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Written submission from Brian M. Ikeda

Mémoire de Brian M. Ikeda

In the Matter of the

À l'égard de

Canadian Nuclear Laboratories

Laboratoires Nucléaires Canadiens

Application to renew its waste nuclear substance licence for the Port Hope Project

Demande concernant le renouvellement du permis de déchets de substances nucléaires pour le projet de Port Hope

Commission Public Hearing

Audience publique de la Commission

November 22, 2022

22 novembre 2022

Canada

Department of Energy
and Nuclear Engineering

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

2022 October 14

BMI-22-003.

Subject: **Canadian Nuclear Laboratories' application for a 10-year renewal of the Port Hope Project Waste Nuclear Substance Licence for the completion of the Port Hope Area Initiative**
Reference Number: 2022-H-13.

Dear Secretariat,

I am an associate professor in the department of Energy and Nuclear Engineering at Ontario Tech University. I have been involved in radioactive waste management for 40 years, half that time with the used fuel disposal program at AECL's Whiteshell Laboratories. I have taught and continue to teach courses in Radioactive Waste Management at both the graduate and undergraduate levels. This document is a personal submission based on my industrial and academic experience, and it is independent of any opinion offered or presented by Ontario Tech University.

The Port Hope Area Initiative (PHAI) is an important project as Canada develops solutions for managing radioactive waste. This long-term management option is an interesting alternative to disposing of low and very low level radioactive waste. Technically sound principles have been applied to designing the facility for long-term isolation of this waste. The inclusion of long-term monitoring of the facility effluent is necessary for a facility that is not closed, i.e., it is not a disposal facility. It does place more responsibility on the proponent and regulator to ensure care and attention is vigilant and continuous. It also provides a measure of satisfaction to the general public that the waste is safe, known to be safe because of robust environmental monitoring, and is maintained. This should encourage other communities to become involved in the public service of managing radioactive waste. The proposed consolidation of licenses is appropriate for both Canadian Nuclear Laboratories (CNL) and the Canadian Nuclear Safety Commission (CNSC) to maintain control and oversight of the historic low level radioactive waste that is contained in the Port Granby long-term waste management facility (LTWMF) and that is to be contained in the Port Hope LTWMF.

I have been taking 4th year nuclear engineering students on field trips to Port Hope and Port Granby since 2006. I have seen the growth of the project, the care and passion of the staff, and the physical developments of the waste management facilities. I have witnessed the staff's attention to the environment and public outreach by putting the importance of this work into a framework that future nuclear engineers easily recognize as important. I fully expect this good work to continue into the future.

Over the years, I have been fully aware of the close ties between the PHAI staff and the communities of Port Hope and Port Granby. I have seen the PHAI in the community, being

present at events, being involved. The staff are part of the community and eager to work with the community to solve problems associated with the project, no matter how small. At the recent ceremony for the completion of the Port Granby mound, I was excited to hear the various Chiefs' talk about the partnership with PHAI, about the value of the project, and about the promise of the future. The PHAI indigenous and public engagement programs are good examples of creating a positive and welcoming public attitude for a project that is often met with negativity or ambivalence. I am confident that these good collaborations will continue into the future and will not be a concern in the license requirements.

The environmental monitoring program and the evaluation of health and environment effects are both robust and appropriate. The program for long-term monitoring is thoughtful and well considered. It is important that this be allowed to continue for a long, uninterrupted period to encompass current remediation (continuing in Port Hope) and to develop an appropriate historical trend for completed facilities (starting in Port Granby). For long-term waste management facilities, 10 years is a short time compared to the lifetime of the facility where events are expected to be slow. It is appropriate for a license duration to be 10 years.

The commitment to continual improvement of the program is important. The CNSC's commitment to oversight is critical to ensuring this continues to be a strong element of the program. One aspect that has been avoided is predicting very long-term effects, that is, effects beyond the lifetime of the facility. It is not an appropriate license condition for this 10 year period, but it may be of value to perform probabilistic modelling of the environmental and health impacts of the facility, at times longer than 300 years, to identify and include the period of maximum effect for both radiological and toxicological consequences.

In conclusion, I wish to support the application by CNL: to consolidate their existing four (4) licenses regarding the PHAI into one license; to obtain a ten (10) year license to continue the cleanup of the historic low level radioactive waste in Port Hope, Ontario; and to include the care and attention responsibilities for the waste management facilities in Port Hope and Port Granby.

Warm regards,

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