

ABOUT BWXT NUCLEAR ENERGY CANADA

BWXT Nuclear Energy Canada (BWXT), a subsidiary of BWXT Canada, has more than 60 years of extensive experience and innovation in the supply of nuclear fuel and fuel channel components, services, equipment and parts for the CANDU nuclear power industry. This includes designing and supplying highly reliable equipment to fuel, inspect and refurbish reactors.

BWXT has been involved with the CANDU industry from its earliest years. In Peterborough, we employ over 450 people in high-tech, engineering, manufacturing and administrative positions. Over 200 of these employees are engineers in disciplines such as software development, metallurgy, mechanical engineering, electrical engineering and systems engineering.

Our Peterborough facility is licensed by Canada's nuclear regulator, the Canadian Nuclear Safety Commission.

CONTACT OUR TEAM

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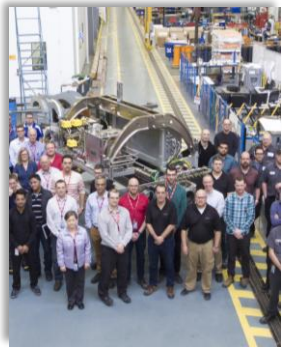
Peterborough Public Information Brochure





PROUDLY MANUFACTURING FUEL FOR ONTARIO

Our employees assemble fuel bundles for use in CANDU power reactors. The natural uranium pellets produced at our Toronto facility, and zirconium tubes manufactured at our Arnprior facility, are shipped to our Peterborough site where they are assembled into fuel bundles. The fuel bundles manufactured in Peterborough go on to provide approximately 25% of Ontario with carbon-free, reliable electricity!

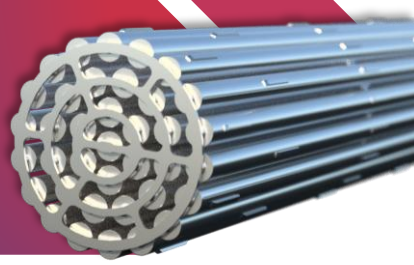


INNOVATIONS IN NUCLEAR POWER AND MEDICINE

Our employees design, engineer and manufacture highly advanced and technical systems and tooling for the nuclear industry. These systems inspect and maintain reactors, reducing radiation doses to workers and decreasing outage times. We're proud that in addition to supporting reactor operating needs, our Peterborough employees also produce components and tooling to enable the production of life-saving nuclear medicine.

Virtual Tour:

Interested in seeing how CANDU fuel bundles are made? Scan the QR code to check out our video!



RESPONSIBLE & SAFE OPERATIONS



The safety of employees, the public, and the environment is our first priority. We are committed to minimizing the effects of our operations on the environment and we comply with all relevant environmental regulatory laws. In addition to our environmental programs, Canada's nuclear regulator, the Canadian Nuclear Safety Commission, conducts their own monitoring to verify the community and environment are protected.

RADIATION

Radiation is energy in the form of waves or particles. Radiation doesn't just come from nuclear energy. It's all around us – and we're exposed to both natural and human-made sources of radiation daily. There are two types of radiation: non-ionizing radiation includes microwaves, radio waves and television signals and ionizing radiation comes from natural sources and man-made sources such as x-ray machines and nuclear power plants.

The Canadian Nuclear Safety Commission regulates the nuclear energy industry to limit the radiation that our employees and neighbours receive. Using studies performed by the International Commission on Radiological Protection on acceptable levels of radiation exposure, they have set a limit of 1 millisievert (mSv) per year for members of the public. At BWXT, we have a comprehensive radiation protection program and are guided by the principles of ALARA (as low as reasonably achievable). The estimated annual public dose to the nearest neighbour in 2025 was 0.6 mSv.

NATURAL URANIUM & BERYLLIUM

Uranium is a naturally occurring, weakly radioactive element that is present at low levels in the environment. Uranium is found naturally in soil, rocks, the water we drink and even in the air we breathe. The pellets manufactured by BWXT in Toronto are made of natural uranium.

Beryllium is a lightweight but strong metal found in the earth's crust and is a naturally occurring stable element that is present in a variety of materials including rocks, coal and oil. Beryllium can be found commercially in everything from cell phones and airbag sensors to aircrafts and pacemakers. Beryllium is used as part of the fuel bundle manufacturing process in small amounts to join portions of the fuel bundle together.

ENVIRONMENTAL MONITORING

Emissions to air, water and soil are measured for uranium and beryllium to ensure we are operating in a responsible manner, and monitoring results show we have very low emissions.

Air Monitoring

- Uranium: In-Stack Sampling is continuously conducted for the single process uranium air emission point. A sample of air is drawn across a filter capable of trapping uranium dust. The samples are analyzed in-house and verified by an independent laboratory by delayed neutron activation analysis. Due to the nature of the process and our stack sample results to-date, perimeter monitoring is not required.
- Beryllium: Continuous in-stack monitoring is conducted for the three beryllium air emission points. A sample of air is drawn across a filter capable of trapping beryllium. The filter is analyzed for beryllium at an external laboratory.

Water Monitoring

- Uranium: Wastewater is generated from routine cleaning activities in the fuel bundle assembly area. All potentially uranium-contaminated wastewater is held in a drum, filtered and samples are sent to an external laboratory for analysis. This wastewater is only released to the sanitary sewer once the test results confirm it meets release requirements.
- Beryllium: Wastewater is generated from equipment use and cleaning activities in the beryllium classified areas. Water passes through a weir settling system prior to release to the sanitary sewer. Regular sampling of the beryllium wastewater is conducted via a 24-hour composite sample taken from the outflow lines, which is sent for analysis externally by an independent laboratory.

Soil Sampling

The Canadian Council of Ministers of the Environment (CCME) established soil quality guidelines to protect human health and the natural environment. Samples of surface soil are retrieved from locations in accordance with a documented plan. Soil sampling is conducted by a third-party consultant and the sampling methodology used is based on Ministry of the Environment Conservation & Parks guidelines.

Data tables are available on our website at nec.bwxt.com.

Want to learn more? Visit nec.bwxt.com to read our Annual Compliance Report