Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

CMD 26-M13.39

Date: 2026-04-17

Written Submission from the Canadian Environmental Law Association for Citizens Against Radioactive Neighbourhoods

Mémoire de l'Association canadienne du droit de l'environnement pour Citizens Against Radioactive Neighbourhoods

In the matter of the

À l'égard de la

Mid-term update from BWXT Nuclear Energy Canada Inc. on licensed activities at its Toronto and Peterborough facilities

Mise à jour de mi-parcours sur les activités autorisées de BWXT Nuclear Energy Canada Inc. à ses installations de Toronto et de Peterborough

Commission Meeting

Réunion de la Commission

May 2026

Mai 2026

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Canada

Canadian Environmental Law Association
EQUITY. JUSTICE. HEALTH.

CITIZENS AGAINST RADIOACTIVE NEIGHBOURHOODS (CARN)

Comments on the Mid-Term Licence Update for the two Class IB licences held by BWXT Nuclear Energy Canada Inc. (BWXT), with a focus on BWXT's Peterborough Facility

(Ref. 2026-M-13)

April 17, 2026

Prepared by:
Sara Libman, Legal Counsel to CELA

April 17, 2026

Sent by email interventions@cnsc-ccsn.gc.ca

Senior Tribunal Officer, Secretariat
Canadian Nuclear Safety Commission
280 Slater Street,
P.O. Box 1046, Station B
Ottawa, Ontario K1P 5S9

Dear Sir or Madam:

Re: Submission of Canadian Environmental Law Association, on behalf of Citizens Against Radioactive Neighbourhoods, regarding the mid-term update from BWXT Nuclear Energy Canada Inc. on licensed activities at its Toronto and Peterborough facilities (Ref. 2026-M-13)

The Canadian Environmental Law Association ("CELA") has enclosed its comments, on behalf of Citizens Against Radioactive Neighbourhoods ("CARN"), regarding the mid-term update from BWXT Nuclear Energy Canada Inc. on licensed activities at its Toronto and Peterborough facilities.

Please find below our submission for your review.

By this letter, and pursuant to the CNSC's *Rules of Procedure*, CELA requests status to participate as an intervenor in the public meeting and an opportunity to provide oral submissions at the May 2026 meeting.

Sincerely,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

Sara Libman

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I. INTRODUCTION

On behalf of the Citizens Against Radioactive Neighbourhoods ("CARN"), the Canadian Environmental Law Association ("CELA") submits this intervention in response to the Canadian Nuclear Safety Commission's ("CNSC") Public Notice dated November 28, 2025 requesting comments on the mid-term licence update from BWXT Nuclear Energy Canada Inc. ("BWXT" or "the licensee") regarding its two Class IB fuel facility operating licences at its Peterborough and Toronto sites.[1] A public meeting for this matter is scheduled for the week of May 25, 2026 in Peterborough.

For the reasons detailed below, CARN re-iterates its concern that the licensee has not demonstrated that they have taken all reasonable precautions to limit and control its emissions to the environment, despite the requirement in the Radiation Protection Regulations[2] to maintain emissions as low as reasonably achievable (ALARA). Further, because of the deficiencies in environmental monitoring data required by the CNSC, there is not sufficient evidence for the Commission to conclude that BWXT, in carrying out its licence, human health and the environment will be protected.

The intervenors have prepared this submission to review what has occurred at the Peterborough facility in the first half of the 10-year licence, and seek clarity on what will happen in the next 5-years of the licence term. This submission poses questions to the CNSC and BWXT on shortfalls associated with the operations at the Peterborough facility and provides recommendations to ensure human health and the environment are being protected through adequate monitoring and regulatory oversight.

II. INTEREST AND EXPERTISE

(a) Citizens Against Radioactive Neighbourhoods

Citizens Against Radioactive Neighbourhoods ("CARN") is a Peterborough-based non-profit whose membership has an interest in nuclear facilities and the licensing process. CARN is specifically concerned about impacts related to the emission of radionuclides and the health of communities and the environment adjacent to nuclear facilities.[3]

CARN is a volunteer led, unincorporated group of concerned citizens that works with the local community to raise awareness about nuclear facilities and advocates for stringent human health and environmental safeguards. CARN was created in response to BWXT's request to the CNSC

[1] CNCSC, "Notice of Participation at a Commission Meeting and Participant Funding" (Ref. 2026-M-13) online: https://api.cnsc-ccsn.gc.ca/dms/digital-medias/CMD26-M13-CR-NTC-ENG.pdf/object

[2] Radiation Protection Regulations, SOR/2000-203, under the Nuclear Safety and Control Act, s 4

[3] Citizens Against Radioactive Neighbourhoods, online: https://www.nopellets.ca

for a flexible license that would allow it to commence pelleting production at their Peterborough facility.

CARN is very concerned about the oversight and monitoring of industrial processes located in a residential area, with specific concerns about threats to vulnerable populations like children attending a public school within 25 metres of the BWXT facility. CARN is of the firm view that industrial processes that carry significant risks should be subject to rigorous environmental monitoring by the regulator over the course of a licensing term, and demand the full scrutiny of public attention.

CARN has dozens of members and has been raising concerns from local community members for 7 years, and has been recognized by the City of Peterborough with a community betterment award for its work in the community in terms of informing the public and advocating for engagement with CNSC public hearings surrounding the BWXT facility.[4]

(b) Canadian Environmental Law Association

CELA is a non-profit, public interest law organization. CELA is funded by Legal Aid Ontario as a speciality legal clinic to provide equitable access to justice to those otherwise unable to afford representation for environmental injustices. For nearly 50 years, CELA has used legal tools to advance the public interest, through advocacy and law reform, in order to increase environmental protection and safeguard communities across Canada. CELA has been involved in number of nuclear facility licensing and regulatory matters before the CNSC. CELA has an extensive library of materials related to Canada's nuclear sector which is publicly available on our website.[5]

CELA represented CARN during the 2020 BWXT licence renewal hearing. In advance of this hearing, CELA and its experts hosted multiple public legal education events in Peterborough. For the hearing, CELA prepared written submissions alongside experts Dr. Tanya Markvart and Dr. Gordon Edwards, as well as making oral submissions during the hearing, expressing concerns about human health and environmental implications associated with renewing BWXT's licence to operate its Peterborough and Toronto facilities.

III. BACKGROUND

BWXT holds two site-specific licences for Class IB nuclear facilities to manufacture CANDU (CANada Deuterium Uranium) nuclear fuel bundles. These fuel bundles are used to power the

[4] CARN News, online: https://www.nopellets.ca/
[5] Canadian Environmental Law Association, online: www.cela.ca

Pickering and Darlington Nuclear Generating Stations.[6] Uranium dioxide fuel pellets are currently manufactured in BWXT's Toronto Facility from uranium powder, while the Peterborough facility manufactures fuel bundles using the pellets from Toronto and using zircalloy tubes manufactured in-house. In addition, the Peterborough facility operates a fuel service business.[7] BWXT's two licences are valid until December 31, 2030.

In March 2020, the CNSC conducted public hearings in Toronto, Ontario and Peterborough, Ontario, for BWXT's application to renew the Nuclear Fuel Facility Operating Licence for its two Class IB facilities located in Toronto and Peterborough, Ontario for a period of 10-years. The Commission received and accepted 247 interventions for this public hearing, with many interventions being submitted by community members expressing concerns about radioactive materials being handled so close to an elementary school, and in a residential neighbourhood, in Peterborough.

