



Oral Presentation

Exposé oral

**Written submission from
Jacquelin Millar**

**Mémoire de
Jacquelin Millar**

In the Matter of the

À l'égard de

**BWXT Nuclear Energy Canada Inc.,
Toronto and Peterborough Facilities**

**BWXT Nuclear Energy Canada Inc.,
installations de Toronto et Peterborough**

Application for the renewal of the licence for
Toronto and Peterborough facilities

Demande de renouvellement du permis pour les
installations de Toronto et Peterborough

Commission Public Hearing

Audience publique de la Commission

March 2 to 6, 2020

Du 2 au 6 mars 2020

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

January 27, 2020

Written Intervention by Jacquelin Millar regarding BWXT NEC License Renewal (Hearing Ref. 2020 –H-01)

I am writing with request to intervene in the license renewal application process for BWXT NEC in Peterborough, ON. I wish to express my opposition to the proposed licensing renewal at BWXT NEC in Peterborough, ON. As a resident in the community, and educator at Prince of Wales Public School, I am deeply concerned for the welfare of residents in Peterborough, particularly my neighbours, co-workers and students in the vicinity of BWXT NEC should they be granted a license renewal. The addition of the option to conduct uranium pelleting at the Peterborough location is particularly concerning. I, like many others, do not feel that the manufacturing/repair of nuclear fuel channel components has a place in **ANY** residential neighbourhood near a public elementary school.

I work with kindergarten students every day at Prince of Wales Public School. Our kindergarten yard is a space for play and exploration for approximately 150 students aged 3-5 years. There are approximately 450 additional students in the primary, junior and intermediate yard. Many of these students will spend 10 years of their young lives at Prince of Wales, as my own child did. These children roll around on the ground, stomp and splash in the mud, play in the water that accumulates in the ditches, dig in the dirt, run, jump, swing, and take in deep, full, breaths of air as they play with their peers. These children also routinely put snow, dirt, sticks, stones and whatever else may be on the ground into their mouths. There are usually only 3-4 staff members supervising these students during their time outside. It can be difficult, given these circumstances, to ensure that our youngest students - the children we are entrusted to care for each day - do not ingest anything that may make them ill or cause harm. If BWXT NEC is granted the license to produce uranium pellets at the Peterborough location, am I to add uranium dust particles to the list of possible substances that I must try to protect my students from consuming?

I ask that the Canadian Nuclear Safety Commission (CNSC) tell me how I am supposed to do this? How can I protect the students from inadvertently ingesting/inhaling uranium dust in our school yard metres away from BWXT NEC in Peterborough? Can you GUARANTEE that this will not occur? I ask BWXT NEC and the CNSC to assure me with peer-reviewed long-term studies on the effects of ingested/inhaled radiation on children. Do studies exist that conclusively prove that there is no need for concern for the long-term health and well-being of children inhaling or ingesting uranium dust particles like students at Prince of Wales? Please provide these studies as a condition of licensing.

While BWXT NEC has made attempts to hold public information sessions including a BBQ on June 5th, 2019, (which was poorly attended due to torrential rain) and information night on October 8th, 2019, (from 5-7pm over dinner and bedtime hours for most families with young children), I remain very concerned that the public, particularly its closest neighbour Prince of Wales, has not been appropriately engaged or informed about the potential dangers their operations pose on the health and safety of

residents, students and staff and on our environment. It is my understanding that hydrogen is required in the pelleting process. It is also my understanding that hydrogen is extremely flammable/explosive. Is there currently a hydrogen tank at the Peterborough facility? I ask BWXT NEC if there is an emergency plan that will protect the students and staff at Prince of Wales, and local residents in the event of an accident or explosion. I believe we have the right to know how best to protect ourselves in the event of unforeseen circumstances. The BWXT NEC and the CNSC should have an obligation to communicate this information to the public as part of the licensing process. In the 6 years I have lived in the area and worked at Prince of Wales, there has been no communication of emergency preparedness plans in the event of a major incident at BWXT NEC.

In the current Safety Analysis Report (SAR) found on the BWXT website, the “What-if Analysis” “a full range of potential hazards was considered for all relevant hazardous materials and activities.” The findings in the SAR found risks presented to be “Low or Very Low.” The SAR for BWXT NEC Toronto also states that “facility risks are all Low or Very Low, except for extremely unlikely incidents involving the hydrogen storage tank which are of Medium risk.” **Can a representative from BWXT NEC please explain what might happen in the area surrounding BWXT NEC Peterborough in the event of explosion involving the hydrogen tank and up to “1500Mg of Uranium?” What does “Medium risk” mean? Can you detail what kind of damage to human life/destruction of property might occur should there be a serious fire/explosion at the facility? How would I protect my kindergarten students, who will be learning and playing less than 50 metres away, from harm? How far could the uranium dioxide or other toxic substances travel if the hydrogen tank were to explode?**

The Safety Analysis Report BWXT NEC Peterborough states “operations provide an adequate level of protection over a broad range of operating conditions” in order “to restrict the likelihood of events that might lead to a loss of control over the safety of the licensed facility; and to adequately protect the public and environment from any potential harm arising from the licensed activity.” Don’t the children of Prince of Wales and the people living in the vicinity next to the facility deserve better than a “restrict the likelihood” and “adequately protect?” Accidents do happen, despite everyone’s best efforts, plans and safety measures. Should a serious event occur on the BWXT NEC in Peterborough, I am not “adequately” prepared to protect my family, my students, my co-workers or myself. I have little confidence that anyone could be. I have less confidence, given the increase in environmental disturbances (floods, fire, earthquakes) in the ability to predict a safe outcome should any of these circumstances arise. My question is “Why take the risk?”

