



Oral Presentation

Exposé oral

**Written submission from
Melanie Buddle**

**Mémoire de
Melanie Buddle**

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 23, 2020

Written Intervention by Melanie Buddle regarding the BWXT Licence Renewal (Hearing Ref. 2020 - H - 01)

I am writing to intervene in the matter of the BWXT Licence renewal process for the Peterborough, ON plant. From the documents I have read, I understand that their current licence allows for the company to pack already-manufactured uranium fuel pellets into fuel rods. This alone is not something I feel should be allowed in a residential area; the area has zoning as an “industrial park” but of course, times have changed. It is no longer an industrial area and my first concern is that we have allowed a Class 1 nuclear facility to operate in the heart of a residential neighbourhood with a school right across the street. My first request would be to deny a renewal of the licence as the location of this plant is not suitable for **any** manufacturing of any kind.

At this time, however, my greater concern is that BWXT has requested an amendment as part of the renewal, which would allow them to produce fuel pellets out of natural and depleted uranium dioxide powder here in Peterborough. I have read the BWXT submission to the CNSC, as well as the CNSC documents which indicate that commissioners seem willing to approve the licence and this amendment: this raises a number of concerns for me.

The pelleting process involves bringing fine uranium powder, or ‘dust’ into the facility and making it into fuel pellets; uranium dust has much more serious consequences for our health and environment than the already-manufactured pellets. Even if BWXT can tell us that safety precautions are in place, this process will release more emissions than the current fuel bundling process does. Emissions will end up in our air and water: BWXT’s posted information shows there are measurable emissions at their Toronto site, and predicts that the radiation dose to the public, should pelleting manufacturing happen here, would increase from 0.00 μ Sv to 10.44 μ Sv. (Darlington Nuclear Power Plant’s was 0.7 μ Sv in 2017). Data (including the industry’s posted information) shows that increased emissions of what is a radioactive substance are an inevitable part of manufacturing uranium pellets. Maybe we cannot inhale a fuel pellet – but we could certainly inhale a speck of dust, and there is no doubt that this process will lead to emissions of ‘some’ uranium dust, through air or water. Many scientists say there is a long-term risk of health issues with additional exposure. **I understand we could debate whether or not uranium is ‘safe’ and what the effects might be of emissions. You may think it’s an acceptable risk. But I don’t. And I live here, with my children!**

Even if someone could reassure me that emissions from uranium pelleting were not toxic (and they cannot: no amount of uranium, if inhaled, is safe and we cannot guarantee that uranium

would never, ever be released), I would ask: what about the related toxins and highly flammable nature of working with uranium in this manner? The risk with adding the pelleting process to this inner-city Peterborough plant is not only uranium dioxide (which, beyond its other dangers, is flammable). The additional required ingredient to manufacture pellets is hydrogen. We may disagree over the level of 'acceptable' risk in terms of uranium emissions at the plant, **but we can all agree that hydrogen (liquid or gas) is an additional and undeniable risk as it is highly explosive** (hydrogen gas is needed in large quantities to reduce the uranium during the sintering process, which heats the uranium to form pellets). Fires and explosions involving uranium dioxide powder and hydrogen have occurred at nuclear processing facilities before. An explosion could decimate neighbouring houses and our local school.

These flammable substances would also pass through our city streets. What happens if a tanker truck rolls over on the way to the plant? Is there a careful plan for transportation into the city? Accidents can happen. And speaking of accidents: what is BWXT's plan in case of an emergency? Is the city prepared for radioactive contamination? Is BWXT? If uranium dust is a very, very fine powder, and is accidentally released or if there is an accidental dumping of this powder into air/water/sewer: what happens? And is the school across the street prepared for accidents and evacuations? CNSC staff state that 'desktop reviews' are conducted regarding safety protocols but this is not enough for me. To my knowledge, the local school has never been put through a mock drill or been provided with any detailed emergency procedures. Even without pelleting manufacture, I'd suggest this should have already happened. I do not have confidence that BWXT has been providing detailed information and safety information to us, at any point since taking over the plant. My children attended that school; no evacuation procedures or information was ever provided to them, or to me as their parent, about what would be done if something – anything! - went wrong in that plant.

If we must, as a society, work with uranium then we should do so in areas that are not within 2 kilometres of residential areas (even Darlington has a 1 km buffer zone: here, we have an elementary school that is 25 metres from the plant's front gate!) **Is there any nuclear facility in Canada or in North America that is this close to an elementary school? I suggest the CNSC take action to deny this licence, and create, for the future, some protocols around minimum distance from residences and from schools!**

I have read the documents submitted indicating the CNSC is convinced that "BWXT has made and will continue to make adequate provision for the protection of the environment, the health and safety of persons, the maintenance of national security and measures required to implement international obligations to which Canada has agreed." I, as one of the "persons" who would be directly affected should an accident happen on this site, do not feel reassured. I have never had a BWXT safety pamphlet, or "in case of emergency" notice at my house. My ground and water has never been tested to my knowledge. I live less than a kilometre from the school and plant. If environmental assessments are being conducted within the area (and I think they should be done regularly and in a 2 km radius), why don't I know more about it?

Another key issue for our community is that the BWXT site is pre-contaminated. This is not a secret and if interested, the CNSC would be able to access a lot of research about what is buried on site and why the site has been difficult to 'clean up.' How do we know what the effects will be, of adding new industry, when there is legacy pollution on the land due to previous improper handling of industrial substances? And of course this prompts me to ask: **Why must BWXT be granted permission to manufacture fuel pellets in densely populated areas and on an already-contaminated site? Why not manufacture pellets in areas where risks can be minimized?**

CNSC argues a consolidated licence for Toronto and Peterborough facilities provides "greater consistency" and a reduction in "administrative burden." The CNSC document suggests that "BWXT's request for authorization to conduct pelleting operations at the Peterborough facility is acceptable as the requested activities are within this facility's current operating limits." These sound like arguments related, not to health or safety or environmental protection, but rather, to administrative load, efficiency and financial gain. This is not enough for those of us who live nearby. We should not be approaching this in terms of economic or administrative efficiency, or what works for industry. We should be asking any industry that requires air and water testing (even though there is "no risk"? interesting) and that will be dealing with radioactive substances and bringing in related highly flammable substances as part of their manufacturing, to locate outside of cities. There are other places for BWXT to work with uranium: a 2 km zone of no-residential areas should be the first and main standard for nuclear industries.

I strongly urge, with this intervention, that the CNSC deny granting a licence renewal for the Peterborough facility. If - despite my objections and the objections of many others who intervene - you allow a renewal, I strongly urge that you deny BWXT's licence amendment that would allow uranium pelleting in Peterborough as part of their renewed licence.

I also ask that any potential renewal (which again, I oppose) if granted, be for a period of five years or less to allow for careful review of process and detailed environmental assessment. Perhaps a shorter period would prompt BWXT to search out a new location for manufacture, in what actually IS a proper "industrial" zone, instead of a school zone.

Thank you for your time.

Sincerely,

Dr. Melanie Buddle