Following the March 2020 hearing, there was a continuation of the public hearing, directing CNSC staff to carry out expedited soil resampling for beryllium from properties adjacent to BWXT's Peterborough facility, focusing on Prince of Wales Public School, to clarify the risk that the seemingly increasing beryllium levels may present to the health and safety of the public and the environment, and potentially identifying the reasons for the increase and the source of the beryllium.[8]

On December 18, 2020, the Commission released its decision, granting BWXT two separate operating licenses for the Toronto and Peterborough facilities, both subject to 10-year terms:

> The renewed facility-specific licences, FFL-3621.00/2030 for the Toronto facility and FFL-3620.00/2030 for the Peterborough facility, are valid from January 1, 2021 until December 31, 2030.
>
> The Commission authorizes BWXT to carry on the commercial production of UO2 fuel pellets at its Peterborough, Ontario facility, subject to the condition that BWXT submits a final commissioning report related to the commercial production of fuel pellets that is acceptable to the Commission.[9]

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[6] CNSC, Commission public meeting information: BWXT Nuclear Energy Canada's mid-term review, https://www.cnsc-ccsn.gc.ca/eng/the-commission/hearings-meetings/meetings/bwxt-midterm/

[7] CNSC, Revised Notice of Participation at a Commission Meeting, April 15, 2026 (Ref. 2026-M-13 Rev. 1), online: https://api.cnsc-ccsn.gc.ca/dms/digital-medias/CMD26-M-13-REV-NTC-ENG.pdf/object?utm_source=dialoginsight&utm_medium=email&utm_campaign=M302-20260416

[8] CNSC, "Record of Decision: Application for the Renewal of the Fuel Facility Licence for BWXT's Toronto and Peterborough Facilities"(Ref. 2020-H-2) December 18, 2020, at para 12 **[2020 Record of Decision]**

[9] 2020 Record of Decision, para 14

Rather uncommon for a Commission hearing, there was dissenting opinion from one of the Commission members:

> With respect to the authorization to BWXT to conduct commercial fuel pelleting operations in Peterborough, the decision is that of the majority of the Commission. Commission Member Dr. S. Demeter would not authorize BWXT to conduct commercial UO2 fuel pelleting operations in Peterborough, Ontario and would hold that the pelleting operations should remain in Toronto, Ontario.[10]

The dissenting view of Dr. S. Demeter will be discussed in greater detail throughout this submission.

The CNSC has chosen to licence a nuclear site, including the expansion of that site, in a residential neighbourhood already impacted by environmental contamination from the General Electric plant at this site operating from 1892 to 2018. It has also chosen to licence a site, including expansion of a site, 25 metres from an elementary school. The particular needs and vulnerability of this community directly adjacent and surrounding the site need to a primary concern in this mid-term licensing hearing and all future decisions on the Peterborough BWXT site.

Pursuant to the decision issued by the Commission in 2020, BWXT is required to provide comprehensive mid-term updates on its licensed activities for each of the Toronto and Peterborough facilities.[11]

IV. SCOPE OF REVIEW

CARN received participant funding to retain CELA to review the BWXT' mid-term licence update report and related documentation, including BWXT and CNSC Commission member documents, with a focus on the environment and human health in order to make recommendations aimed at improving licence and Licensing Control Handbook ("LCH') parameters specific to environmental protection, public awareness and human health.

This intervention is directly relevant to the Commission's duty under section 24(4) of the *Nuclear Safety and Control Act* (NSCA) to ensure the adequate protection of the environmental and human health.[12] CELA's findings and recommendations, below, aim to advance the objectives of the Commission and are directly relevant to this mid-term licence update. CELA's review also recommends how the CNSC, enabled by section 24(4) of the *NSCA,* can incorporate principles of

[10] 2020 Record of Decision, para 15
[11] 2020 Record of Decision, para 23
[12] *Nuclear Safety and Control Act*, SC 1997, c 9

international environmental law, such as the precautionary principle, in its review of BWXT's operations over the course of this 10-year licence period.

For this written submission, CELA has reviewed CNSC regulatory oversight reports, relevant international reports and standards associated with radioactive materials and nuclear safety, academic reports and studies concerning human health and environmental effects, and other CNSC policies and regulatory provisions.

V. FINDINGS

(a) Reflecting on the Licensing Decision from 2020

i. Precautionary Principle, ALARA, and the Principle of Justification

In the Record of Decision for the 2020 licence renewal hearing, one of the Commission Members dissented on the decision to permit BWXT to conduct fuel pelleting operations in Peterborough. Section 4.19 in the 2020 Record of Decision sets out Dr. S. Demeter's dissenting opinion on this issue, with the primary concern being what is the safest option:

> Dr. Demeter is of the view, however, that BWXT has not provided adequate justification for such an eventual transfer, and that the question is not whether pelleting is safe in Peterborough, but rather, at what location is it "safer" to pellet. Holding all else constant, the **significant difference between BWXT's Toronto and Peterborough facilities is the presence of an elementary school (i.e. Prince of Wales Public School), with an identifiable vulnerable population, immediately adjacent to BWXT's operations in Peterborough.** Therefore, taking all things into consideration, is it safer to pellet in Toronto or Peterborough?[13]

In the dissent, Dr. Demeter held that if a safety case could be made for either site, the request to allow pelleting in Peterborough "…needs to be analysed through the lenses of ALARA, justification, the precautionary principle and the relative risk of pelleting in Toronto vs Peterborough…"[14]

The intervenors submit Dr. Demeter approached this issue through the correct lens, as the issue of allowing pelleting must consider what is safe, especially for such a vulnerable community. The intervenors further submit these principles need to be applied when reviewing BWXT's practices so far under this licensing term, and must be applied should BWXT seek to commence pelleting in Peterborough.

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[13] 2020 Record of Decision, para 443
[14] 2020 Record of Decision, para 445

Precautionary Principle

The precautionary principle was adopted into Canadian law by the Supreme Court of Canada in *Spraytech* 2001.[15] As the court held:

> In order to achieve sustainable development, policies must be based on the precautionary principle. Environmental measures must anticipate, prevent and attack the causes of environmental degradation. Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.

Dr. Demeter relied on the precautionary principle when opposing pelleting in Peterborough: "even if it would be difficult to argue that there is potential for "serious or irreversible damages" with moving the pelleting operations, adding radiation doses and UO2 air and effluent emissions in a site which has an adjacent vulnerable population, is not acting in an abundance of precaution."[16] The majority claimed that there would not be serious or irreversible damages, and that "the pelleting operations, the plant design and the estimated doses and environmental releases are well characterized, and would be conducted in **only one facility**."[17]

When reviewing the uncertainty and data gaps in environmental monitoring around BWXT's facilities (to be discussed below), the intervenors submit the precautionary principle is applicable to the Peterborough facility, especially with a highly contentious demolition application slated for numerous buildings on the Peterborough property where BWXT operates. The intervenors recommend the CNSC revisit the potential threat of serious or irreversible damage from BWXT's operations in Peterborough, and the risks pelleting would bring to this vulnerable neighbourhood through applying the precautionary principle to the licensee's operations.

ALARA Principle (As Low As Reasonably Achievable)

In the dissent, Dr. Demeter submitted that the ALARA principle needs to be considered for the "selection of the best option under the prevailing circumstances, in accordance with section 4.1.3 of the draft REGDOC-2.7.1: Radiation Protection. Considering "social factors" such as equity and social trust, Dr. Demeter concluded that BWXT had not demonstrated that moving the pelleting operation to Peterborough would be acceptable.[18] The majority disagreed with Dr. Demeter's application of the ALARA principle, viewing that the very low levels of environmental releases

[15] 114957 Canada Ltée (Spraytech, Société d'arrosage) v. Hudson (Town), [2001] 2 SCR 241 at paras 30 – 32.
[16] 2020 Record of Decision, para 451
[17] 2020 Record of Decision, para 452
[18] 2020 Record of Decision, para 446

and doses to the public would not have an impact on the health of persons and the environment, in accordance with subsection 24(4) of the NSCA.[19]

It is important to note that the ALARA principle must be implemented by the licensee (BWXT), and not the CNSC itself. Section 4.1.3 of REGDOC-2.7.1. states:

> The application of the ALARA principle should be considered at all stages – from design of facilities, processes, structures, systems and components, to construction, through to operation, decommissioning and waste management. The application of ALARA should be implemented by licensees through an ongoing, cyclical process (i.e., the optimization process or the ALARA process)… Judgment of reasonableness is inherent in the ALARA process. Understanding, good practice and feasibility help in judging the reasonableness of an action…[20]

As the intervention will discuss below, there are concerns about the monitoring and report of various environmental pollutants, and submit the ALARA principle is not being met by BWXT. The intervenors request the CNSC review the licensee's application of the ALARA principle.

