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Written submission from Zackary Krowchuk

Mémoire de Zackary Krowchuk

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
280 Slater Street P.O. Box 1046, Station B
Ottawa, Ontario K1P 5S9

Date: April 10, 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 Secretariat:

I am writing today to express my support for the construction of the Near Surface Disposal Facility (NSDF). NSDF is, over the long term, the correct decision for the Chalk River Laboratories (CRL), the Ottawa Valley, and Canada as a whole. Over the long term NSDF addresses challenges not just at CRL, but around the globe.

Long-termism is an ethical stance which emphasizes improving the long-term future. It is a stance that I not only agree with, but find to be an important lens for viewing matters pertaining to the nuclear industry. The nuclear industry is inherently a long-term endeavour with long term benefits and consequences. Not the least among these long-term matters is nuclear waste. As such consideration of NSDF must be viewed through a long-term lens, addressing its impacts over the lifecycle of the project and beyond.

Over the long term the construction of NSDF will permanently dispose of the low-level radioactive waste (LLW) present at CRL. This waste already exists and something must be done to dispose of it. It is irrational to handle waste repeatedly, providing the opportunity for new failure modes to appear, when it is unnecessary. Permanently disposing of the waste in NSDF removes this possible failure modes and improves the safety of the CRL site. Its construction and operation will also prove the eternal nuclear bugbear "but what about the waste?" false, paving the way for the growth of nuclear power around the globe and saving lives through the reduction in Greenhouse Gas (GHG) emissions associated with switching from fossil fuels to nuclear power. For these reasons I believe NSDF is the right decision because it provides safe, permanent, disposal for the low-level waste currently at CRL.

Currently, waste is stored in a variety of manners throughout the CRL campus. All of these are explicitly interim storage and require monitoring and periodic repackaging. As they age and degrade the integrity of the packages also decays. The monitoring, packaging, and aging of the waste provides myriad failure modes for the waste to impact CRL personnel, the environment, or the public. In contrast, NSDF is engineered following internationally-recognized best practises for the permanent disposal of low-level radioactive waste. Furthermore, it is sited on a bedrock ridge such that any waste water from it is directed away from the Ottawa river and drinking water for those downstream. As such the transfer of this extant waste from aging containers and facilities into a purpose-built facility represents a significant reduction in threat to the environment and the public. The NSDF will, through its' siting and design reduce the danger to CRL personnel, the public, and the environment.

Taking a wider view, NSDF continues to be a long-term gain for society. Climate change remains an existential threat to humanity, with the 10 hottest years on record all having occurred this century. Further, it is estimated that climate change will cause 83 million excess deaths by 2100. Humanity must cease to generate GHGs if we wish to survive. Nuclear power provides safe, stable, baseload capacity for electricity generation and comprised 60% of the generated electricity in Ontario in 2018. In contrast, fossil fuels were used to produce approximately 60% of global electricity in 2021. Replacing these fossil fuels with low carbon sources such as nuclear would represent a substantial reducing in global GHG production and save millions of lives. Unfortunately, significant opposition to nuclear power continues to exist, with the waste being one of the most common arguments against nuclear power. The construction and operation of NSDF would prove the claim that nuclear waste has no solution false and remove an argument from the quiver of the anti-nuclear movement. This would lead to the construction or continued operation of nuclear reactors, reducing global GHG emissions and saving lives. This is, at first glance, a stretch, but no one snowflake believes it is responsible for the avalanche. Changes in the real-world result from aggregate changes across a nation or country and not from storybook heroic endeavours. The construction of NSDF represents a contribution to the aggregate change in the acceptance of nuclear power in Canada. As such, NSDF saves lives and provides a long-term net gain for humanity.

The Near Surface Disposal Facility is a solution to challenges on the CRL site and also a step in the right direction for the global nuclear industry. NSDF is a solution to the LLW present at the CRL site, moving it from it's current decentralized and ad hoc storage into a centralized, engineered, permanent, and most importantly safe solution. This solution would represent a trailblazing step forward for the nuclear industry in Canada and the world. It's construction and operation would aid in the expansion of the nuclear industry, combatting global GHG emissions and saving lives around the world. For these reasons I support the construction of the Near Surface Disposal Facility.

Thank you for your consideration,
Zack Krowchuk