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Written submission from Philip Sweetnam

Mémoire de Philip Sweetnam

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

Canada

Senior Tribunal Officer, Secretariat
Canadian Nuclear Safety Commission
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2022 April 11th

Subject: Support for Near Surface Disposal Facility on Canadian Nuclear Laboratories site

Dear Secretariat:

I am Philip Sweetnam, an Engineering Chemist, who has worked in a family business which has built over three hundred homes in the Fringewood Community and serviced and sold 340 lots in the Granite Ridge Community, both are part of Stittsville in the City of Ottawa. Neither I nor any of my relatives or friends work for the nuclear industry. For over forty years the City of Ottawa has appointed me as one of their representatives at the Mississippi Valley Conservation Authority (MVCA), which among other responsibilities requires permits to ensure buildings along the Ottawa River are built in a safe manner to avoid flooding. I live in Ottawa, which is in the watershed of the Ottawa River, and approximately 150 KM downstream from the proposed Near Surface Disposal Facility (NSDF).

I am interested in supporting the construction of the NSDF in a proper way so that the Canadian Nuclear Laboratories (CNL) can safely deal with Low-Level Nuclear waste generated at the CNL site over the past 70 years. The engineered containment mound is internationally recognized as best practice for Low-Level Nuclear waste disposal and will provide a long-term solution to Canada's growing problem of where to store its low-level waste. It is important to ensure we take care of the environment now, and not leave it for future generations.

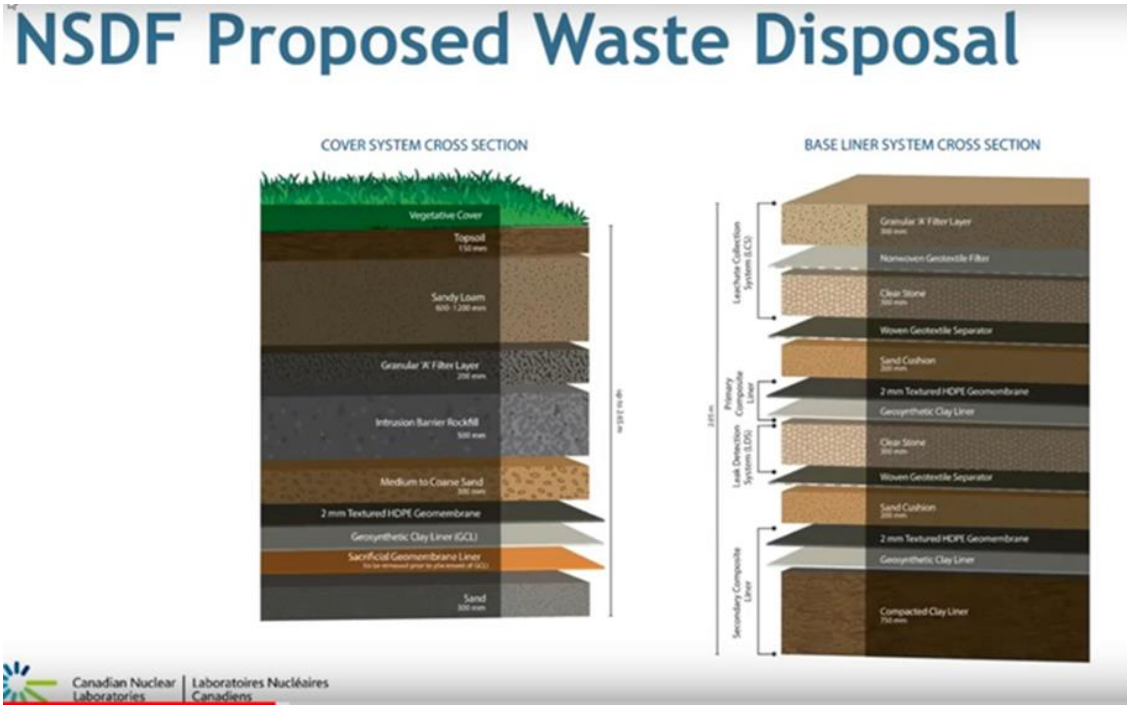
I am anxious to see that the NSDF is constructed in a cost effective, safe & efficient manner. Meeting the concerns of many NDSF opponents could be prohibitively costly and unnecessary. It would be worthwhile to demonstrate that their safety concerns are dealt with and meet long term safety objectives.

A few key aspects of the project that would be beneficial to emphasise is the well thought out system ensuring long term safety of surrounding communities and the environment. The concerns of the City of Ottawa expressed in a resolution was a reasonable compromise to appease the more grave concerns expressed by a few members of Council and the Concerned Citizens of Renfrew County (https://concernedcitizens.net/tag/chalk-river-laboratories/). The Engineers responsible for water believed that the NSDF met adequate standards to ensure safe drinking water. The NSDF is especially designed to protect the Ottawa River. Drinking water in any location downriver is not at risk. The Canadian Nuclear Safety Commission (CNSC) will need to discern whether it is necessary to meet the condition in the compromised resolution requiring no further import of Nuclear Waste from outside of Ontario. CNL, and its predecessor AECL, have had a record of 40 years safely transporting hazardous nuclear waste without incident. The Ottawa resolution also called for assurances that rainwater would not enter

the disposal site. The statement below allows the CNSC to be assured that the proposed NSDF meets those requirements.

The NSDF facilities are expertly designed to divert rainwater through the layers of natural materials safely to the surrounding berms to then seep into the ground (as seen in the accompanying illustration.) The life expectancy of the high-density polyethylene geomembranes covering the waste layers is 550 years, which is far longer than the half-life of the low-level nuclear waste disposed of at this site. The nuclear waste is composed of 88.48% Cobalt-60 with a 5.3-year half-life, 11.51% Cesium-137 with a 30-year half-life, and the remaining 0.01% for all other isotopes & radioactive elements. With such short half-lives the waste materials will reach natural background radiation levels after 125 years, thus with the HDPF and natural clay layers, the radioactivity will be adequately contained long after it has become naturally decayed to background levels.

“The radioactivity of the inventory will decrease about 2,000 times in the first 100 years, and then begin to approach natural levels of radioactivity shortly thereafter." - NSDF EIS Interactive Summary Document, page 8



I believe that the CNL has proposed a construction technique which is beyond adequate to provide protection to the surrounding community, and the residents of the Ottawa River watershed. I also believe that staff at CNL value safety, environmental protection, quality, and accountability. The NSDF provides a place to safely deal with more than 70 years of Low-Level Nuclear Waste generated at the CNL site. The CNL site is a source of unique nuclear science in Canada, producing research in health science that brings hope to people who suffer from cancer and other diseases. They are making advances in clean, non-carbon energy to combat climate change for today and for tomorrow. By properly disposing of the waste in a highly engineered facility built to stand the test of time, CNL is taking accountability for the waste now. Significant additional requirements will add costs and may prolong how long it takes

to get the disposal facility in place. To demonstrate that Nuclear Energy can play an important part in generating carbon-free energy, it is important that this project demonstrates that the nuclear industry will safely deal with the waste which it produces in a cost-effective manner.

Phil Sweetnam P.Eng.