Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

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Written submission from James Harrington

Mémoire de James Harrington

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, Registry
Canadian Nuclear Safety Commission
280 Slater Street P.O. Box 1046, Station B
Ottawa, Ontario K1P 5S9

Date: 11 April 2022

Subject: Canadian Nuclear Laboratories' application to amend its Chalk River Laboratories site licence to authorize the construction of a near surface disposal facility IAA Reference Number: 80122

Dear Registrar:

My name is James Harrington, and I have lived the majority of my life within about an hour's drive of Ottawa, including my current residence in Petawawa where I have lived for 7 years. I enjoy back-country camping, hiking, canoeing on the Ottawa River, and have recently started developing passions for both ice fishing and hunting. I spend as much time as I can enjoying the outdoors in the Ottawa Valley with my family and friends, and therefore have a vested interest for a future in this area.

I received my M.Sc in Radiation and Health Physics from McMaster University, and I currently work at Canadian Nuclear Laboratories as an Operational Health Physicist. Along with many of my colleagues in Radiation Protection, I share a responsibility to ensure that radiation exposures associated with licensed activities at Chalk River Labs (CRL) are ALARA – "As Low As Reasonably Achievable".

The three primary principles I adhere to when protecting people and the environment are: Justification, Optimization, and Dose Limitation. I see multiple associations between NSDF and my daily work in Radiation Protection.

NSDF has significant Justification; we have a responsibility to manage these wastes for the protection of the people and the environment. In terms of Optimization, multiple different technologies were evaluated and the NSDF was selected as being the most appropriate engineered solution based on the hazard level of the low level wastes. Finally, Dose Limitation established in national legislation is fully incorporated into CNL's practices, with highly conservative assessments supporting that NSDF will remain below applicable limits and levels for employees and the public.

As part of my own decision-making related to supporting NSDF, I encountered the following figure from Volume 2 of the Environmental Impact Statement:

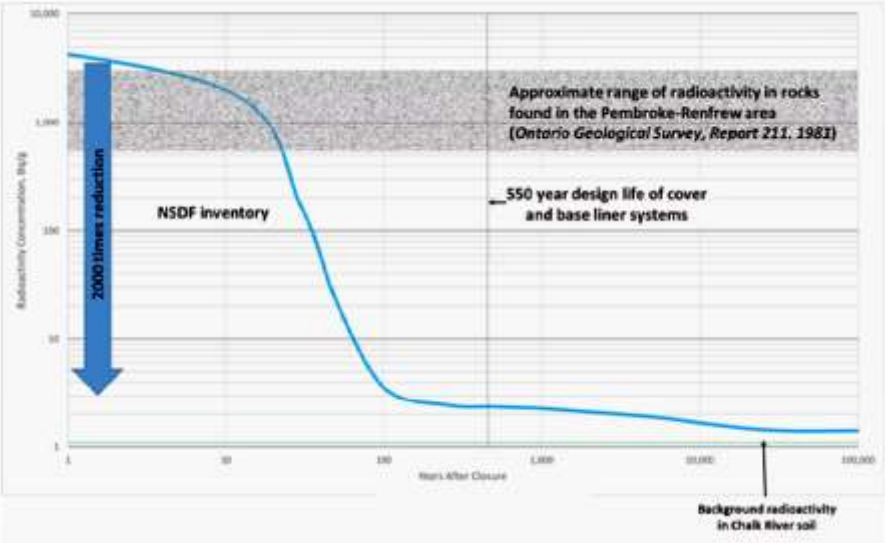

Figure 3.3.1-2: Radiologic Decay of the Near Surface Disposal Facility Waste Inventory

This figure demonstrates a reality that we often do not consider; in 100 years, any radionuclide with a half-life less than 10 years will be 1000x reduced. Since NSDF will only accept low-level wastes, the wastes only represent a 3x increase above the average level soil radioactivity after 100 years; this level of radioactivity does not represent an increased risk to individuals or populations. Variations in background radioactivity are a fact (shown by the shaded area in the referenced figure); specimens present in our environment can exceed the average by a significant margin with no detrimental effects.

When I discuss my support of NSDF to family or friends, I emphasize the following: Until such a time that these wastes no longer represent a radiological hazard, an appropriate solution is required to protect people and the environment. I have completed my own review of the information and support NSDF as the appropriate engineered solution to responsibly manage these wastes.

Thank you for providing the opportunity to intervene in this matter,

James Harrington