Principle of Justification & Unreasonable Risk

Dr. Demeter referred to International Commission on Radiological Protection's system of radiation protection being framed by justification, optimisation and dose limits (ICRP Publication 103, 2007) and determined that "BWXT has not provided justification that would override the need to protect the more vulnerable population of Peterborough, and that it is therefore more justifiable to conduct pelleting in Toronto than in Peterborough."[21]

The International Atomic Energy Agency ("IAEA") has recommended that Canada adopt the principle of justification, as noted in a recent IAEA Mission reviewing Canada's regulatory framework for safety. In 2019, the IAEA made 4 recommendations and 16 suggestions to make Canada's regulatory framework align with IAEA standards, and 2 recommendations and 10 suggestions have been closed. However, it is still recommended that Canada implement the following:

- Explicit justification of facilities and activities whereby radiation risks must be considered in terms of the overall benefit, in line with IAEA safety standards;
- Full alignment of Radiation Protection Regulations with IAEA safety standards;

[19] 2020 Record of Decision, para 447
[20] CNSC, REGDOC-2.7.1: Radiation Protection, subsection 4.1.3
[21] 2020 Record of Decision, para 450

- Implementation of constraints on dose or on risk, to be used in the optimization of protection for members of the public for nuclear facilities.[22]

The intervenors recommend that the IAEA principle of justification must to be incorporated into the *Nuclear Safety and Control Act*, to ensure the protection of human health and the environment is not compromised by a licensee's economic priorities, as would be the case with pelleting activities commencing in Peterborough.

Rather than Canada being bound by the principle of justification, the *NSCA* requires the CNSC to prevent unreasonable risk, under section 9(a)(i):

> The objects of the Commission are
>
> (a) To regulate the development, production and use of nuclear energy and the production, possession and use of nuclear substances, prescribed equipment and prescribed information in order to
>
> (i) prevent unreasonable risk, to the environment and to the health and safety of persons, associated with that development, production, possession or use…[23]

During the hearing, intervenors raised concerns about the vagueness of "unreasonable risk" and "safety". In response, CNSC staff explained:

> [A]s a regulator, the CNSC considered unreasonable risk to be an exposure to the public, worker or environment that causes an impact to health and safety. A licensee's loss of control of the operations of its facility – which may not have an immediate impact but has the potential to have one – is also considered to be an unreasonable risk. Safety analyses consider information and assessments that had been carried out relative to risk and are a more judgment-based concept. Although, the Commission understands the concerns raised by intervenors on the apparent vagueness of such terminology, the Commission notes that the CNSC's mandate per article 9(a)(i) of the NSCA includes the "prevention of unreasonable risk…to the health and safety of persons…" The term "risk," in the context of the CNSC's mandate, is also defined in REGDOC-3.6, Glossary of CNSC Terminology. The Commission is satisfied with CNSC staff's interpretation of the terminology discussed during this hearing.[24]

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[22] IAEA, "IAEA Mission Recognizes Canada's Robust Regulatory Framework for Safety, Encourages Continued Improvements" 13 June 2024, online: https://www.iaea.org/newscenter/pressreleases/iaea-mission-recognizes-canadas-robust-regulatory-framework-for-safety-encourages-continued-improvements, *emphasis added*

[23] NSCA, s 9(a)(i)

[24] 2020 Record of Decision, para 95

According to REGDOC-3.6, "risk" is defined as: "The chance of injury or loss, defined as a measure of the probability and severity of an adverse effect (consequence) to health, property, the environment or other things of value; mathematically, risk is the probability of occurrence (likelihood) of an event multiplied by its magnitude (severity)."[25] The intervenors note that there is no definition of "unreasonable" within the glossary. The intervenors request that the CNSC defines what an "unreasonable risk" is, and how it comes to that determination. With such vulnerable community members (children) being in close proximity to BWXT's operations 5 days a week, at what point does the risk to children's health become unreasonable?

Recommendation No. 1: CNSC revisit the potential threat of serious or irreversible damage from BWXT's operations in Peterborough, and the risks pelleting would bring to this vulnerable neighbourhood through applying the precautionary principle to the licensee's operations.

Recommendation No. 2: The ALARA principle is not being met by BWXT. The intervenors request the CNSC review the licensee's application of the ALARA principle.

Recommendation No. 3: The IAEA principle of justification must to be incorporated into the *Nuclear Safety and Control Act*, to ensure the protection of human health and the environment is not compromised by a licensee's economic priorities, as would be the case with pelleting activities commencing in Peterborough.

Recommendation No. 4: The intervenors request that the CNSC defines what an "unreasonable risk" is, and how it comes to that determination.

ii. Failure to uphold recommendations on monitoring air quality

At the licence renewal hearing, expert Dr. Julian Aherne, Associate Professor, Trent University's School of Environment,[26] provided insight on gaps and shortfalls in environmental monitoring of current emissions from the Peterborough site. One of Dr. Aherne's recommendations was: "that the CNSC require ambient environmental monitoring for all facilities located within residential areas; this will ensure that the public and the environment are protected from emissions from licenced facilities. Environmental monitoring programs provide additional (external) verification on facility emissions and provide the public with direct information on environmental quality."[27] Dr. Aherne also recommended improvements to the Independent Environmental Monitoring Program (IEMP), noting:

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[25] CNSC, REGDOC-3.6, Glossary of CNSC Terminology

[26] *Note*: Dr. Aherne's area of expertise is environmental monitoring. https://www.trentu.ca/news/experts/profile/julian-aherne

[27] Dr. Julian Aherne, Intervention Submission (CMD 20-H2.244), online: https://api.cnsc-ccsn.gc.ca/dms/digital-medias/cmd20-h2-244.pdf/object, page 2

> The CNSC need to ensure greater thoroughness in the analysis and reporting of the IEMP results. Despite the limited sample size of the IEMP data, repeated (multi-year) sampling of soils at fixed locations can be used to support trend analysis, i.e., an assessment of environmental response to facility emissions. If trends are observed in the IEMP data, they should be reported and, where necessary, appropriate actions should be implemented; "If soil analysis indicates rising levels, emissions have increased, and investigation must be made into the causes" (BWXT 2018).[28]

With Dr. Aherne's valuable knowledge on the topic of environmental monitoring, the CNSC required additional monitoring:

> The Commission directs CNSC staff to carry out an IEMP campaign near the BWXT Peterborough facility in 2021. Recognizing the importance of trust building and communication with host communities, the Commission directs CNSC staff to engage Indigenous communities, members of the public and stakeholders including, Dr. J. Aherne, CARN and municipal officials, in future Peterborough IEMP sampling campaigns. The Commission also directs CNSC staff to engage with stakeholders near the Toronto facility in respect of IEMP sampling.[29]

The intervenors note that while CNSC staff developed a sampling plan/approach in consultation with Dr. Aherne, we submit the engagement with Dr. Aherne on the topic of air monitoring is insufficient. The recommendations Dr. Aherne had made to improve the IEMP monitoring in Peterborough were not intended to be a one-time approach; the recommendations he provided were intended to improve the long term sampling for beryllium in soils. However, in 2022, the CNSC decided to discontinue beryllium monitoring using the full extraction of beryllium from soil samples. Full extraction is a standard that the CNSC has used since 2014, and is critically important to understanding what's happening with beryllium emissions near BWXT's facility. Additionally, the intervenors note that Dr. Aherne was not given advance notice that this monitoring would end. This goes against the Commission's directive to improve trust and communication with host communities.

As stated in Dr. Aherne's 2020 submission, "If trends are observed in the IEMP data, they should be reported and, where necessary, appropriate actions should be implemented". Without long term monitoring through repeated sampling (multi-year), it is not possible to accurately report trends. Therefore, the intervenors request that CNSC staff resume the beryllium monitoring using the full extraction of beryllium from soil sample during IEMP sampling, and further recommend that Dr. Aherne is regularly consulted and communicated with.

