



**Written submission from
Jennifer Bowe**

**Mémoire de
Jennifer Bowe**

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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January 26, 2020

Dear Commission Members,

RE: BWXT Nuclear Energy Canada Inc. - Application for the renewal of the licence for the Toronto and Peterborough Facilities;

I attended the community information night that BWXT held in late September. Staff were helpful in giving me a useful overview of current local operations making fuel bundles, and the potential pelleting operation. They were open about reasons the company might decide to move the pelleting operations from Toronto to Peterborough as a result of anticipated reduction in demand for their product.

Though not completely comfortable with the normal manufacturing processes described, I was satisfied that I had acquired a clear understanding of them. However, when I asked about plans to deal with unforeseen events, I could not get satisfactory clarity. My questions were repeatedly referred around the room to different staff members. In all I spoke with six BWXT employees. No one could explain emergency precautions and procedures, especially how these would change if pelleting were added to local operations: what would happen in the event of a flood, tornado, earthquake (which Peterborough has had,) explosion, fire, malicious attack, either at the manufacturing site, or during transportation of uranium powder? I was told only that emergency responders would be trained in appropriate responses and experts would be called in. I couldn't get any specifics about which experts, for which types of emergencies, where they would be located, how long they would take to arrive, and what they would actually do. I also could not elicit descriptions of prevention measures, especially physical safeguards that would mitigate the effects of an unforeseen incident.

During and since that information session, I've sought and listened to many experts (including CNSC staff), people with first hand experience of nuclear fuel manufacture, and lay people doing research like myself, to understand the hazards of handling natural and depleted uranium. It seems there is a considerable body of knowledge about the effects and ways to limit external radiation exposure for humans. There seems to be little scientific information regarding the effects of internal radiation on the human body, especially for children. In lay terms, I have grasped that a key difference is that external exposure is transient, whereas particles that enter the body are not always excreted, especially the particles generated during the post-sintering grinding process. Exposure from particles that persist in the body is long-term.

Taken together, the risk of an unforeseen incident, and the risk posed by escaped particles inhaled, ingested, or absorbed by the body are not tolerable.

As part of the manufacture of uranium fuel pellets, liquid hydrogen would be stored at the BWXT Peterborough site. Again, though risks of unforeseen incidents are low, natural disasters, errors and destructive intentions are possible. Locating a large tank of a highly flammable, explosive substance a mere 75 meters from a kindergarten playground is not a risk worth taking.

The only argument I can see for allowing pelleting operations to move to Peterborough is to help BWXT realize efficiencies; effectively, help them make more profit, and by extension possibly keep the costs of nuclear fuel down. These are not a good enough reasons to put my neighbourhood, my child and her school-mates, at increased risk.

Please do not allow the company to establish a new location where higher risks of contamination and other dangers may occur. At the very least, maintain the status quo rather than expose a new population to these risks.

I urge that the CNSC renew BWXT NEC's licence only under its existing terms, and deny the company's request for the flexibility to move pelleting operations to Peterborough.

Thank-you for your consideration,

Jennifer Bowe