



**Written submission from  
Trevor Middel and  
Stephanie Melles**

**Mémoire de  
Trevor Middel et  
Stephanie Melles**

In the Matter of the

À l'égard de

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

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

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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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Filed by email on January 27, 2020

Trevor Middel & Dr. Stephanie Melles  
Peterborough, Ontario,

January 27, 2020

Dear Members of the CNSC,

In 2019 we learned that BWXT-Peterborough applied to start making uranium fuel pellets to power nuclear reactors at their facility on the old GE grounds. The following list of concerns published by a local friend and concerned citizen reflect our questions and concerns regarding this license application by BWXT.

1. **Fine Uranium Powder.** Uranium fuel pellets are made from a very fine radioactive powder (finer than flour) that can easily escape into the air and is easily inhaled or ingested.

**Dear commission members, aside from the uranium that will be permitted to be released as air emissions and liquid effluent, what will be done to contain the air in the facility so that fugitive unaccounted for emissions don't further contaminate the environment?**

2. **Radiological Hazard and Chemical Hazard.** BWXT-Peterborough implies that uranium is safe by calling it weakly radioactive when compared to x-rays but that is outside of the body. If inhaled into the lungs, it can emit alpha and beta particles that irradiate our cells from within for years and years. According to the World Health Organization, once inside the body, alpha particle emitters such as uranium are type 1 carcinogens. Uranium is also a heavy metal with health implications similar to lead.

**Dear commission members, if pelleting begins, by what factor will the risk of getting cancer increase in Peterborough and by what factor will our exposure to heavy metals increase?**

3. **Tiny not negligible.** According to BWXT's 2018 Annual Compliance Report, their pelleting facility in Toronto released 46.2 grams of uranium into the air in the last five years. That's roughly 1/3 cup and doesn't sound like much but according to physicists and President of the Canadian Coalition for Nuclear Responsibility, Dr. Gordon Edwards, 46.2 grams of uranium powder contains 35 quadrillion particles at 0.3 microns in diameter and all it takes is inhaling one particle to potentially cause serious long term illness.

**Dear commission members, do the people of Peterborough understand that similar to the cancer-causing potential of one single asbestos fibre, breathing in just one particle of uranium is extremely dangerous?**

4. **No Environmental Assessment.** A federal environmental assessment is not required for approval of this new industrial process in Peterborough even though radioactive emissions will increase significantly. In comparing the emissions of BWXT's Toronto facility, where they make pellets, to the emissions from BWXT's Peterborough facility, where they assemble the pellets into fuel bundles, Zach Ruiten wrote in an article in The Arthur last month, "According to their self-reported estimates in the 2018 Annual Compliance Report, the company has dosed the Toronto public, claiming to have released 46.2 grams of uranium into the air, and 3.62 kilograms of uranium in the water over the past five years. This is compared with less than one gram into the air and sewer in Peterborough over the same time period."

**Dear commission members, how can the CNSC approve or deny a license for a new industrial process without an independent scientific review of the risks to the surrounding air, land, water, wildlife and people?**

5. **CNSC puts health second.** The CNSC seems to me to be more like the Canadian Nuclear Support Commission than the Canadian Nuclear Safety Commission. Its regulatory limits are set according to the A.L.A.R.A principle, As Low As Reasonably Achievable - not according to what is safe. According to York University Environmental Studies Professor Mark Winfield, the CNSC is “The poster child for an industry captured regulator.” For example, the former president of the CNSC Linda Keen, was promptly fired after raising concerns about the safety of a nuclear reactor.

**Dear commission members, in your opinion does the track record of the CNSC show that it puts Canadians or the nuclear industry first?**

6. **Treaty Rights.** The BWXT-Peterborough facility sits on the traditional territory of the Anishinaabe Mississauga.

**Dear commission members, has BWXT received their permission for this new industrial process?**

7. **Dirty Supply Chain.** According to Civil and Environmental Engineering Professor Mark Z. Jacobson, “Uranium mining causes lung cancer in large numbers of miners because uranium mines contain natural radon gas, some of whose decay products are carcinogenic” and “consumed fuel rods from nuclear plants are radioactive waste...This has given rise to hundreds of radioactive waste sites in many countries that must be maintained and funded for at least 200,000 years.

**Dear commission members, if pelleting begins will the city of Peterborough, the federal government or BWXT accept some of the responsibility of the consequences of pelleting before and after Peterborough? Will some of the profits or the tax revenue go towards compensating the uranium miners in Northern Saskatchewan/ Dene Territory who get lung cancer? Will the highly radioactive consumed fuel rods, return to Peterborough and be safely stored for the next 200000 years?**

8. **Accidents Happen.** In 2017 BWXT-Peterborough found they had been using the wrong masks and had accidentally exposed their employees to highly toxic beryllium. During the 2004 flood in Peterborough, there was 2 inches of water on the floor of the GE facility that ultimately flowed into Little Lake. In 2018 GE claimed responsibility for an oil spill into Little Lake that contained hydrocarbons.

**Dear commission members, if pelleting begins, 1500 metric tons of uranium powder and a 9000 gallon tank of liquid hydrogen will be on-site. What is the worst case possible accident?**

9. **Women & Children.** Women and children are known to be much more vulnerable to both radiological damage and chemical damage than an adult male and the effects are cumulative. Prince of Wales Public School is across the street, Queen Mary Public School is up the street and West Mount Elementary School is 2.5 km away from the facility on Monagan Rd. That’s a lot of kids that will be exposed to new health risks day in and day out.

**Dear commission members, in your personal opinion, if pelleting begins, is the proximity of the facility to public schools acceptable?**

**10. Property Values.** The property value of my house on Paterson St. stands to go down because of the stigma of being so close to a uranium processing facility and the associated risk of radioactive and heavy metal contamination.

**Dear commission members, if pelleting begins and my property value goes down, will I receive compensation from the federal government?**

**In closing we feel that there is no good argument for allowing pelleting operations at the Peterborough facility in light of these concerns and the fact that BWXT has not demonstrated a compelling case for why this operation cannot be continued out of its Toronto facility as it has been doing already. In our opinion this proposed new process in Peterborough poses an unreasonable risk to public health, for no reason other than convenience to BWXT.**

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**From:** Stephanie Melles  
**Sent:** January 28, 2020 7:36 AM  
**To:** Interventions (CNSC/CCSN)  
**Cc:** Trevor Middel  
**Subject:** Re: Intervention for the BWXT Licence Renewal (Hearing Ref. 2020 - H - 01)

Dear CNSC interventions,

I'd like to add that BWXT purchased GE Hitachi nuclear in 2016. GE Hitachi nuclear was NOT operating as a nuclear facility in Peterborough at that time. GE Hitachi nuclear took over GE Peterborough IN NAME ONLY back in 2007. As far as citizens of Peterborough are concerned, this was a change in name only, and no public consultation was necessary.

Their current license is not for operation of a nuclear facility, and they are seeking a 10 year license renewal underhandedly in my opinion. This should be a new license to operate a nuclear facility in Peterborough. They say they are applying for a license renewal, but they do not have a license to operate as one. Just bc you change your name, doesn't mean you're any different! Their current operations do not require the name, 'nuclear facility'. We fought this a decade ago and we'll figure it again now.

We are frustrated that this has been allowed to continue in this way. We have a whole number of other legitimate concerns. I'd be happy to speak to this in person- if necessary.

Stephanie Melles, PhD