

Toronto Community Liaison Committee Meeting Record

- Meeting Date:** May 31, 2022
- BWXT NEC:** Natalie Cutler, Director, Communications & Government Relations
David Snopek, Director, EHS & Regulatory Affairs
Ted Richardson, Director, Fuel Operations
Kathleen Augustin, Communications & Community Relations Specialist
- CLC Members:** R Church, H. Dougherty, P. Feinstein, L. Irvine, J. Wickenden, B. Moroz, J.J. Santano.
- Absent:** P. Correia, R. Desrochers, H. Fleisher, J. Ker, D. McNee.
- Guests:** Canadian Nuclear Safety Commission:
 - Julian Amalraj, Senior Project Officer
 - Kristi Randhawa, Radiation and Health Science Officer

Action Items:

Action Item	Status
1. Share video content and infographics with CLC.	Ongoing
2. Review door-do-door approach and plan with CLC.	Hold
3. 2021 Evaluation Feedback: BWXT to provide more information on giving back, community events, etc. CLC to provide ideas.	Ongoing
4. 2021 Evaluation Feedback: Guest speakers, specific to Toronto operations, perhaps NWMO. CLC to provide input on speakers.	Open
5. 2021 Evaluation Feedback: BWXT to review additional translation services for the community in addition to Portuguese (i.e. Spanish, Italian, Vietnamese).	Open
6. Orientation Tours for CLC members (share safety protocols in advance of meeting if held in person)	Open
7. CLC Members to provide new CLC Co-Chair	Open
8. BWXT to ask if 980 Lansdowne contact would like to be added for regular email updates.	Open
9. BWXT to review joining Facebook groups to share information.	Open
10. BWXT to review stormwater monitoring and provide information at next meeting in September 2022.	Open

Discussion Notes:

Due to the COVID-19 pandemic, the meeting was held virtually. The meeting began with a roundtable of introductions, overview of the agenda and a safety moment.

Augustin shared the recently updated Radiation webpage with the CLC and outlined the ways in which the page has been improved using feedback and information learned from the Canadian Centre for Science Communications workshop held earlier in the year.

Cutler then asked the CLC to share any updates and feedback. She noted that the CLC Co-Chair position is still open as the previous CLC Co-Chair reached the end of her term with the CLC and asked any interested members to reach out if they are interested. No feedback was noted by the CLC. Richardson shared that he was recently approached by a member of the public who asked if BWXT NEC offers tours. Richardson shared that currently tours are on hold to protect employees and the public from COVID-19, but that we look forward to hosting again after the summer. Cutler let the CLC know that they can send inquiries and questions about the company and tours direct to questions@bwxt.com or 1.855.696.9588 or to Cutler or Augustin directly.

Next, Cutler reminded the CLC that the June emergency exercise is coming up on June 9th and that local first responders participate to ensure a coordinated approach. She also noted that representatives from the Canadian Nuclear Safety Commission (CNSC) witness and evaluate our response during the drill. Cutler shared that BWXT NEC has shared information about the drills and exercise via a variety of ways including, email updates, postcard mailer, social media and more. She noted that on the day of the exercise, BWXT NEC's phone, social media and website will be updated to inform the community that a drill is occurring and a banner will be hung on the fence. Two CLC members noted they don't recall receiving a mailer, however other CLC members noted they did receive the mailer. Augustin shared this is why BWXT NEC uses a multi-prong approach to communications as not all methods are completely reliable. Augustin shared that the company is also doing a Facebook Ad for one week leading up to the drill to inform neighbours. A CLC member asked if BWXT NEC has posted to local community Facebook groups. Cutler shared that BWXT NEC has not yet done that and Augustin added that some groups have restrictions on who can join. Cutler noted that the company would look into joining community Facebook groups to share information. Two CLC members noted they could share information to their community groups to help spread the word.

Cutler then shared that there have been no public disclosures made for Toronto since the last meeting and noted that the public website (nec.bwxt.com) is up-to-date with all past public disclosures.

Next, Augustin outlined some ways in which BWXT NEC has or will be supporting the community. She first noted that the company will be providing funding to the Davenport Perth Neighbourhood & Community Health Centre (DPNCHC) for their summer camp that will support about 70 low-income children ages 6-12. The camp focuses on enriched learning and discovering Toronto to help kids get outside and explore during the summer. Augustin then shared that BWXT NEC has been a long-time supporter of Western-Technical Commercial School through sponsorship of their FIRST Robotics team. She shared that the company recently developed with the school a scholarship for a student pursuing STEM education.