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[28] Dr. Aherne, page 2

[29] 2020 Record of Decision, para 258, *emphasis added*

In addition to the IEMP needing an improved sampling approach, the intervenors also request that the CNSC embraces Dr. Aherne's other monitoring recommendation: real-time, ongoing ambient environmental monitoring for all facilities located within residential areas and especially at the elementary school across the street; this will ensure that the public and the environment are protected from emissions from licenced facilities. This is monitoring that community members want to occur, as it will provide a more accurate data set of the air emissions in the community. At this point in time, there is a lack of public trust surrounding air emissions from BWXT, and the concerns surrounding air emissions will be exponentially higher should BWXT decide to commence pelleting operations in Peterborough. Without an accurate picture of the ambient air quality in the neighbourhood, there cannot be a determination that there no unreasonable risk to the vulnerable population that is in close proximity to the Peterborough facility.

> **Recommendation No. 5:** CNSC staff should resume the beryllium monitoring using the full extraction of beryllium from soil sample during IEMP sampling, and further recommend that Dr. Aherne is regularly consulted and communicated with.
>
> **Recommendation No. 6:** The CNSC should require ambient environmental monitoring for all facilities located within residential areas; this will ensure that the public and the environment are protected from emissions from licenced facilities.

(b) Demolition of buildings at Peterborough facility pose major concerns for human health and environmental harm

The property on which BWXT operates its manufacturing activities in Peterborough is owned by GE Vernova. In 2024, GE Vernova retained an engineering firm to assess the condition of unused buildings on the property. The evaluation determined that the old manufacturing buildings are at or past their useful service life, and in poor condition. Since this assessment, GE Vernova has submitted a Notice of Intent to demolish most of these vacant buildings.[30]

The property opened in 1891 and operated from 1892 until 2018, serving as a major industrial hub for electrical manufacturing and component assembly.[31] Throughout its 126-year history, numerous hazardous substances were used, stored, and disposed of at the Site, often without modern containment or ventilation standards. The result was extensive contamination of the buildings and surrounding soil.[32] This legacy of contamination raises serious concerns about the

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[30] GE Vernova, Peterborough Site Updates: https://gevernova-peterborough.com/

[31] GE Vernova

[32] Robert DeMatteo and Dale DeMatteo, The Report of the Advisory Committee on Retrospective Exposure Profiling of the Production Processes at the General Electric Production Facility in Peterborough, Ontario 1945-2000 (Peterborough, ON: Advisory Committee, 15 May 2017), online: https://www.ohcow.on.ca/edit/files/resources/pebra_ventra/ge_advisory_cmtt_report_may_15_final_for_web.pdf at p 3 ["Report of the Advisory Committee"]. **Attached as Appendix A**

potential health and environmental impacts of the Site's impending demolition - especially because the public is not aware of any detailed information about what contamination remains on site or how to prevent offsite exposures during demolition.

The *Report of the Advisory Committee on Retrospective Exposure Profiling of the Production Processes at the GE Production Facility in Peterborough, 1945–2000*, [hereinafter "Report of the Advisory Committee"] was published by the Occupational Health Clinics for Ontario Workers ("OHCOW") in 2017.[33] The Report of the Advisory Committee documents that over 3,000 industrial chemicals were used on-site, including many classified by the International Agency for Research on Cancer ("IARC") as human carcinogens or acute toxins.[34] To the public's knowledge, most or all of these contaminants remain at the site and in many of the Site's physical structures, floors, and surrounding soils.

Chemicals, toxins, and heavy metals recorded on the property include:

- Asbestos;
- Polychlorinated Biphenyls (PCBs);
- Lead;
- Mercury;
- Cadmium, Chromium (VI), Nickel, Arsenic, and Beryllium;
- Uranium;
- Solvents, degreasers, and volatile organic compounds (VOCs);
- Paints, Resins, and Floor Treatments;
- Acids and Plating Chemicals; and
- Other hazards such as: coal tar and asphaltic coatings, silica dust from sandblasting, diesel and propane exhaust, and endocrine-disrupting plasticizers (phthalates).[35]

The intervenors note that the impending demolition of this Site presents serious public health risks to a community that is already facing an elevated combination of environmental, social, and health-related stressors, including because of the CNSC's decision to allow for an additional industrial process, namely uranium pelleting, to be moved to this site. The demolition of the heavily contaminated structures that exist on the Site could release dangerous and toxic compounds - including asbestos fibers, PCB dust, and heavy metals - into the surrounding community via:

- Air borne contaminants
- Surface water runoff

[33] Report of the Advisory Committee
[34] Report of the Advisory Committee
[35] Report of the Advisory Committee, p 3, 6, 12, 13, 14, 15, 16, 22, 31, 32, 33, 51, 62, 63, 65, 79, 113, 114, 116, 118, 126, 127, 134, 136-139, 144-146

- Landfill disposal

Some of the buildings slated to be demolished were involved in nuclear processing, with uranium oxide and beryllium being some of the substances used on site. Given the radioactive contamination lingering on a property with major demolition activities slated, the intervenors submit the proposed demolition should be of concern to the CNSC and should be considered in conjunction with its other decisions at the site. The intervenors submit the CNSC should be concerned about the impacts this demolition proposal will have not just on the residents and nearby school, but the workers and facilities at the site in which it has regulatory oversight and monitoring responsibilities as well.

The proposed demolition of unused buildings on this property is highly relevant to the operations of BWXT, as the demolition has the potential to release harmful pollutants into the air and water, in close proximity to BWXT's licensed activities. The intervenors are concerned about the cumulative effects of BWXT's environmental emissions combining with releases that may occur from demolition activities. Despite the relevance to BWXT's operations, the only mention of the proposed demolition within the mid-term update was regarding BWXT being mentioned in the media: "…one was a reference about the BWXT NEC buildings in relation to GE Vernova's intent to demolish part of the property."[36] The lack of discussion surrounding demolishing heavily contaminated buildings on the property where BWXT's operations are being conducted is deeply concerning. The Intervenors submit the CNSC and BWXT should be taking this proposed demolition into consideration on how this will impact the safety of the Peterborough Facility.

Due to BWXT's operations at the Peterborough site, and the environmental releases resulting from licensed activities, the intervenors are very concerned about the inadequate financial guarantee for decommissioning of this site. The intervenors are concerned about the decreased amount of BWXT's financial guarantee for the Peterborough Facility. In 2024, BWXT filed an Application for Acceptance of the Revised Financial Guarantees Proposed by BWXT Nuclear Energy Canada Inc. for its Toronto and Peterborough Facilities.[37] Prior to the application, BWXT maintained financial guarantees totaling approximately $48.1 million for both the Toronto facility and the Peterborough facility, and the CNSC approved a reduction to a total of $30,498,884 to decommission both facilities—approximately a $17.5 million reduction, with the Peterborough site seeing a decrease of C$705,427.[38] We request that the previous decommissioning amount be

[36] BWXT Midterm Report, p 58.

[37] CNSC, 2020 Record of Decision: Application for Acceptance of the Revised Financial Guarantees Proposed by BWXT Nuclear Energy Canada Inc. for its Toronto and Peterborough Facilities, (Ref. 2024-H-103), April 8, 2024. **[Revised Financial Guarantees]**

[38] Revised Financial Guarantees, paras 17, 21, 30; CNSC Staff, "Revision of Financial Guarantee for BWXT Nuclear Canada Inc." December 8, 2023 (CMD 24-H103), p 6

restored and BWXT increase its financial guarantee to $10,775,122 for the Peterborough site and $37,362,745 for the Toronto site.[39]

The intervenors are concerned about this reduction in finances to decommission the Peterborough facility, especially considering the legacy of toxic chemicals on site and BWXT's own pollution. How does the proposed demolition of most of the buildings at the Peterborough site impact the decommissioning plan for Peterborough? BWXT claims that its Preliminary Decommissioning Plan (PDP) is on its website[40], however, the website link results in a 404 error. Meaningful public participation is not possible without an informed public; therefore, easy access to relevant studies, data, records, etc., is critical. The intervenors request that BWXT fix the website issue to ensure that the PDP is fully available to members of the public.

