



**Written submission from
Peter Harris**

**Mémoire de
Peter Harris**

In the Matter of

À l'égard de

BWXT Nuclear Energy Canada Inc.

BWXT Nuclear Energy Canada Inc.

Revision of Financial Guarantee for BWXT
Nuclear Energy Canada Inc.

Révision à la garantie financière de
BWXT Nuclear Energy Canada Inc.

Public Hearing - Hearing in writing based
on written submissions

Audience publique - Audience fondée sur
des mémoires

February 2024

Février 2024

The Canadian Nuclear Safety Commission;

I am submitting this document to the Canadian Nuclear Safety Commission for consideration in hearings on the CNSC regulated Class I nuclear facility in Peterborough Ontario for its revised decommissioning financial guarantees for the current lessor of the GE-Hitachi, GE-Nuclear, GE facility and property. The lessor, (BWXT NEC) apparently wishes to revise its financial guarantees.

I would like to register with commission members my concerns for how this hearing is being conducted. I understand that this is not a hearing about process, but I feel that it is important for commission members to understand that there have been significant issues with process and compliance. I wish for these issues to be recorded with the commission.

1) Failure of the CNSC to adequately notify the public of BWXT's Confidentiality Request

- The CNSC posted a deadline for objections to this request that was post due. When informed of the error, the CNSC reposted the request and provided the public 5 business days to respond.
- The CNSC benchmark for public notification of hearings is [5 business days](#). (It took 6 business days for CNSC staff to provide me with this figure). This benchmark effectively ensures that the CNSC will not engage the public adequately.
- The notice for BWXT's request was originally posted December 20. It is a pattern for CNSC staff to clear their desks before Christmas break. With an embarrassingly weak five business day notification benchmark, this pattern ensures non-participation and a poorly informed public.
- Notification of hearings should occur months in advance, not days or weeks. There is simply no excuse for how the CNSC has handled BWXT's decommissioning hearings.
- CNSC staff and commission members must ask themselves how they would want to be treated if their children attended Prince of Wales School. They need to remind themselves how busy their lives were when their children were the same age as children in the junior playground of this school - only 25 metres from a CNSC regulated facility.

2) Failure of the licensee to meet its license obligations and failure of CNSC staff to uphold those obligations

- From the 2020 record of decision for the licensee's current CNSC license we find the following;

406. The Commission is satisfied that BWXT, through the PIDP and engagement activities, has, in accordance with regulatory and licensing requirements, communicated and will continue to communicate to the public information about the health, safety and security of persons and the environment and other issues related to BWXT's Toronto and Peterborough facilities.

407. However, the Commission clearly heard from the intervenors that BWXT's communication tools need improvement. The Commission notes that BWXT committed to improve its public communication strategy in Toronto and Peterborough, and directs CNSC staff to verify the implementation of the proposed improvements in conjunction of its own sufficiency review of REGDOC-3.2.1.

- While the licensee has created a Community Liaison Committee (CLC) as part of its license obligations, it has not used the CLC for its stated purpose; as a mechanism to inform the public of its activities and seek input from the public. Committee members were not consulted about decommissioning hearings or confidentiality requests.
- Until my complaints were registered with the CNSC, the most recent CLC minutes posted by BWXT were from August of 2022. Over a year's worth of minutes were absent from BWXT's website.
- In the minutes, we find no mention of BWXT's intentions regarding decommissioning
- The CLC would appear to be more of a public relations ploy than a genuine attempt to engage the public.
- BWXT issues newsletters to neighbours of this facility. These newsletters are purportedly intended to inform the public of BWXT's activities but BWXT did not discuss its decommissioning plans or its intent to request confidentiality for those decommissioning plans.

3) Failure of the CNSC to provide access to critical information

- On January 11th 2024, after almost 5 months of not holding hearings, the CNSC decided to "update" its website. From January 12th to January 30th alone the CNSC held 3 hearings.
- The CNSC's website has been a problem for years.
- Why the CNSC chose to "update" its website prior to a schedule containing critical hearings is a question only the CNSC can answer.
- CNSC staff have not made hearing documents a priority. For example, critical [hearing documents](#) for [this hearing](#) are inaccessible. That CNSC staff have not made hearing documents a priority after this "update" should trouble commission members.

4) The failure of the CNSC to separate licenses for the BWXT's Toronto and Peterborough facilities

- In its 2020 decision, the commission was very clear in mandating separate licenses for the two facilities;

“The Commission decided that individual licences will best meet the needs of the host communities and the CNSC’s regulatory expectations – benefits that outweigh any regulatory burden to BWXT.”