I ask BWXT NEC and the CNSC to communicate directly to the families of my students assuring them that there is nothing for them to be concerned about now or in the future and that their children are safe breathing in the air, playing in the soil and water 25 metres away from a class 1 nuclear facility.

I also request that BWXT provide detailed Emergency Preparedness Plans to Peterborough City Council for approval, and conduct safety preparedness plans in the event of an emergency for Prince of Wales Public School and residents within the 2km zone surrounding the BWXT NEC as a condition of licensing.

The land on which BWXT sits has a long legacy of pollution and contamination. The documentary “Town of Widows” chronicles the story of family members of former GE workers in their struggle for acknowledgement and appropriate compensation for illness and death directly related to exposure to toxic substances. What measures are in place to protect workers who may be over-exposed to radiation? Are these protections adequate to support and protect workers in the event of an accident/over-exposure? Does BWXT NEC have a proven track record for ensuring the safety of its employees? Does BWXT have supports in place to support the physical and mental well-being of their employees? BWXT NEC’s Public Disclosures page on their website, contains a posting from November 2017 regarding two workers found to be using “incorrect filters” for “Powered Air Purifying Respirators” over a, disturbingly long, “20-month period.” The notice does not state what the root cause of the problem was, (surely this error would have been detected if the filters had been inspected for safety compliance sooner), what the corrective actions were or what medical care and support was given to the workers involved. I am concerned for those workers who must live with the knowledge of what they were not adequately protected. I am also concerned that proper safety inspections of these filters were not conducted in a timely manner. **Can a representative from BWXT NEC explain to the tribunal why the problem was not detected sooner, what was done to support the workers, and what measures have been implemented to ensure that this does not recur?** BWXT NEC “Renewal of Operating License Section 4.8.2 Past Performance Table 3” indicates that there were “0 Lost Time Injuries.” Does this mean that the 2 workers who were using “incorrect filters” did not miss a day of work as a result of this incident? If they were not deemed “injured” which category would this incident fall under?

Given the current toxic load on the land surrounding and on which the facility sits, it is prudent to continue to add further contamination to this residential neighbourhood adjacent to a public school? Has there been any attention/consideration to studying the impact of continuing to add to the toxic burden of the property surrounding the facility?

I ask that the CNSC conduct third-party certified tests of soil, air and water quarterly on the land within a 2km radius and in ALL areas of the school yard as a condition of licensing and that these results are posted publicly and that a detailed explanation of the results are explained in layman’s terms to help all community members understand the findings.

At the CNSC Meet the Regulator event in Peterborough on January 23, 2020, a representative from the CNSC stated that the CNSC has no jurisdiction over the location of uranium pelleting facilities. I found this to be quite shocking. Common sense would dictate that the location of a Class 1 Nuclear facility should be of great importance in ensuring public safety. The International Atomic Energy Agency, of which Canada is a member, states in their “Specific Safety Requirements-Manual for Siting Nuclear Facilities”

"Requirement 26: Population distribution and public exposure. The existing and projected population distribution within the region over the lifetime of the nuclear installation shall be determined and the potential impact of radioactive releases on the public, in both operational states and accident conditions, shall be evaluated and periodically updated.

6.8. Information on the existing and projected population distribution in the region, including resident populations and (to the extent possible) transient populations, shall be collected and kept up to date over the lifetime of the nuclear installation. **Special attention shall be paid to vulnerable populations and residential institutions (e.g. schools, hospitals, nursing homes and prisons) when evaluating the potential impact of radioactive releases and considering the feasibility of implementing protective actions."**

Can a member of the CNSC explain why they are not giving "special attention" to Prince of Wales and Queen Mary Public Schools and the "resident populations" in recommending the approval of the license application for BWXT Peterborough? Are we not, as per this definition, a "vulnerable population?" Can you present any data on your conclusions regarding this requirement? How many schools, hospitals, and nursing homes are located near the BWXT NEC Peterborough site? What is the resident population surrounding the facility? Can you provide/have you provided any research/data on the "potential impact" of "radioactive releases on the public" in either "operational states" or "accident conditions" in Peterborough for the tribunal to review?

I ask the CNSC adhere to this recommendation and withdraw their approval of BWXT NEC's licensing application to produce uranium pellets in Peterborough and Toronto.

I am not a nuclear scientist or a lawyer. I am a mother, educator, resident and concerned citizen. I work and live metres away from BWXT NEC and I don't feel safe knowing that if anything goes wrong, so many lives, especially those of 600 children at Prince of Wales could be irreparably damaged. I know these students and their families' want to live in a safe environment. Everyone does. I am placing my faith in this tribunal to protect these children from **ANY** potential harm that may occur as a result of operations at BWXT NEC Peterborough. They are likely not known to you but they are to me and it's important that I do what I can to ensure their safety. Please do not assume that I am arguing this just because I do not want this industry in my backyard. I don't want it in **ANYONE'S** backyard! I do not believe it is worth the risk, especially in the event of a major accident or incident. I strongly urge that BWXT NEC be denied a license renewal. If granted a license renewal, I strongly urge that the tribunal deny the inclusion of uranium pelleting at BWXT NEC facilities in both Peterborough **AND** Toronto in order to ensure public and environmental safety. I also recommend that the licensing period be reduced to no more than a 5-year period to assist with public engagement, city operations and environmental considerations.

Thank you for your time,

Jacquelin Millar