSC staff not flagged CNL’s flouting of the International Atomic Energy Agency (IAEA) Safety Standard SSR-5 Disposal of Radioactive Waste on Nuclear Waste management, which disallows this type of “mound” as containment for intermediate radioactive waste, with long-lasting radioactive elements ?<sup>9</sup>
- Why does the CNL project proposal downplay the risks of seasonal flooding and the possibility of a catastrophic flood should the Tamiskaming dam give way?

- What is the urgency for this project, and where does it fit into the overall plan for disposal of low and intermediate level nuclear waste, as part of the management of Canada's nuclear "*legacy*" liabilities? For example, where do Ontario Power Generation's Low and Intermediate nuclear waste disposal plans at the Bruce Power site fit in.
- Why did CNSC staff not recognize and flag the significant risks of intermediate nuclear wastes?
- Does the proponent have a good track record in the construction and management of such a unique near-surface mound nuclear waste facility? Or, is it relying on AECL, which owns the site, or the staff of the regulatory agency CNSC for their expertise to guide the process?
- What are the distinct roles and responsibilities of AECL, CNL and the various business partners like SNC Lavalin?
- Given the very long-lasting nature of some intermediate level nuclear waste, will it be abandoned or managed after the 50 year planned operation of the facility? What plans are in place to manage it over the very long term to protect future generations and the environment?

## **Conclusion**

To conclude, Indigenous groups, independent scientists, and other intervenors have identified numerous potentially significant adverse environmental, health, and safety threats over the immediate and very long term future from CNL's proposed nuclear waste disposal project. Yet, CNSC has not referred this project to an independent Environmental Assessment Panel. Therefore, it is extremely important that these intervenors be heard and their cautionary knowledge and expertise be made integral to the EA hearing and to the final CNSC decision.

## **References:**

1. Canadian Environmental Law Association. June 20<sup>th</sup>, 2017. Petition to Auditor General . Canada's Nuclear Legacy Liabilities: Clean –up Costs for the Chalk River Liabilities. Page 8. AECL's former Director of Safety, Engineering and Licensing Program, re inadequate technology, not meeting regulatory requirements; re health and safety; not meeting CEAA 2012. CELA 2006.17

2..CNL Project Description SECTION 5.3 GEOLOGICAL AND HYDROLOGICAL ENVIRONMENT 5.3.1.4.2.2 . Map Figure 5.3.1.5 Descriptive " Two main fracture or faulting zones are present in the CRL property; the Mattawa Fault , which lies below the Ottawa river and consists of the northeast boundary of the property, and; the Maskinonge Lake lineament in the southwest area of the property. Within the Perch

Lake basin a moderate probable fracture zone extends from approximately east to west through the upper portion of the basin. \*\* *“These are known to be active and have been for thousands and thousands of years”* –J. Robert Janes BSc, M.Eng, author *Geology and the New Global Tectonics*.

**3.** Canadian Environmental Law Association. June 20<sup>th</sup>, 20217. Petition to Auditor General. *Canada’s Nuclear Legacy Liabilities: Clean –up Costs for the Chalk River Liabilities*. Page 7 *“CNL is proposing to put a wide variety of low-and intermediate-level nuclear legacy wastes, many with long half-lives in an 18 metre-high mound..”*

**4.** Northwatch submission to CNSC. June 24<sup>th</sup> 2016: As noted, AECL is the property owner, CNL is managing AECL properties and the Canadian National Energy Alliance (CNEA) business consortium (CH2M, Atkins, Fluor, SNC Lavelin) is the contract operator. This EA application is one of Three CNEA has applied to carry out its business operations.

**5.** Canadian Environmental Law Association. June 20<sup>th</sup>, 20217. Petition to Auditor General. *Canada’s Nuclear Legacy Liabilities: Clean –up Costs for the Chalk River Liabilities*. Page 6. *“CNL shall seek the fastest, most cost- effective way(s)of executing the DWM (Decommissioning and Waste Management) Mission including disposal of all waste.”*

**6.** Personal communication, T. McClenaghan CELA. August 11<sup>th</sup> 2017. confirmation of PCWO. view re Section 15 of the Canadian Environmental Assessment Act 2012 and the Canadian Nuclear Control Act that *“ this is one of the first for CNSC itself under CEAA 2012. DGR was continued under CEAA 2012 but kept the joint panel already appointed.”*

**7.** In the case of the Seaborn Hearing, the Panel turned down the proposal, and the final report cited PCWO’s warning that *“the public has grave concerns“* as part of the evidence of a lack of societal acceptance. The Bruce deep geological disposal project was conducted by an EA panel and its favourable decision, with conditions, has been the subject of extensive further attention by the Minister of Environment.

**8.** Evelyn Gigantes. Ottawa. May 17, 2017 Submission to CNSC. *“The reason I knew nothing about what CNL was proposing was that I live in a major urban centre 183 kilometres south of CNL’s proposed activities. For close to 32 years, CNL, and by association CNSC, had ignored the obvious interest that the residents of Ottawa would have in the planned CNL project(s) ...Once again groups and individuals who are invited to become “engaged” in the assessment process are being told to be patient and wait for the “final design” to learn critical information about the exact nature of the project....Even more seriously, the process of public “engagement” has been one in which the very subject of the “engagement” is constantly changing. Questions posed about the waste to be buried during the Environmental Stewardship Council Meeting with CNL representatives (June 16, 2016) could not be answered because the design of the project (s) was only 15% complete.”*

9. .Ibid page7. *“The IAEA Standard says that a land-fill type facility is suitable only for very low level radioactive waste, and certainly not for radioactive wastes with long half-lives such as those that CNL proposes to place in the mound. The disposal facility shall be sited, designed and operated to provide features that are aimed at isolation of the radioactive waste from people and from the accessible biosphere. The features shall aim to provide isolation for several hundred years for short-lived waste, and at least several thousand years for intermediate and high level waste. (IAEA 2011).”*

