



**Oral Presentation**

**Exposé oral**

**Written submission from  
Murali Ganapathy**

**Mémoire de  
Murali Ganapathy**

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**

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

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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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# Intervention in BWXT Licence Renewal Application

By

Murali Ganapathy, M.A.Sc., P.Eng.

# Concerns

- I reviewed the two CMD that are on the USB stick provided by CNSC;
- “Quantitative Risk Assessment”, “Hazard and Operability Study”, “Hazard Analysis” – do not appear in the document anywhere;
- I am concerned that QRA was not carried out and if carried out, its maximum impact distances for various concentrations of uranium, due to an accident (several scenarios), are not somehow mentioned in the report;
- Why the Emergency Preparedness and Fire Prevention Programs document not in public domain?
- The density of urbanization around the plant has been growing steadily as land is premium in downtown Toronto and Lansdowne and Dupont is seeing large developments all around;
- Without a credible risk identification and transparent risk reporting, the facility should not get license renewal.
- Words of staff saying “we reviewed and it meets regulatory criteria are bogus, at best”. There are no supporting documents

# Concerns

- The facility has been circumventing the question of risk reporting; even CNSC staff at the public meeting were not forthcoming with the details;
- The facility carries insurance for public liability – this amount would somehow be commensurate with the risk the facility is perceived to have by the Insurer. Both CNSC and BWXT are silent about this information.
- New build at Pickering NGS was scuttled due to risk and liability and Government not backstopping the liability amount. BWXT insurance is critical in ascertaining its viability and protection to the citizens.
- In the UK, BWXT would have been subject to a Safety Case - [http://www.onr.org.uk/operational/tech\\_asst\\_guides/ns-tast-gd-051.pdf](http://www.onr.org.uk/operational/tech_asst_guides/ns-tast-gd-051.pdf)
- To quote from this guide:

A safety case should: (a) explicitly set out the argument for why risks are ALARP; and (b) link the information necessary to show that risks are ALARP, and what will be needed to ensure that this can be maintained over the period for which the safety case is valid; (c) support claims and arguments with appropriate evidence, and with experiment and/or analysis that validates performance assumptions; (d) accurately and realistically reflect the proposed activity, facility and its structures, systems and components; (e) identify all the limits and conditions necessary in the interests of safety (operating rules); and (f) identify any other requirements necessary to meet or maintain the safety case such as surveillance, maintenance and inspection.

# Concerns

- **To achieve these, a safety case should:** **(a)** identify the facility's hazards by a thorough and systematic process; **(b)** identify the failure modes of the plant or equipment by a thorough and systematic fault and fault sequence identification process; **(c)** demonstrate that the facility conforms to relevant good engineering practice and sound safety principles. (For example, a nuclear facility should be designed against a set of deterministic engineering rules, such as design codes and standards, using the concept of 'defence in depth' and with adequate safety margins.) Instances where good practice has not been met should be identified and a demonstration provided to justify why these are considered to grossly disproportionate; **(d)** provide sufficient information to demonstrate that engineering rules have been applied in an appropriate manner. (For example, it should be clearly demonstrated that all structures, systems and components have been designed, constructed, commissioned, operated and maintained in such a way as to enable them to fulfil their safety functions for their projected lifetimes.); **(e)** analyse normal operations and show that resultant doses of ionising radiation, to both members of the workforce and the public are, and will continue to be, within regulatory limits and ALARP; **(f)** analyse identified faults and severe accidents, using complementary fault analysis methods to demonstrate that risks are ALARP; **(g)** demonstrate that radioactive waste management and decommissioning have been addressed in an appropriate manner; and **(h)** provide the basis for the safe management of people, plant and processes. (For example, the safety case should address management and staffing levels, training requirements, maintenance requirements, operating and maintenance instructions, and contingency and emergency instructions).

# Concerns

- We understand BWXT and its predecessors have operated for several decades and we also appreciate its contribution to the City and the neighbourhood. However, the situation has changed over the years and that should be recognized by the company as well as CNSC.
- Transparency and trust are vital for the citizens to believe in the permitting process. CNSC and BWXT are hiding facts from the citizenry and that is unacceptable.
- With due respect, BWXT would not be able to get a siting permit from the City if it applied for it in 2020. CNSC license would be a dream.

# Submission

- BWXT should transparently inform the citizens of the risk and the measures undertaken to reduce them – these should be quantitative risks, not verbal or statements of assurance;
- Independent Risk Assessment review should be carried out by experts;
- Once satisfied, CNSC could provide license renewal for 5 years at the most – for BWXT to move its pelleting operations to Peterborough or elsewhere, with much less human density.
- At this point, this facility should be closed.