> **Recommendation No. 7:** CNSC should consider the serious environmental impacts of the proposed demolition in all decisions at this site.
>
> **Recommendation No. 8:** BWXT should restore its previous financial guarantee for this site.
>
> **Recommendation No. 9:** BWXT must clarify how the proposed demolition will impact its decommissioning plan for the Peterborough site.
>
> **Recommendation No. 10:** CNSC must require BWXT to make all reports, analyses, and data associated with its operation licences, such as the Preliminary Decommissioning Plans for the Toronto and Peterborough facilities, accessible on their website. BWXT should be checking links on their website regularly to ensure documents are accessible.

(c) Environmental justice and the siting of the Peterborough facility

i. Cumulative Effect Mapping of the Peterborough Site

As the *Report of the Advisory Committee* has explained, the property on which BWXT is operating is heavily polluted from decades of industrial activity, and the site is not in a remote location. The Peterborough Site is surrounded by densely populated urban neighbourhoods, including homes, small businesses, and the Prince of Wales Public School. This proximity means that any release of airborne or waterborne contaminants from the BWXT site could directly affect a large and diverse

[39] BWXT, "Written submission: Application for the renewal of the licence for Toronto and Peterborough Facilities" December 19, 2019 (CMD 20-H2.1), p 47

[40] BWXT Midterm Report, p 42: "The PDP strategy and end-state objective of decommissioning is to release the site from regulatory control for industrial use or demolition of the structures. These are reviewed at least once every five years. The PDP summaries for Peterborough and Toronto remain available on our website (www.nec.bwxt.com)."

local population, including children, older adults, and individuals with pre-existing health conditions.

To further illustrate this concern, the *Mapping for Change* map of the local area provides a "Cumulative Burden Index" for neighbourhoods across Peterborough.[41] The map shows that the neighbourhoods surrounding the Site already experience some of the highest cumulative burden scores in the city (the darker the colour, the higher the cumulative burden index score). In practical terms, this means that that the neighbourhoods that surround the Site are *already* facing an elevated combination of environmental, social, and health-related stressors. Any new emissions, such as from uranium pelleting if it is moved to the Peterborough site, will further exacerbate this injustice.

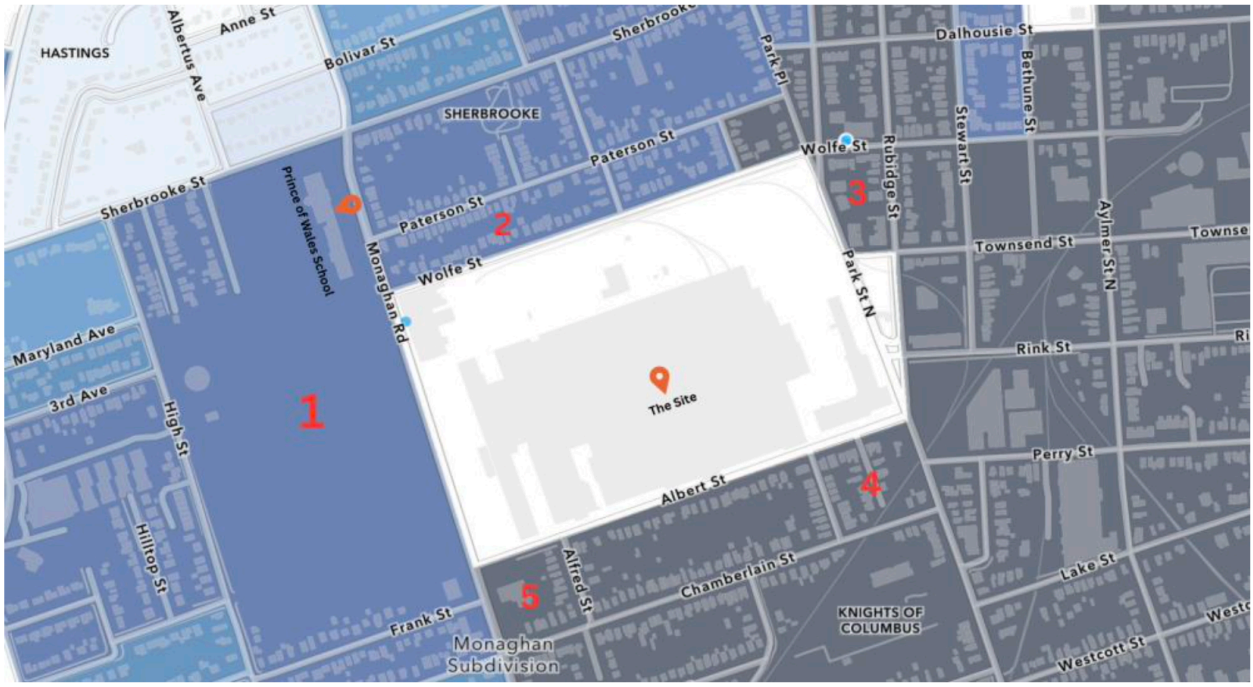

Figure 1: *Cumulative Index Map (courtesy of https://www.mapping4change.org)*

[41] The full Peterborough map, courtesy of Mapping For Change can be seen online, https://experience.arcgis.com/experience/7cac03eb1ff2419fbdc085d9d4d7dfbf/page/Home?views=Features%2CLayers#widget_136=text:107%20Park%20St%20N%2C%20Peterborough%2C%20ON%20K9J%203V6

The table outlines the cumulative burden index scores for numbered neighbourhoods adjacent to the Site, courtesy of *Mapping for Change*:

Neighbourhood	Burden Percentile	Social Vulnerability Percentile	Health Vulnerability Percentile	Environmental Vulnerability Percentile
1	84th	80%	89%	60%
2	89th	75%	47%	91%
3	100th	99%	93%	97%
4	98th	85%	63%	98%
5	95th	85%	63%	94%

For reference, any burden percentile above 80% is considered *very high*, underscoring the heightened vulnerability of local residents to additional social, health, and environmental stressors.

The CNSC is not just compelled to consider cumulative effects when issuing licences, but "…throughout the facility's lifecycle by reviewing licensee monitoring data (emissions, effluents, environmental) in annual reports and reviewing environmental risk assessments (ERAs)."[42] When considering the activities being conducted by BWXT at the Peterborough facility, the CNSC must consider the legacy of pollution within this neighbourhood, and how releases from BWXT may cumulatively effect the neighbourhood and local watershed. The intervenors recommend that the CNSC utilizes the Cumulative Index Map when assessing the cumulative effects associated with the operations at the Peterborough Facility.

The intervenors maintain the position that the siting of the Peterborough facility within this neighbourhood unreasonably puts human health and the environment at risk, especially when taking the cumulative burden index into account. The siting of this facility has even been questioned by the Federal Court when discussing the legal arguments before it in a Judicial Review application: "While the Court may consider that the wisdom of expanding an industrial operation involving nuclear materials in the immediate vicinity of a primary school is dubious, that is not the question before it to determine."[43] The intervenors submit the decision to do so is indeed dubious, and submit the environmental monitoring data still indicates potential risk to human health and the environment (as discussed in the next section).

Thus, the CNSC's decision (with the exception of Commission Member Dr. S. Demeter) to authorize BWXT to move pellet manufacturing to the Peterborough Facility should it so choose,[44]

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[42] CNSC, "Cumulative Effects" (CNSC website): https://www.cnsc-ccsn.gc.ca/eng/resources/environmental-protection/cumulative-effects/

[43] CARN v BWXT, para 103, *emphasis added.*

[44] 2020 Decision Record, para 14: "The Commission authorizes BWXT to carry on the commercial production of UO2 fuel pellets at its Peterborough, Ontario facility, subject to the condition that BWXT submits a final commissioning report related to

is deeply troubling from an environmental justice perspective. Should BWXT opt to move the pelleting operations to Peterborough from Toronto, it would unfairly burden a neighbourhood with socioeconomic challenges and a vulnerable population (an elementary school located 25 metres away from the property), to an increase in environmental pollution and adverse health risks.