- However, in the very first hearing subsequent to the above decision, the CNSC has again merged hearings for these facilities - as if the decision to split licenses were never made. Please see a screen capture for Hearing 2024 H-103 in Appendix 1

5) Regardless of what Commission members determine with respect to the lessor’s confidentiality request, this will be a closed not an open hearing

- The CNSC has posted BWXT and CNSC staff submissions about this hearing that although inaccessible at this time, were accessible prior to the “update”
- These documents were vague and provided little background information regarding decommissioning
- Prior to the decision about confidentiality, and prior to the deadline for submitting interventions, these were the only documents provided to intervenors.
- Without the information required to understand BWXT’s decommissioning plans, intervenors are hamstrung - in what is a de facto closed hearing, regardless of what the commission decides with respect to BWXT’s confidentiality request.
- Requests for confidentiality should be made months in advance of hearings. In order to ensure that hearings are open, submissions to the commission by the licensee and CNSC staff should be revised to reflect the hearing’s openness.

Individually, the above would be considered problematic, but collectively they seem to represent contempt of procedure. Commission members are urged to review [Reg Doc 3.2.1](#) with staff to ensure that regulations are upheld. The commission has a significant credibility problem that it must address. In calling its regulatory role “quasi judicial” the CNSC seems to have provided itself an excuse for sloppy and unfair processes.

I am a resident of Peterborough. I live near the CNSC regulated Class I facility that lies 25m from the school that my two daughters attended. I have a strong interest in what has happened on this site and wish to intervene in the best interests of my community.

Peterborough has a long history of activity on the site that BWXT currently occupies and leases. From the 1890's, General Electric occupied most of this site. However, property to the west of Building 21 came into GE's possession at a later point - I believe in the 1950's - when GE purchased a former Isolation hospital whose grounds became a parking lot.

The nuclear arm of General Electric has had activities on this site from the 1950's onwards. Much of the fuel and reactor design for CANDU reactors occurred at this site. Manufacturing fuel bundles began in the late 1960's.

Coinciding with nuclear activities, from the 1950's onward, the areas marked in yellow on the map below (see Fig. 1) were used by GE, GE Nuclear, GE Hitachi and BWXT as parking lots. Ministry of the Environment soil surveys in the southernmost area of contamination indicate the presence of PCBs together with other contaminants (such as lead) that are consistent with dumping. We must depend upon what GE has told us about contamination on this location, but there seems a high probability that dumping occurred on the southernmost property.

"MS TADROS: Haidy Tadros, for the record.

So we can confirm that there are no radiological legacy issues from the old GE Hitachi. What we do know is that there are dioxins and PCBs that potentially might be on the premises." (CNSC licence hearing transcripts, March 2, 2020)

Surface outflow of pollutants from the southernmost (See Fig. 1 below) area of known contamination has been limited by capping the gravel parking lot with an extended area of pavement. Test holes in this area were drilled to monitor groundwater contamination. Water entering the water table from the hill above the parking lot, would be expected to carry contamination towards the CNSC regulated building 26 which lies downhill from the parking lot. The highest point above the parking lots is the water tower - shown in Figure 1 and 2.

Regulation of movement of pollution off of the northernmost area of known site has been poor. In the mid 2000's this intervenor observed significant amounts of what was likely contaminated soil from the unpaved parking in the middle of Monaghan Road after heavy rain. A street cleaner removed the soil and deposited it in an unknown location. Phone calls to the Ministry of Environment about this problem caused GE/GE-Hitachi to

place limestone at the edge of the parking lot. Ground water from the slope above building 21 has been significant enough to flood building 21 and in 2004, the floor of building 21 was covered with 5cm of floodwater with a high probability that this water had significant levels of PCBs and other contaminants.

Poor regulation of pollution from this site extends to periodic oil sheens on [Little Lake](#) that have been attributed to the General Electric site as water moves downhill in a west to east direction. After significant pollution events in [2018](#) and [2019](#), GE was forced to remediate some of the property. It was not until 2020 that the northern parking lot currently in use by BWXT employees had any significant level of control installed. At this time, cellular gravel stabilization was installed to help prevent surface outflow - 30 years after GE/ GE-Nuclear/GE-Hitachi admitted that it had a problem.

