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Oral presentation

Written submission from the Provincial Council of Women of Ontario

Exposé oral

Mémoire du Provincial Council of Women of Ontario

In the Matter of the

Canadian Nuclear Laboratories (CNL)

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

Commission Public Hearing
Part 2

May and June 2022

À l'égard des

Laboratoires Nucléaires Canadiens (LNC)

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

Audience publique de la Commission
Partie 2

Mai et juin 2022

Canada

PROVINCIAL COUNCIL OF WOMEN OF ONTARIO

(Estb. 1923)

April 11th 2022

Louise Levert

Senior Tribunal Officer, Commission Registry Canadian Nuclear Safety Commission
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Dear Ms. Levert

Regarding my request to speak on behalf of the Provincial Council of Women of Ontario (PCWO) at the May 31st 2022 the Canadian Nuclear Safety Commission (CNL) hearing on Canadian Nuclear Laboratories application to amend its licence to allow a nuclear waste mound on site, my presentation , as required, will deal with the following areas of concern, some of which I have merged under new titles: An edited final brief will be sent to the Commission at least ten days before the May 31st hearing begins, if that is acceptable.

Introduction

The Provincial Council of Women of Ontario has a very strong interest in , and have researched and developed policies on nuclear issues as they impact health, environment, workers, families and society for over 30 years. Using these policies we have presented to many Boards, Commissions and the political representatives regarding a wide range of nuclear projects, policies and plans. 1.

With regard to the current CNL proposal, PCWO is following up on our previous comments to CNSC in 2017 about "scoped and hurried" Environmental Assessment of the Near Surface Disposal Facility at Chalk River Laboratories. We are therefore very aware of , and strongly support, the concerns of the many groups such as the Old Fort William Cottagers Association, the Ralliement contra la pollution radioactive, group the Ottawa River Keepers, the over 140 downstream municipalities along the Ottawa River, and the Assembly Anishinabek Indigenous peoples, on whose "Un-ceded" lands this current CNL proposal to build a giant- above ground nuclear waste dump for the one million tons of mixed radioactive and hazardous waste alongside the Ottawa river, may be built.

With this in mind PCWO raises the following issues regarding the current CNL proposal.

Geology

Of great concern to PCWO is the location of the proposed CNL mound in a known area of geologic instability, where there is considerable risk from earthquakes.

According to the 2017 Canadian Nuclear Laboratory project description of this area , " *Two main fractures of faulting zones are present in the CNL 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.*" And, according to the late J.Robert Janes BSc, M. Eng. author of Geology and the New global Tectonics, "*These faults are known to be active and have been for thousands of years".* This latter precautionary statement is in contrast to the optimistic, but not tested , CNL staff comments at the February CNSC hearing, that this high mound is *"designed to withstand a significant seismic event, the magnitude of which has not been observed in the region*". 2.

Technical Protection, Exposure to Weather and Life Span

PCWO finds it extremely troubling, that CNL's proposed 60 foot high, mostly above-ground nuclear dump , which is planned to contain one million tons of mixed radioactive and hazardous wastes will have its upper container exposed to the elements for about 50 years until the mound is completely sealed. Additionally, while CNL predicts and plans for the synthetic , high density polyethylene geomembrane- liner system, and other technologies, to protect the mound's contents from the elements for 550 years, in our experience with proposed liners for municipal dumps , they don't always work as expected and eventually leak. It is significant that this project will be their first test and any failure will be disastrous.

Equally worrisome , the mound is to be built on a slope in a very sensitive wetland area that drains into the Ottawa River which is less than 1,000 metres from the site. It is also common knowledge that the water table is just inches under the surface at that location, the bedrock is highly fractured, and there is a probability that the site could be flooded, particularly in these days of rapidly changing weather, and an ever increasing number of significant and extremely damaging floods. No matter how well a project (in this case a very high mound) or building is engineered, or barriers created, water usually finds a way to the lowest point nearby. We note that *previous studies by dump proponents, identified many ways the mound would leak and described the inevitable disintegration of the mound within 400 years through a process of normal evolution*" 3.

It is also clear that the site is far too small to be dealing with so many kinds of Nuclear and hazardous waste projects. It should be located on much larger pieces of land . .And while it seems logical to remove old buildings, and to sort, categorize and secure CNL 's current nuclear waste on the site, or preferably on a much larger site elsewhere, low and intermediate nuclear waste from across Ontario and Canadary should not be transported in , but dealt with safely close to where it is produced and well away from sensitive natural areas and any water body.

Low and Intermediate Nuclear Waste Risks

According to respected independent scientist Gordon Edwards and others, some intermediate and low level nuclear wastes, are dangerously radioactive and extremely long –lived . Also, according to Dennis Leneveu, a former vault modeller for Canada's first high level waste program in the 1990s , post-closure monitor assessments found that both high level an low level were " *long lived*" and "*major dose contributors* ".4. These facts make CNL plans for five hundred years of containment and monitoring , and then abandonment , not only poor planning but lacking any thought of health, environmental and social stewardship for the benefit of generations to come.

Conclusion

The potential releases of extremely dangerous radioactive elements and other hazardous wastes ,whether as a result of design flaw, human error or act of a malfeasant nature, will pollute the site , the ground water, surrounding lands, the Ottawa River, and hence the environment, health, and welfare of nearby and downstream Ontario and Quebec residents immediately and for many years to come . PCWO urges the Commission members to turn this application down, or at the very least allow for an independent scientific, social and environmental review before proceedings go further.

Gracia Janes

Background:

1.The Provincial Council of Women was an Intervenors (public witnesses) . at the Seaborn panel hearings in 1997 and Intervenors in the Ontario Energy Board's 2008 Ontario Power Authority Integrated Power System Plan . PCWO was also an intervenor in the Bruce Power Deep Geologic Repository on Lake Huron hearing, and Pickering and Darlington Nuclear life extension hearings and others.

2. Section 5.3. Geological and Hydrological Environment 5.3.1.4.22, Map Figure 5.3.1.5, background report

3. Brief to CNSC 2022/04/11

4. Personal communication by e mail 2022/04/11.