While BWXT has not implemented a transition of pelleting to the Peterborough facility yet, there are still 4.5 years left within this licensing period, meaning that at any point, BWXT could opt for pellet manufacturing to take place in Peterborough. The intervenors submit community members are heavily opposed to any pellet manufacturing in Peterborough, and request the CNSC revoke the license condition that would authorize this activity. Additionally, the intervenors request BWXT listen to the community that is hosting its operations and not utilize the licence condition at any point during its license term.

ii. The expansion of nuclear projects across Canada cannot justify the processing of enriched uranium

With BWXT only being authorized to manufacture fuel bundles for CANDU reactors, the intervenors seek clarity on BWXT's intentions for the remainder of this licence period, as there will be a reduced demand for fuel bundles once OPG's Pickering Nuclear Generating Station enters a period of refurbishment. In the Midterm report, BWXT notes: "BWXT NEC remains committed to continuously improve its EHS programs to improve efficiency and minimize risk to employees, the public and the environment. Facility operations are projected to be lower in 2026 due to the downtime for refurbishment of Pickering OPG's nuclear reactors."[45] As a business, ultimately BWXT's number one priority is making profit. The fuel bundles are manufactured for OPG's two CANDU reactors, Pickering and Darlington, and with one of these facilities going offline for refurbishment, there will be less demand for fuel bundles, as noted by BWXT. The intervenors note if BWXT pursues expansion to service other nuclear facilities, it must seek permission to do so.

At the licence renewal hearing, there was a discussion surrounding manufacturing fuel for non-CANDU reactors (i.e., enriched fuel), which has become more urgent and applicable as other technologies are being considered in CNSC licensing and impact assessment processes:

> The BWXT representative added that BWXT does not process enriched uranium and has no intention to do so. In the hypothetical event such a request were made, CNSC staff reported that the first step would be to inform the community about the application and perform a technical assessment. The application would then be presented to the

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the commercial production of fuel pellets that is acceptable to the Commission. At any time in the licence period of the two licences, BWXT shall be authorized to commercially produce fuel pellets at only one of its facilities, and not both."

[45] BWXT Midterm Report, p. 61

> Commission for its consideration. On whether BWXT would need Commission authorization if it wanted to produce fuel for a non-CANDU reactor, CNSC staff indicated that any change to the licensing basis, including the type of material currently possessed, would require a licensing decision by the Commission.[46]

We strongly agree that any processing of enriched uranium would require a licensing decision. We note that we are strongly opposed to the approach the CNSC took to this issue in 2010. In fact, this was a licence condition that had been granted to GE Hitachi in January 2010 (before the site was purchased by BWXT). The condition was removed at the December 2010 licence renewal hearing—not for safety concerns, but for lack of demand:

> The activities related to low enriched uranium, as approved in the January 2010 amendment to the Peterborough licence, as well as the right to possess low enriched uranium is to be removed from the proposed draft licence, so that these activities would not be allowed under the renewed licence, FFOL-3620.00/2020. The proposed Licence Condition Handbook should be modified accordingly.[47]

Presently, there has been increased interest in expanding nuclear power across the country, with small modular reactors (SMRs) being very popular. The following are all new reactor and power plant facilities being reviewed by the CNSC:

- Global First Power;
- New Brunswick Power ARC-100 Project;
- Darlington New Nuclear Project;
- SaskPower SMR Project;
- Peace River Nuclear Power Project;
- Bruce C Nuclear Project; and
- New Nuclear at Wesleyville Project.[48]

While many of these projects are in early stages of development (and some are paused), they open the door to new fuel demand, depending on the technology selected. The intervenors submit the community does not want enriched uranium to be processed in Peterborough, and urge BWXT to not seek a licence amendment to process enriched fuel. Introducing enriched uranium to the Peterborough facility would be a serious and totally unacceptable environmental injustice, unfairly subjecting vulnerable members of society to increased radiation and other health implications.

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[46] 2020 Record of Decision, para 440, *emphasis added*.

[47] CNSC, Summary Record of Proceedings and Decision: In the Matter of GE-Hitachi Nuclear Energy Canada Inc., Application to Renew the Licences for Toronto and Peterborough Facilities" (December 2010), https://api.cnsc-ccsn.gc.ca/dms/digital-medias/2010-12-09-SummaryDecision-GE-Hitachi-e-Final-edocs3654543.pdf/object para 8

[48] CNSC, New Reactor and power plant facilities, online: https://www.cnsc-ccsn.gc.ca/eng/reactors/new-reactor-power-plant-projects/new-reactor-power-plant-facilities/

The intervenors submit that in the event BWXT were to seek permission to process enriched uranium in Peterborough, a licensing decision made by the CNSC must be subject to a public hearing, and not a hearing in writing. Further, in the event such a hearing were to occur, the CNSC must consider cumulative effects, and apply a cumulative burden lens to decision-making, in order to truly protect human health and the environment, including children at Prince of Wales school.

Recommendation No. 11: When considering the activities being conducted by BWXT at the Peterborough facility, the CNSC must consider the legacy of pollution within this neighbourhood, and how releases from BWXT may cumulatively effect the neighbourhood and local watershed.

Recommendation No. 12: The CNSC should refer to the Cumulative Index Map when assessing the cumulative effects associated with the operations at the Peterborough Facility.

Recommendation No. 13: Community members are heavily opposed to any pellet manufacturing in Peterborough and request the CNSC revoke the license condition that would authorize this activity.

Recommendation No. 14: BWXT listen to the community that is hosting its operations and not utilize the licence condition to bring fuel pelleting operations to Peterborough at any point during its license term.

Recommendation No. 15: The community does not want enriched uranium to be processed in Peterborough and urges BWXT to not seek a licence amendment to process enriched fuel.

Recommendation No. 16: Any applications made to allow enriched fuel processing in Peterborough must be subject to a public hearing, and not a hearing in writing.

Recommendation No. 17: In the event BWXT were to seek permission to process enriched fuel in Peterborough, the CNSC must consider cumulative effects, and apply a cumulative burden lens to decision-making, in order to truly protect human health and the environment.

(d) Environmental monitoring data still indicates potential risk to human health and the environment

i. Beryllium

As previously mentioned, the CNSC and BWXT have not implemented Dr. Aherne's recommendation for continuous ambient airborne monitoring for beryllium. Beryllium pollution is likely episodic, so increases can occur up to a year after an event occurs, which makes continuous monitoring crucial to understand the whole picture of airborne emissions from BWXT's operations. The intervenors express concerns surrounding the beryllium concentrations surrounding the site, as the unexpected spikes in beryllium concentrations were flagged by Dr. Aherne, not the CNSC and not BWXT.

Before the Commission renewed BWXT's licences, CNSC staff were required to carry out expedited soil resampling for beryllium of properties adjacent to BWXT's Peterborough facility, with a special focus on the property where the Prince of Wales Elementary School is located. Following the resampling, there was no clear answer for the spikes in beryllium levels in the soil between 2014-2019.[49] The intervenors submit the gaps in continuous ambient airborne release monitoring is contributing to a gap in understanding the complete impact of BWXT's activities on the Peterborough community.

ii. Effects of uranium

In July 2023, the International Agency for Research on Cancer ("IARC") specifically named uranium as a Group 1 carcinogen to humans; "…it was previously listed without being named specifically as a member of the family, Radionuclides, alpha-particle-emitting, internally deposited (Group 1)."[50] With the IARC, the specialized cancer agency of the World Health Organization, specifically recognizing uranium as a carcinogen, the intervenors are concerned about the uncertainty of the health effects from long-term chronic exposure.[51] In particular, the intervenors are concerned about the disproportionate harm to vulnerable populations through uranium exposure.

