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Oral Presentation

Written submission from North American Young Generation in Nuclear, Durham Chapter

In the Matter of the

BWXT Nuclear Energy Canada Inc., Toronto and Peterborough Facilities

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

Commission Public Hearing

March 2 to 6, 2020

Exposé oral

Mémoire de North American Young Generation in Nuclear, Durham Chapter

À l'égard de

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

Demande de renouvellement du permis pour les installations de Toronto et Peterborough

Audience publique de la Commission

Du 2 au 6 mars 2020

Canada

Introduction

Veeshesh Sunassy for the record. I am the current vice-president of the NAYGN Durham Chapter and have been since July 2019. It is a privilege to be part of an organization whose mission is to provide opportunities for a young generation of nuclear enthusiasts to develop leadership and professional skills, create life-long connections, engage and inform the public, and inspire today's nuclear technology professionals to meet the challenges of the 21st century.

Today we are here to support BWXT Nuclear Energy Canada's application to the Canadian Nuclear Safety Commission (CNSC) to renew its Class 1B Nuclear Fuel Facility Operating Licence (FFOL) for a period of 10 years. BWXT NEC is seeking one change to its licence with regard to pellet manufacturing operations. In addition to the fuel pellet production at its Toronto facility, BWXT will be seeking to extend those operations to its Peterborough facility over the same 10-year license period.

I joined OPG Darlington Refurbishment team as a co-op student in October 2016 around the same time Unit 2 was shut down for Refurbishment. I witnessed the defueling of Unit 2 as all 480 fuel channels were removed by January 15, 2016 before returning to my studies. I re-joined OPG in May 2018, this time as a temporary employee, and witnessed the refuelling of Unit 2. By November 22, 2019, Unit 2 Refurbishment reached a major evolution as new fuel load was completed. These new fuel bundles were supplied by BWXT. This shows the key role BWXT played in the refurbishment project. As future units undergo refurbishment, both at Darlington and at the Bruce, we have a need for new fuel pellets and bundles which BWXT can supply with quality.

Through our intervention, we will be addressing the 3 main concerns that people have about extending BWXT's license: safety, environment and the community impact.

Safety

Michael Saliba for the record. Since the 1950's, BWXT has supplied the CANDU nuclear fleet with reliable fuel and demonstrated their commitment to the industry, community, environment, and public safety.

BWXT is licenced by the CNSC to produce natural and depleted uranium dioxide (UO2) pellets, as well as to produce and test fuel bundles in their Toronto and Peterborough facilities, respectively. In order to maintain this license BWXT must meet the requirements of the Nuclear Safety Control Act and Class IB Nuclear Fuel Facility Operating Licence FFOL-3620.01/2020 [3]. BWXT has shown that they are able to obtain and maintain this licence as listed in the CNSC's annual regulatory oversight reports [2].

In particular, CNSC staff has consistently rated BWXT's performance as satisfactory in all safety and control areas with zero lost time incidents (LTIs) for the latest reporting period at its Toronto and Peterborough facilities [2]. For 2017, CNSC staff rated BWXT's performance as "satisfactory" in all Safety Control Areas (SCAs) [3].

BWXT continues to improve their already strong health and safety program by including improvements in the Workplace Hazardous Material Information System (WHMIS) and reviewing their practices and policies through three separate committees under its conventional health and safety program: the Health and Safety Policy Committee, the WSC, and the Ergonomics Committee.

Furthermore, BWXT has demonstrated its social responsibility through regular self-reporting. Examples include two reported false fire alarms (2015 & 2017) and one extended power outage in which no health or safety risk posed to the public or their employees [2].

<Here the Durham chapter intends to append a short first-hand account of our BWXT's Toronto facility tour with particular focus on its relevance to the case for safety set out in this section. The tour is scheduled for February 4th; the account will be added shortly thereafter.>

Environment

Dany Awad for the record. BWXT contributes to the continuous efforts of preserving the environment through comprehensive environmental protection program geared towards monitoring and controlling radioactive and hazardous substances emitted from the facility. The program is meant to identify concentrations in the environment and to assess exposure to the public.

The efficacy of the program is reflected in the 2014, 2016, 2018, and 2019 results of the Independent Environmental Monitoring Program (IEMP). This, along with conclusions of available health studies for Uranium processing facilities, confirm that the public and the environment in the vicinity of the BWXT Toronto facility are protected and that there are no expected health impacts [4].

That addresses the environmental impact of the facility itself. However, by being one of just two suppliers of uranium fuel pellets in Cananda, BWXT also plays a key role in minimizing carbon production and generating emission free electricity. Uranium is an abundant metal with considerable energy density—one uranium fuel pellet is capable of creating as much energy as one ton of coal, 149 gallons of oil or 17,000 cubic feet of natural gas [5]. Shifting away from fossil fuel and to renewable and emission free sources of energy factors heavily into sustaining a clean and eco-friendly environment.

Community Impact

Owen Marshall-Glew for the record. I am the Community Outreach Chair of the Durham chapter and the Regional Lead for Canada, I have four years of experience in the nuclear industry and I currently work as a field engineer on the Darlington Retube and Feeder Replacement, one of the largest clean energy projects in Canada.

BWXT Nuclear Energy Canada has supplied fuel and fuelling technologies to CANDU power stations for over 60 years and provides 400 highly skilled positions across Peterborough, Arnprior, and Toronto [1]. Having worked on the NRU reactor in Chalk River not far from Arnprior I can personally attest to the far-reaching opportunities that the nuclear industry can provide in a smaller town. In the wake of the refurbishments at Darlington and Bruce, these contributions are unlikely to change.

As a refurbishment engineer at Darlington I have devoted years of my career to the pursuit of a safe, reliable, and clean energy future for this province, this country, and its citizens. It is particularly

gratifying to me to know, then, that with 60 years of safe operating experience BWXT shares my values and like me has the best interests of Canadians at heart. I have also personally relied upon the nuclear professionals at BWXT as subject matter experts during the refurbishment process and know first hand their devotion to quality, safety, and professionalism.

Furthermore, given the inter-provincial announcements regarding the next generation of reactors, BWXT NEC is uniquely positioned to support the Canadian nuclear industry as it leads the world in the development of these technologies.

I'm confident that that BWXT will continue to reprise its role as a safe and responsible supplier of fuelling expertise for the nuclear industry.

References

[1] BWXT Site License Renewal: file:///C:/Users/marshalo/Downloads/BWXT%20NEC%20License%20Renewal%202019%20-%20Web.pdf

[2] CNSC-*Regulatory Oversight Report for Uranium and Nuclear Processing Facilities*, 2017. Ottawa: CNSC

[3] BWXT-*Annual Compliance Monitoring Report*, 2019. Toronto: BWXT.

[4] Nuclear Facility Map: https://nuclearsafety.gc.ca/eng/resources/maps-of-nuclear-facilities/iemp/bwxt-toronto.cfm

[5] NEI Nuclear Fuel Fundamentals: https://www.nei.org/fundamentals/nuclear-fuel

[6] Case Study-*The End of Coal*, 2017: https://www.ontario.ca/page/end-coal