Snopek then noted that each year BWXT and similar licensees submit an Annual Compliance Report (ACR) to the CNSC. He shared that this is a detailed report that outlines performance from the prior year and demonstrates that BWXT NEC has successfully met the requirements of the Nuclear

Safety and Control Act. He shared the CNSC reviews the report, along with their information collected throughout the year, and forms a Regulatory Oversight Report for the Commission. He noted at the end of the year, the CNSC presents their report and data to the Commission at a public meeting and BWXT NEC appears before the Commission to answer questions. Snopek shared that the full 2021 ACR for BWXT NEC is posted on the public website at nec.bwxt.com.

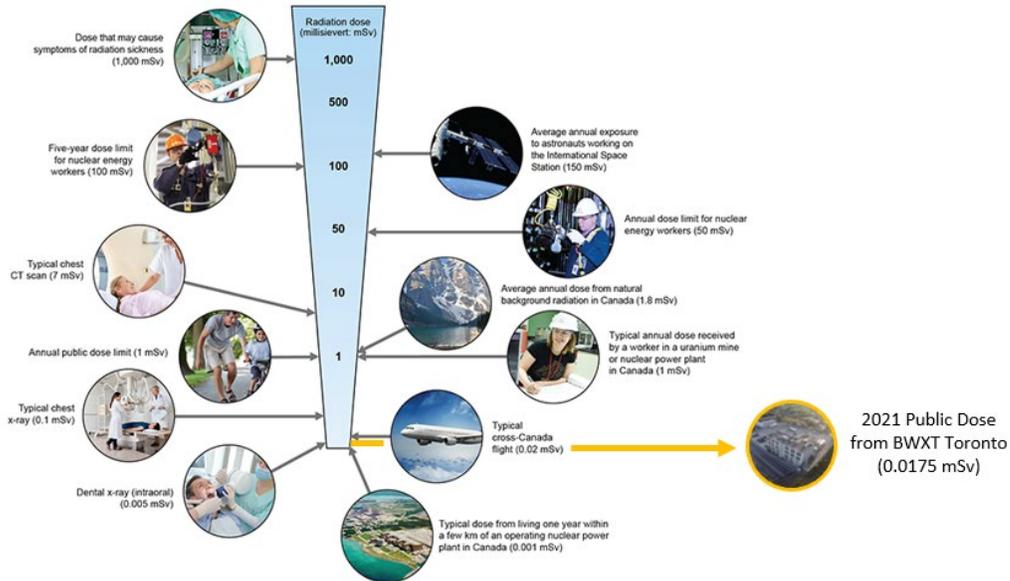
Snopek proceeded to provide information on specific areas of the ACR.

Public Dose: Snopek shared that public dose is a calculated value, measured in mSv (millisievert). He noted that the regulatory limit for members of the public is 1 mSv per year and the average natural background radiation exposure people living in Canada receive is 1.8 mSv per. Snopek shared the below table to outline the public dose from 2021 and previous years. A CLC member asked if the dose is calculated based on someone standing outside the facility 24/7 for the year. Snopek explained that the dose is based on estimates of occupancy for the closest person to the site. The CLC member asked if the dose is different for a child. Snopek explained no, that the dose conversion factors are bounding for children and adults. The CLC member asked if there is a maximum or median dose based on occupancy. Snopek explained that the dose is so low that regardless if the dose is the maximum, it would be a very small fraction of the public dose limit. Another CLC member asked why the 2018 and 2020 doses are so low and why 2019 was an increase. Snopek explained that the dose is calculated based on two components; direct gamma using thermoluminescent dosimeters and an inhalation dose from the small emissions from the site. He continued to note that in some cases, the gamma component is smaller than the background dose and therefore the public dose for the year consists of only the very small inhalation dose resulting in very low doses in some years.

Year	Estimated Annual Public Dose (mSv)	% of Public Dose Limit (1,000 μ Sv = 1 mSv)
2021	0.0175	2%
2020	0.0057	1%
2019	0.0235	2%
2018	0.0004	0%
2017	0.0175	2%

Snopek continued on to share a graphic from the CNSC website on radiation dose examples (see image below). He went through some of the dose examples and shared that the 2021 estimated public dose from the Toronto site in 2021 was 0.0175 mSv which is similar to the dose you would get from a flight from Toronto to Vancouver at 0.02 mSv.