It is well known that there are detrimental health consequences for being exposed to ionized radiation. There are two broad categories for exposure to radiation: 1) acute radiation exposure, or irradiation (high-dose radiation); and 2) all other types of exposure, which may include internal

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[49] 2020 Record of Decision, para 35

[50] IARC, "IARC Monographs on the Identification of Carcinogenic Hazards to Humans" 27 March 2026, online: https://monographs.iarc.who.int/agents-classified-by-the-iarc/#:~:text=Note:%20In%20September%202022%2C%20four,internally%20deposited%20(Group%201)

[51] CNSC, "Strategic Research Agenda for the Canadian Organization on Health Effects from Radiation Exposure (COHERE) – 2020" online: https://www.cnsc-ccsn.gc.ca/eng/resources/research/cohere/strategic-research-agenda-cohere/

and external exposure.[52] According to a recent report published by the United Nations Institute for Disarmament Research (UNIDIR),

> These exposures may occur at a wide range of levels, including as ongoing, or sustained, exposures from living in contaminated environments (e.g., uranium extraction zones). Variability in the outcome of radiation exposure is now understood to include, among other factors, age, biological sex, and individual variability due to genetic makeup, epigenetic factors, and other indicators such as intergenerational health outcomes.[53]

The UNIDIR report highlights the challenge of monitoring lower dose radiation exposure: "Radiation exposures that are lower and do not result in catastrophic damage to the body may be imperceptible at the time of exposure. Cancer and non-cancer outcomes from lower-dose radiation exposure may appear at any point during the life of the exposed individual, with some cancers taking as long as 30 years to present in the body.[54]

The intervenors raise the issue of disproportionate harm from ionizing radiation due to the location of the Peterborough facility. With the Prince of Wales Public School being only 25 m away from BWXT's operations involving uranium, there are concerns about the long term effects of being exposed to low dose radiation over the course of a child's elementary school career. It is known that "the exposure of children creates greater bodily harm than exposure of adults. The exposure of female bodies is more harmful than the exposure of male bodies. These two findings, take together reveal that age and biological sex are compounding factors, resulting in a significantly greater impact to one post-birth life-stage than all the others."[55]

The intervenors ask the CNSC and BWXT to provide clarity on how the disproportionate harm to vulnerable populations, such as children, is being considered when monitoring low dose ionizing radiation from the Peterborough facility. How are the releases from BWXT being weighed with the cumulative effects of the legacy toxins from the Peterborough lands?

iii. Radiation doses to the public

The intervenors have numerous concerns related to radiation doses to the public for both the CNSC and BWXT to address. At the 2020 Hearing, BWXT said that the combined dose of radiation to public would be 10 µSv.[56] However, in 2023, Toronto alone was estimated at 40.2 µSv, in 2024,

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[52] Amanda M. Nichols and Mary Olson. Gender and Ionizing Radiation: Towards a New Research *Agenda Addressing Disproportionate Harm*. Geneva, Switzerland: UNIDIR, 2024, p 16 [UNIDIR Report] **Attached as Appendix B**

[53] UNIDIR Report, p 16, *emphasis added*

[54] UNIDIR Report, p 16, *emphasis added*

[55] Olson, M., Protection of entire lifecycle from radiation is needed to ensure future human generations. [Online] 13(12). https://doi.org/10.18103/mra.v13i12.7137 **Attached as Appendix C**

[56] 2020 Record of Decision, para 152

Toronto alone was 137.8 µSv , and in 2025, Toronto's was 109.1 µSv. And in Peterborough, the 2025 public dose was 5.7µSv.[57] These doses seem extremely high, especially when compared to the estimated public doses at nuclear power plants: 1.4µSv at Pickering; 0.85 µSv at Darlington; and 1.1 µSv at Bruce. The intervenors seek clarity on the causes of these high estimated public doses.

To get a better understanding of the radiation doses to the public, the intervenors want to know how much uranium is stored on site in Building 24, and whether there should be thermoluminescent dosimeter (TLD) on the south side of the Peterborough buildings, as there are residences all along that side of the property.

> **Recommendation No. 18:** CNSC and BWXT to provide clarity on how the disproportionate harm to vulnerable populations, such as children, is being considered when monitoring low dose ionizing radiation from the Peterborough facility. How are the releases from BWXT being weighed with the cumulative effects of the legacy toxins from the Peterborough lands?
>
> **Recommendation No. 19:** The intervenors seek clarity on the causes of high estimated radiation doses to the public in Toronto.
>
> **Recommendation No. 20:** To get a better understanding of the radiation doses to the public, the intervenors want to know how much uranium is stored on site in Building 24.
>
> **Recommendation No. 21:** Should thermoluminescent dosimeter (TLD) be implemented on the south side of the Peterborough buildings, as there are residences all along that side of the property?

(e) Inaccurate Mapping of Peterborough Facility within CNSC Regulatory Oversight Reports

When reviewing the 2024 Regulatory Oversight Reports for Uranium and Nuclear Substance Processing Facilities ("ROR"), the intervenors note the image portraying the layout of BWXT's Peterborough facility, incorrectly circling building 21, whereas the industrial operations actually occurs on site. Upon reviewing the RORs for 2021, 2022, and 2023, it appears that this inaccurate image has been used for every ROR since BWXT licence was renewed. [58] The intervenors point out that the image (see Figure 2, below) also does not include the Prince of Wales Public School, obscuring the close proximity of the elementary school to the pelleting activities. Interestingly, the

[57] BWXT, Midterm Report, p 25 of 56, table 14

[58] *See:* CNSC Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada 2021, Figure 2-5 in each report, reporting for 2021, 2022, 2023, and 2024

2020 ROR uses Google Maps image of the Peterborough facility that also includes Prince of Wales Public School in the frame (see Figure 3, below).[59]

Figure 2: Image used in CNSC Regulatory Oversight Reports for the reporting years of 2021, 2022, 2023, and 2024.

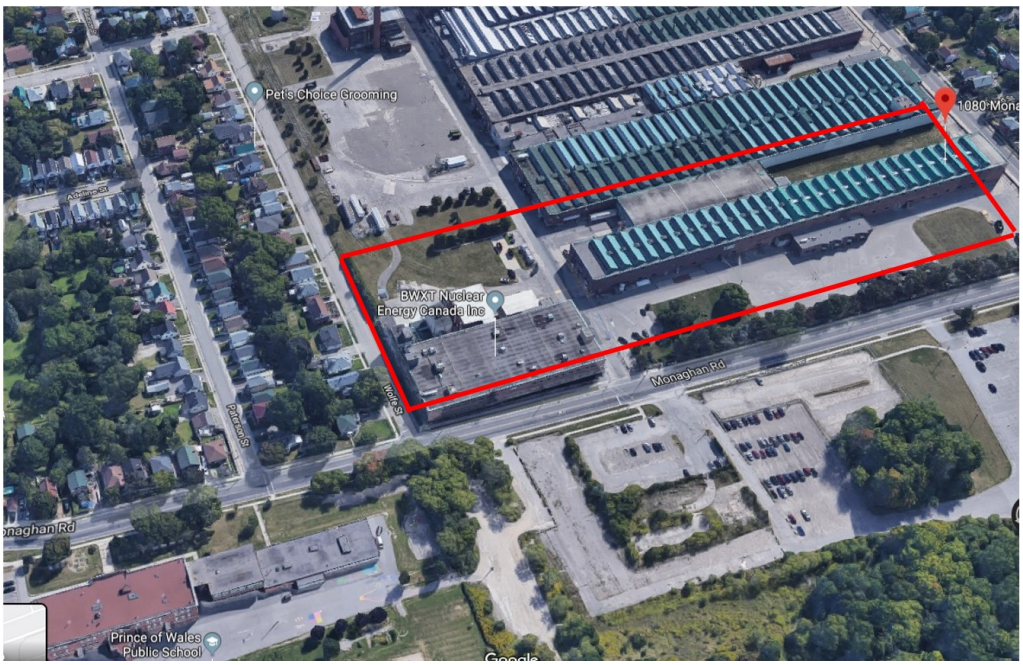

***Figure 3**: Image used for BWXT's Peterborough Facility in Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2020*

[59] Regulatory Oversight Report for Uranium and Nuclear Substance Processing Facilities in Canada: 2020, online: https://www.cnsc-ccsn.gc.ca/eng/reactors/regulating-nuclear-reactors-power-plants/regulatory-oversight-reports/uranium-and-nuclear-substance-processing-facilities/2020/#sec2-4

This error was recently pointed out during the March 2026 CNSC Commission Meeting. Claire Pike, Director of the Nuclear Processing Facilities Division at the CNSC, noted:

> There are two small discrepancies in the ROR from 2024…the second is for BWXT NEC, with respect to Figure 2.5, showing the Peterborough facility. The red box should include an additional building on the left that extends to the fence line. The figure will be updated in the report prior to publication.[60]

While the intervenors are relieved that this error has been acknowledged, the intervenors request an explanation on why this inaccurate image has been used for multiple years of regulatory oversight. The imagery is misleading in the sense that it ignores the nature of the neighbourhood where these hazardous activities are being conducted; there is a public school adjacent to the fuel bundle manufacturing in Building 21, and there are residences across the road on the south side of the property as well.

