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Oral presentation

Written submission from Jennifer Hannigan

Exposé oral

Mémoire de Jennifer Hannigan

In the Matter of the

New Brunswick Power Corporation, Point Lepreau Nuclear Generating Station

Application for the renewal of NB Power's licence for the Point Lepreau Nuclear Generating Station

Commission Public Hearing Part 2

May 11 and 12, 2022

À l'égard de la

Société d'Énergie du Nouveau-Brunswick, centrale nucléaire de Point Lepreau

Demande de renouvellement du permis d'Énergie NB pour la centrale nucléaire de Point Lepreau

Audience publique de la Commission Partie 2

11 et 12 mai 2022

Canada

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

Mar. 25, 2022

Re: Intervention by Dr. Jennifer Hannigan for the NB Power Licence Renewal Application (Hearing Ref.2022-H-02)

To whom it may concern:

I, Dr. Jennifer Hannigan, request to intervene by way of written submission and oral presentation in the hearing in the above-referenced matter in Saint John, if possible, or virtually. Through my experience of caring for patients as a medical practitioner, as well as my involvement with emergency department disaster planning and specific training in radiation exposure and treatment, I offer a unique perspective on human health and the impact of toxins in our environment, including the effects of radiation in the short and long term. These experiences also contribute to an understanding of the capacities and limitations of our health care system in handling any potential incidents. Considering the Commission's mandate to "protect health, safety and security of the environment", a first-person medical account, preferably with an opportunity to orally present the key features would be essential to ensure adherence to this mandate.

Please consider the comments below as a submission to the Canadian Nuclear Safety Commission, regarding the licence renewal of the NB Power Point Lepreau Nuclear Generating Station.

As a mother and retired physician, with strong commitments to the health and well-being of all human beings, I have deep concerns regarding the impacts of ongoing nuclear power generation on human health and the natural systems on which we intimately depend. We all have a responsibility towards one another and our environment not only in the present moment, but to ensure that the decisions we make today respect the needs of future generations as well.

Specifically, my concerns are related to the following:

1. Regardless of whether all rules are followed and safety protocols and regulations are adhered to, daily operations at this power plant depend on uranium mining, emission of toxic by-products into air and water and the production of radioactive waste, for which there is no proven-safe option for permanent disposal.

The CNSC must consider the impact of radioactive wastes within this licensing hearing. The CNSC should no longer continue to licence nuclear power plants as there is inadequate evidence to support the safe and permanent disposal of radioactive wastes.

2. Proving causation between toxins in our environment and their specific impacts on human health is incredibly misdirected and at risk of distracting from the main issue. The main issue being, that without adequate evidence, determining "safe" levels of specific toxins and even known carcinogens is simply fallacious. For example, Canada's current "safe" limits for tritium, a known radioactive carcinogen, are many times higher than in other countries. This inconsistency reflects an obvious lack of evidence. If we know that a substance is carcinogenic to human beings, why do we tolerate the exposure? In medicine, there is evidence to support that even low-level exposures to specific carcinogens have significant and varied negative impacts on human health. The quantitative data we have access to regarding environmental carcinogens is incomplete and therefore we must take a more precautionary approach to protect the health of our environment.

The CNSC must consider the impact of radioactive and carcinogenic emissions within this licensing hearing. The CNSC should no longer continue to licence nuclear power plants as daily operations guarantee the ongoing release of these toxins into our environment.

3. The effects of radiation exposure on human health are concerning, vast, and cumulative. Even low-level exposures can cause cell and DNA mutations, which in turn can lead to sterility, malignancies and hereditary disorders, propagating these genetic mutations indefinitely. Children and developing fetuses are most at risk. Radiation exposure is a risk to employees, the surrounding community and its local environment.

The CNSC must consider the impact of radiation exposure on human health within this licensing hearing. The CNSC should no longer continue to licence nuclear power plants as they pose an unnecessary risk to human health.

4. Nuclear "accidents" are not uncommon. A nuclear and radiation "accident", as defined by the International Atomic Energy Agency (IAEA) is "an event that has led to significant consequences to people, the environment or the facility. Examples include lethal effects to individuals, large radioactivity release to the environment, reactor core melt." As of 2014, there have been more than 100 serious nuclear accidents and incidents worldwide, from the use of nuclear power. This does not include less severe incidents or near-misses. Interestingly, fifty-seven "accidents" or severe incidents have occurred since the Chernobyl disaster. The repercussions of these events are obviously devastating and irreparable on a timescale that is beyond our comprehension. No amount of decontamination or emergency preparedness can begin to address the devastation. If such an event were to occur locally, our health care system would be unprepared to deal with it. For example, as a retired MD, I have witnessed the inadequate management of the COVID-19 pandemic, and this was within a system that should have been well prepared to deal with infection control. If infection control is a daily process for our local hospitals, how can we adequately deal with a nuclear incident.

   Generally speaking, an accident is "an event that happens by chance or that is without apparent or deliberate cause." Nuclear "accidents" are predictable and preventable and are therefore

not accidents at all. As a collective, we will take responsibility and invest all of our knowledge, skills and resources to support the decommissioning of the NB Power Point Lepreau Nuclear Generating Station**.**

The CNSC must consider the impact of nuclear and radiation "accidents". The CNSC should no longer continue to licence nuclear power plants understanding the probability and irreparable consequences of nuclear and radiation events.

I must trust that the Commission will consider the above listed concerns earnestly and make a decision that is accountable to the local human communities and natural systems that it is intended to protect.

Sincerely,

Dr. Jennifer Hannigan