For more than 20 years, GE, GE-Nuclear, GE/Hitachi has acknowledged that the PCB's on this site came from oil used as a dust suppressant. Parking lots used by GE/GE-Nuclear, GE-Hitachi and currently BWXT staff were sprayed extensively to eliminate dust. **This action was taken to protect vehicles, neighbouring properties and the manufacturing processes happening in the neighbouring facilities - including those housing AECB/CNSC regulated facilities.**

References to the use of dust suppressants that benefited employees and manufacturing processes regulated by the CNSC/AECB are given below;

["At present, the widespread contamination of PCB waste oils is under the surveillance of the Ontario Ministry of the Environment, since PCB residues persist and have been identified in many areas of the plant -- as well as adjoining land where PCB waste oils were spread over parking lots and road ways as a "dust suppressant".](#)"

[" PCBs were also present in a dust suppressant used by GE from the 1960s to the 1980s." says public health spokesperson Brittany Cadence.](#)"

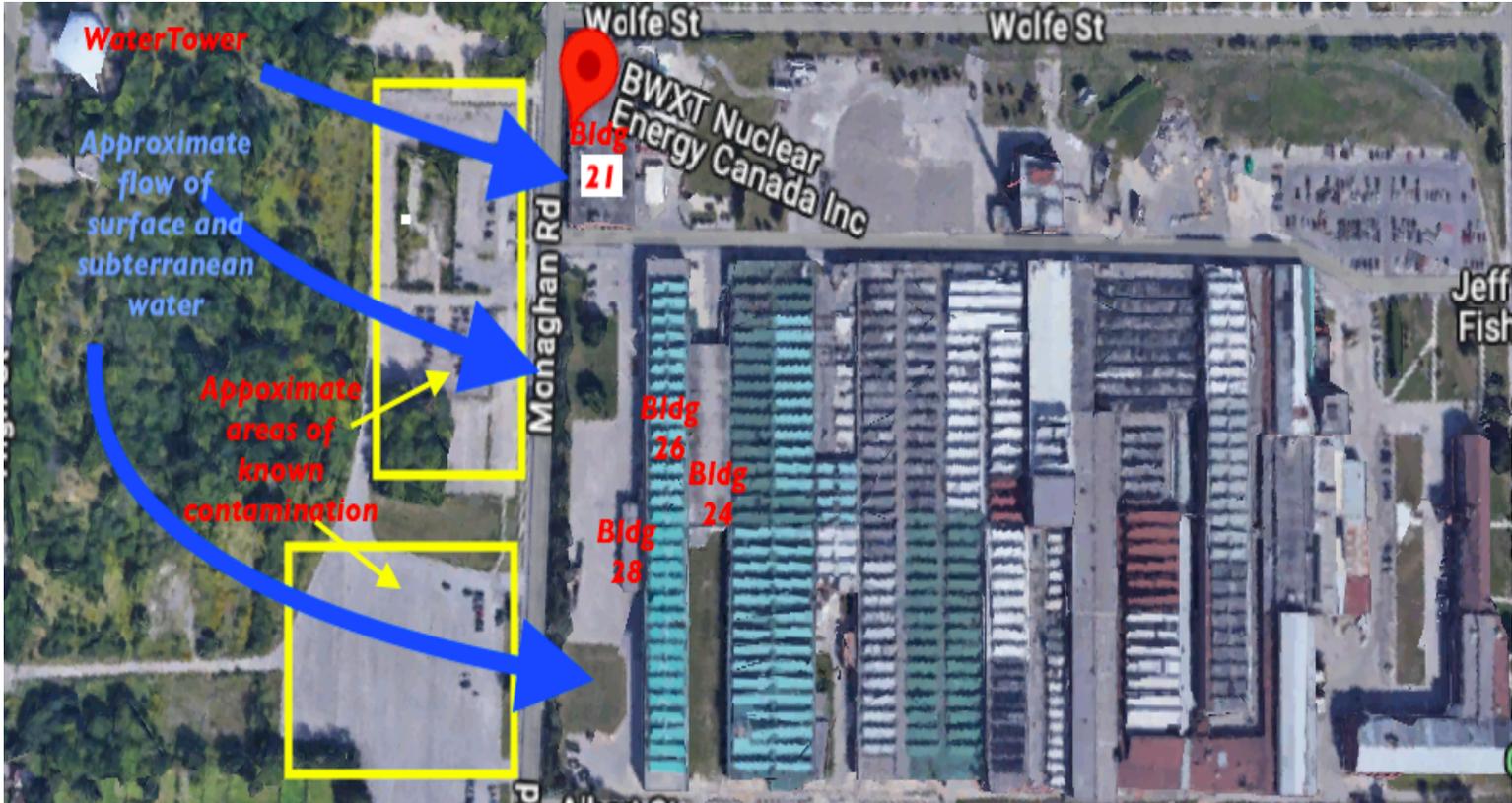


Figure 1. Parking lots contaminated with PCB's, dioxin and other materials and gravity driven motion of water flow through contaminated areas. The Water Tower represents the highest point on this image. Buildings 21,28,26 and 24 are CNSC regulated.