It is also worth noting that in BWXT's mid-term review report, Prince of Wales Public School is also out of frame (see Figure 1 in BWXT Midterm Report).[61] The intervenors submit images of the BWXT facility in Peterborough need to accurately capture the neighbourhood hosting its activities: Prince of Wales Public School, and the hundreds of homes surrounding the property. In doing so, there is acknowledgement of where these industrial operations are taking place, and who is at risk from environmental releases.

> **Recommendation No. 22:** Requesting an explanation as to why an inaccurate image of the BWXT facility in Peterborough has been used for multiple years of regulatory oversight.

> **Recommendation No. 23:** Images of the BWXT facility in Peterborough need to capture the neighbourhood hosting its activities: Prince of Wales Public School, and the hundreds of homes surrounding the property.

(f) Climate change

When reviewing BWXT's Midterm Report, there is a lack of discussion surrounding climate change—both in terms of potential impacts of climate change, and in terms of mitigation strategies. The only mention of climate change is in the discussion of community events, in which BWXT notes that in both Toronto and Peterborough: "Throughout 2021-2025, the majority of questions that were posed during these events focused on uranium, waste management, climate change,

[60] CNSC, Canadian Nuclear Safety Commission Public Meeting, March 24th, 2026, (Meeting Transcript), p. 228
[61] BWXT Midterm Report, p. 5 (Figure 1)

environmental monitoring, radiation detection and protection, community support and communication, and job opportunities."[62]

There is no mention of the extreme weather events such as severe derecho and ice storms in the Peterborough region over the last 5 years. For example, "On May 21, 2022 shortly after 2 p.m. a violent weather system known as a 'derecho' ("deh·ray·chow") arrived in Peterborough and battered the City for several minutes. The brief but powerful storm had a phenomenal impact, with power outages lasting days and debris cleanup taking months."[63]

Extreme weather events exacerbated by climate change can result in various forms of property damage and flooding, and as mentioned above, can result in major power outages, which is concerning for a facility handling radioactive materials and other hazardous materials. As a result, there must be a robust climate action plan in place for BWXT's facilities. The intervenors also note that with the proposed demolitions slated for the Peterborough property, extreme weather events could result in unexpected releases of hazardous materials that have been undisturbed for decades, and could cumulatively impact the health and safety of workers, members of the public, and the environment. Therefore, the intervenors request BWXT elaborate on its climate mitigation strategies, and how the proposed demolition of numerous polluted buildings on the property is considered within those strategies for its own facilities.

> **Recommendation No. 24:** Addressing climate change impacts and having a strong climate action plan is crucial in preventing harmful releases into the environment. The intervenors request BWXT elaborate on its climate mitigation strategies, and how the proposed demolition of numerous polluted buildings on the property is considered within those strategies.

[62] BWXT Midterm Report, p 50 0f 61 and page 47 of 56

[63] City of Peterborough, "The Derecho: Before, During and After the May 2022 Windstorm", online: https://storymaps.arcgis.com/stories/84c5b004e0f14e39b7aa46caf8819fcf

VI. CONCLUSION

We respectfully provide these comments to assist the Commission in its review of the *Mid-term update from BWXT Nuclear Energy Canada Inc. on licensed activities at its Toronto and Peterborough facilities*.

Sincerely,

CANADIAN ENVIRONMENTAL LAW ASSOCIATION
On behalf of
CITIZENS AGAINST RADIOACTIVE NEIGHBOURHOODS

Sara Libman

Sara Libman, Legal Counsel to CELA

Summary of Recommendations

Recommendation No. 1: CNSC revisit the potential threat of serious or irreversible damage from BWXT's operations in Peterborough, and the risks pelleting would bring to this vulnerable neighbourhood through applying the precautionary principle to the licensee's operations.

Recommendation No. 2: The ALARA principle is not being met by BWXT. The intervenors request the CNSC review the licensee's application of the ALARA principle.

Recommendation No. 3: The IAEA principle of justification must to be incorporated into the *Nuclear Safety and Control Act*, to ensure the protection of human health and the environment is not compromised by a licensee's economic priorities, as would be the case with pelleting activities commencing in Peterborough.

Recommendation No. 4: The intervenors request that the CNSC defines what an "unreasonable risk" is, and how it comes to that determination.

Recommendation No. 5: CNSC staff should resume the beryllium monitoring using the full extraction of beryllium from soil sample during IEMP sampling, and further recommend that Dr. Aherne is regularly consulted and communicated with.

Recommendation No. 6: The CNSC should require ambient environmental monitoring for all facilities located within residential areas; this will ensure that the public and the environment are protected from emissions from licenced facilities.

Recommendation No. 7: CNSC should consider the serious environmental impacts of the proposed demolition in all decisions at this site.

Recommendation No. 8: BWXT should restore its previous financial guarantee for this site.

Recommendation No. 9: BWXT must clarify how the proposed demolition will impact its decommissioning plan for the Peterborough site.

Recommendation No. 10: CNSC must require BWXT to make all reports, analyses, and data associated with its operation licences, such as the Preliminary Decommissioning Plans for the Toronto and Peterborough facilities, accessible on their website. BWXT should be checking links on their website regularly to ensure documents are accessible.

Recommendation No. 11: When considering the activities being conducted by BWXT at the Peterborough facility, the CNSC must consider the legacy of pollution within this neighbourhood, and how releases from BWXT may cumulatively effect the neighbourhood and local watershed.

Recommendation No. 12: The CNSC should refer to the Cumulative Index Map when assessing the cumulative effects associated with the operations at the Peterborough Facility.

Recommendation No. 13: Community members are heavily opposed to any pellet manufacturing in Peterborough and request the CNSC revoke the license condition that would authorize this activity.

Recommendation No. 14: BWXT listen to the community that is hosting its operations and not utilize the licence condition to bring fuel pelleting operations to Peterborough at any point during its license term.

Recommendation No. 15: The community does not want enriched uranium to be processed in Peterborough and urges BWXT to not seek a licence amendment to process enriched fuel.

Recommendation No. 16: Any applications made to allow enriched fuel processing in Peterborough must be subject to a public hearing, and not a hearing in writing.

Recommendation No. 17: In the event BWXT were to seek permission to process enriched fuel in Peterborough, the CNSC must consider cumulative effects, and apply a cumulative burden lens to decision-making, in order to truly protect human health and the environment.

Recommendation No. 18: CNSC and BWXT to provide clarity on how the disproportionate harm to vulnerable populations, such as children, is being considered when monitoring low dose ionizing radiation from the Peterborough facility. How are the releases from BWXT being weighed with the cumulative effects of the legacy toxins from the Peterborough lands?

Recommendation No. 19: The intervenors seek clarity on the causes of high estimated radiation doses to the public in Toronto.

Recommendation No. 20: To get a better understanding of the radiation doses to the public, the intervenors want to know how much uranium is stored on site in Building 24.

Recommendation No. 21: Should thermoluminescent dosimeter (TLD) be implemented on the south side of the Peterborough buildings, as there are residences all along that side of the property?

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Recommendation No. 23: Images of the BWXT facility in Peterborough need to capture the neighbourhood hosting its activities: Prince of Wales Public School, and the hundreds of homes surrounding the property.

Recommendation No. 24: Addressing climate change impacts and having a strong climate action plan is crucial in preventing harmful releases into the environment. The intervenors request BWXT elaborate on its climate mitigation strategies, and how the proposed demolition of numerous polluted buildings on the property is considered within those strategies.