Radiation dose examples



2021 Air Monitoring (Stack): Snopek shared that continuous in-stack sampling is conducted for all six stacks at the facility. He explained that a sample of air is drawn across a filter capable of trapping uranium dust and the samples are analyzed in-house daily and verified externally by an independent laboratory. Snopek referred to the below table to outline that of the 1506 samples taken, zero exceeded the action level.

Toronto Stack Air - Uranium	2020	2021
Number of samples taken	1506	1506
Number of samples exceeding action level (1.0 µg/m ³)	0	0

2021 Air Monitoring (Perimeter): Snopek shared that perimeter samples are high-volume air samples drawn at five positions strategically located around the facility perimeter. He explained that perimeter samples are analyzed externally by an independent laboratory. Snopek referred to the table below to outline that of the 260 samples taken, zero exceeded the action level and the average and highest values were extremely low.

Toronto Perimeter Air - Uranium	2020	2021
Number of perimeter samples taken	265	260
Number of samples exceeding action level (0.08 µg/m ³)	0	0
Average concentration (µg/m ³)	0.000	0.000
Highest value recorded (µg/m ³)	0.003	0.003

2021 Water Monitoring: Snopek shared that water is used in the production process and to clean

protective clothing, floors and other janitorial functions. He continued to share that the water is first held in storage tanks at the facility, treated to remove uranium dioxide, tested and only released once the test results confirm it meets release requirements. He noted that uranium in water concentrations and water discharge quantities are subject to normal variations from year to year, depending on production activities, cleaning and maintenance activities that occur during a given year. Snopek referred to the table below to outline that no samples taken exceeded the action level.

Toronto Water - Uranium	2020	2021
Number samples exceeding 6 ppm action level	0	0
Average uranium concentration at point of release (ppm)	0.24	0.28
Highest uranium concentration at point of release (ppm)	2.79	2.55

2021 Soil Sampling: Snopek shared that in Ontario, background levels of uranium in soil are generally below 2.5 µg/g (parts per million (ppm)). The Canadian Council of Ministers of the Environment (CCME) established soil quality guidelines to protect human health and the natural environment. He continued to note that soil sampling for uranium is conducted annually by a third-party consultant and samples of surface soil are retrieved from locations both onsite and in the surrounding community. He shared the sampling methodology used is based on Ministry of the Environment Conservation & Parks guidelines. Snopek referred to the table below to outline that all samples taken were below the CCME guidelines.

	Location Description		
	On BWXT NEC property	On industrial / commercial lands (i.e. south rail lands)	All other locations (i.e. residential)
Relevant CCME Guideline (µg U/g)	300 µg U/g	33 µg U/g	23 µg U/g
Number of samples taken	3	2	29
Average concentration (µg U/g)	2.4	1.0	1.0
Maximum concentration (µg U/g)	4.6	1.0	1.1

Snopek asked the CLC if they had any questions on the ACR data shared. None were noted. A CLC member asked about stormwater monitoring and shared that during past discussions recalled that the stormwater management and catchments on the property were not sampled for runoff. The CLC member asked if this is something BWXT NEC or the landlord would monitor. Snopek noted he would look into this question and get back to the CLC member at the next meeting.

Cutler asked Amalraj from the CNSC if he had any updates to share. Amalraj noted that the CNSC attends a Toronto and a Peterborough CLC meeting each year for compliance purposes and to understand issues in the community and the last meeting CNSC attended in Toronto was in November 2021. He shared that there was a power outage at the Toronto site in October 2021 and that the emergency operations centre at BWXT NEC responded as expected. He noted that the CNSC conducted three inspections in the last six months and shared CNSC will be attending the

June 9th emergency exercise to conduct an on-site inspection of the response. Amalraj shared that there have been no action level exceedances or safety concerns with the site. He noted that the CNSC has had a lack of face time with the community and intends to look into better plans once normal operations commence in the fall. Amalraj shared that the CNSC will be in Toronto the week of June 6-10 to conduct its Independent Environmental Monitoring Program (IEMP) where they will be sampling emissions to ensure compliance. He noted that the team will be there with a tent and banner and that notifications to key stakeholders have occurred with participation planned with some Indigenous communities. Amalraj asked if the CLC had any questions. None were noted.

Before the meeting ended, Augustin mentioned the next meeting would likely be held in September and BWXT would like to hold the meeting in person and offer tours to new members if able. She noted that CLC members can reach out at any time and that they do not need to wait for meetings to ask questions.

The meeting concluded.