Figure 2. Looking up Wolfe Street towards the water tower. BWXT's building 28 is visible in red and white. Prince of Wales Elementary is at the top of this street and slightly to the right on Monaghan Road. Surface and groundwater contamination is most likely to follow a path dictated by gravity. A PCB contaminated parking lot currently used by BWXT staff and formerly by GE- Hitachi/GE-Nuclear/GE staff is situated on the side of this hill.

The CNSC routinely monitors non-radioactive emissions from former mine sites and mills related to the nuclear industry in Canada. For example heavy metals such as molybdenum, arsenic, copper and nickel are monitored by the CNSC. Furthermore, the CNSC regulates organic materials such as ammonia released from mines and former mine sites.

If, in a manner similar to that that occurred in Peterborough, a CNSC regulated mine operator applied a slurry of mine waste on the employee parking lot, would the CNSC turn a blind eye?

“MS GLENN: *Good afternoon. My name is Karine Glenn and I am the Director of the Waste and Decommissioning Division at the CNSC.*

I confirm that in putting together the decommissioning plans the licensee must consider any hazardous waste that may be non-radiological in addition to any waste that is radiological. So

they need to consider both non-radiological hazardous waste and radiological hazardous waste, so we look at that in their preliminary decommissioning plans.” (CNSC licence hearing transcripts, March 2, 2020)

In licensing documentation for this facility, I have never seen PCBs mentioned in the context of the licensee’s activities. And yet the [General Nuclear Safety and Control Regulations](#) of the Nuclear Safety and Control Act the following that clearly spells out the CNSC’s responsibilities with respect to hazardous materials such as PCBs and beryllium;

“12(f) take all reasonable precautions to control the release of radioactive nuclear substances or hazardous substances within the site of the licensed activity and into the environment as a result of the licensed activity” (General Nuclear Safety and Control Regulations)

What is different about this site, that would make the CNSC believe that PCBs applied to the parking for the benefit of employees and operation of this facility should not be regulated? Why do CNSC staff believe that their responsibility to the community of Peterborough, adjacent school and the environment entails decommissioning this facility as a brownfield, where it will no doubt remain for years - or until tax payers intervene?

“Haidy Tadros, for the record.

So we can confirm that there are no radiological legacy issues from the old GE Hitachi. What we do know is that there are dioxins and PCBs that potentially might be on the premises.” (CNSC licence hearing transcripts, March 2, 2020)

“THE PRESIDENT: So I'm kind of finding it a little challenging reconciling that with what I heard you say, that you are not sure what legacy waste may have been left by GE, but you are still liable for cleaning that up. Is that correct? (CNSC licence hearing transcripts, March 2, 2020)

MS GLENN: Karine Glenn, for the record.

And just to complement Mr. Jamal's answer, just so we all understand what the end state for this facility is for this decommissioning plan is release as an industrial site. So it's not a green field, it's what we would call a brown field.” (CNSC licence hearing transcripts, March 2, 2020)

In allowing BWXT to lease this site without first addressing the role of GE/GE Nuclear/GE-Hitachi in the application of PCBs to the staff parking lots, how does the CNSC separate legal liability in the event of contamination while BWXT operates the facility?

Furthermore, how does the CNSC expect removal of contamination will happen physically? Dioxin, for example, is typically remediated through heat processing while beryllium toxicity is potentiated by heat. The legacy contamination in this site is complicated and remediating it will be complicated. How would the CNSC assess financial responsibility in such a case? Of course, if the CNSC allows BWXT to leave this site as a brownfield, it will leave this problem for the next generation to solve.

During the CNSC license hearings in 2020, statements were made about the contamination on the Peterborough site which suggested that reduced decommissioning guarantees for the BWXT site were warranted due a better understanding (Unfortunately, almost all discussion about Peterborough's decommissioning occurred in Toronto. This is one of the reasons why the commission split the Toronto/Peterborough licences.) The Peterborough facility is located at the bottom of a hill. Contamination is above the facility. With gravity in play, the pollution at this facility will never be static. Pollutants will be driven towards the BWXT facility. Periodic pollution episodes occurring in Little Lake provide evidence of how storms or an elevated ground water table can liberate contaminants and drive them towards the Otonabee River and Little Lake.

Karine Glenn, for the record.

The difference for the current financial guarantee is a decrease of approximately \$4 million from the previous value of financial guarantee. And that's because they've gotten greater precision as to what the contamination is onsite and what they would have to decontaminate as well as greater accuracy of the cost of certain activities that they would need to do. (CNSC licence hearing transcripts, March 2, 2020)

This is a site that has been occupied by industry for over 120 years. We will never know where contamination is with certainty: About 4 years ago, a former GE, GE Nuclear and GE-Hitachi employee told me that staff were instructed to wash molds in acid after beryllium brazing occurred in the Peterborough plant. They were then told by GE Nuclear (at that time) supervisors to dump the acid wash containing beryllium down a sewer grate close to building 21. Over time, the acid dissolved the carbonate sewer pipes and the sewer needed to be replaced. The sewer was removed and replaced but no remediation of soil likely contaminated with beryllium occurred.

This would be an example of the type of surprise legacy contamination that I expect neither BWXT or the CNSC would have mapped. It is also the type of contamination that would be difficult to remediate if it is co-contaminated with materials such as

dioxin. I also question how the CNSC would assess responsibility in a situation such as this if GE-Hitachi refused to pay for cleanup. GE-Hitachi no longer holds the license at this facility.

As we have seen in jurisdictions with historical contamination like that found in Port Hope, it is no small undertaking to understand where contaminants originated and how they were moved through sites of contamination. To believe that this site's non radioactive legacy contamination has been well mapped and delineated would be foolhardy.

MS GILBERT:

"And just so you know, as a neighbour, there have been times where there for several days are trucks with giant pumps and workers in HAZMAT-like suits pumping out the sewers one small block over from me. And I've always assumed that if it was something that was posing a risk to me, that I'd hear about it, there'd be some kind of news. But many times the trucks take a few days and then they go away and then it's over." (CNSC licence hearing transcripts, March 5, 2020)

In summary;

- **This CNSC regulated property occupies a site that has been occupied by heavy industry since the 1800's.**
- **For this reason, knowing where pollution is and where it is heading will be extremely difficult to determine. Financial guarantees need to reflect this.**
- **However, we do know with certainty that GE, GE Nuclear and GE-Hitachi applied PCBs originating from oils used to suppress dust in the parking lots adjacent to buildings 21, 26 and 28**
- **The dust suppressant was applied for the benefit of GE Nuclear staff for parking and to ensure that dust did not affect equipment and processes occurring in the above buildings.**
- **The CNSC has a legal responsibility to remediate the PCBs applied to the parking lots used for the benefit of staff and the nuclear processing occurring in CNSC regulated buildings under the Nuclear Safety and Control Act.**
- **The interaction of organic and inorganic waste under this facility will complicate remediation. Financial guarantees should reflect this.**
- **BWXT's position as lessor of a facility owned by a non CNSC regulated business and occupying a site with known contamination increases the likelihood that liability will be contested.**

- The location of this facility below a contaminated hill ensures that pollution on this site will never be static.
- Financial guarantees should reflect the potential for “surprises” in remediation

If commission members reject their legal responsibilities to ensure that this site is fully remediated, it will effectively ensure that this economically disadvantaged neighbourhood will remain disadvantaged. As thanks for hosting Canada’s “clean” nuclear energy industry, Peterborough will inherit a brownfield. This would be morally indefensible.

Peter Harris

Appendix 1

2024-02-19	2024-H-103	Hearing in writing	BWXT Nuclear Energy Canada Inc.	Nuclear Fuel Fabrication Facility, Peterborough	Notice	Revised Notice of hearing in writing - BWXT Nuclear Energy Canada Inc. - Request for acceptance of the revised financial guarantees for its facilities in Toronto and Peterborough - Revision 1
2024-02-19	2024-H-103	Hearing in writing	BWXT Nuclear Energy Canada Inc.	Nuclear Fuel Fabrication Facility, Toronto	Notice	Revised Notice of hearing in writing - BWXT Nuclear Energy Canada Inc. - Request for acceptance of the revised financial guarantees for its facilities in Toronto and Peterborough - Revision 1