

2022 Environmental Dashboard: Peterborough (Uranium)

At BWXT Nuclear Energy Canada Inc.'s (BWXT NEC) Peterborough facility, air and water emissions are measured for the presence of uranium and results show the 1160 Monaghan Road facility is a near-zero emissions plant.

Airborne and liquid effluent discharged from a fuel fabrication facility like BWXT NEC are regulated by concentration limits. Action Levels and our own internal limits are set at just a fraction of the Licence Release Limits, which are set by the Canadian Nuclear Safety Commission (CNSC), to keep public exposure to any radiation as low as possible. Although Action Levels are set below Licence Release Limits, exceeding an Action Level is considered a CNSC reportable event in which BWXT NEC must notify the Commission within 24 hours of becoming aware that an Action Level has been exceeded. Accordingly, BWXT NEC has established Internal Control Levels for various radiological and environmental parameters that are set even lower than Action Levels to act as an early warning system. An Internal Control Level exceedance results in internal investigation and corrective and preventive action.

Water: Waste water is generated from routine cleaning activities in the fuel bundle assembly area. The water is held in a drum, filtered and agitated prior to sampling, then sent for independent analysis at an accredited external laboratory. After the waste water sample result is verified to be below the Internal Control Level of 3 ppm (per batch) and the Action Level of 3 ppm (annual average), the water is discharged to the sanitary sewer. The Action Level is 0.003 g/L (3 ppm (annual average)) and the Licence Release Limit is 0.14 g/L (weekly composite).

Air: The facility performs continuous in-stack monitoring of the single process uranium air emission point, drawing a sample of air across a filter capable of trapping uranium dust. The samples are analyzed by an independent laboratory. The minimum detection limit is 0.01 µg uranium. The Action Level is 1.0 µg/m³ and the Licence Release Limit is 410 µg/m³.

To continue to demonstrate transparency and provide information to the public, BWXT NEC has developed this Environmental Dashboard to provide more detail on our low uranium emissions. This document will be updated throughout the year when new data becomes available.

For more information, please visit the Environment page of our website at nec.bwxt.com/environmental-monitoring or refer to our Annual Compliance Reports, a thorough document submitted to the CNSC annually, which can be found at nec.bwxt.com/safety/our-compliance-record.

If you have any questions, please contact us at questions@bwxt.com or 1.855.696.9588 (toll-free).

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Water			
Status: no action level exceedances			
Week	Concentration (mg/L)	Licence Release Limit (mg/L)	Number of Action Level Exceedances
Jan 3		140	
Jan 10		140	
Jan 17	0.78	140	0
Jan 24		140	
Jan 31		140	
Feb 7		140	
Feb 14		140	
Feb 21		140	
Feb 28		140	
Mar 7		140	
Mar 14		140	
Mar 21		140	
Mar 28		140	
Apr 4		140	
Apr 11		140	
Apr 18	0.34	140	0
Apr 25		140	
May 2		140	
May 9		140	
May 16		140	
May 23		140	
May 30		140	
Jun 6		140	
Jun 13		140	
Jun 20		140	
Jun 27		140	
Jul 4		140	
Jul 11		140	
Jul 18		140	
Jul 25		140	
Aug 1		140	
Aug 8		140	
Aug 15		140	
Aug 22		140	
Aug 29		140	
Sep 5		140	
Sep 12		140	
Sep 19		140	
Sep 26		140	
Oct 3		140	
Oct 10		140	
Oct 17		140	
Oct 24		140	
Oct 31		140	
Nov 7		140	
Nov 14		140	
Nov 21		140	
Nov 28		140	
Dec 5		140	
Dec 12		140	
Dec 19		140	
Dec 26		140	

Stack (Air)			
Status: no action level exceedances			
Week	Concentration (µg/m ³)	Licence Release Limit (µg/m ³)	Number of Action Level Exceedances
Jan 3	0.001	410	0
Jan 10	0.001	410	0
Jan 17	0.002	410	0
Jan 24	0.001	410	0
Jan 31	0.001	410	0
Feb 7	0.001	410	0
Feb 14	0.004	410	0
Feb 21	0.001	410	0
Feb 28	0.002	410	0
Mar 7	0.001	410	0
Mar 14	0.000	410	0
Mar 21	0.000	410	0
Mar 28	0.001	410	0
Apr 4		410	
Apr 11		410	
Apr 18		410	
Apr 25		410	
May 2		410	
May 9		410	
May 16		410	
May 23		410	
May 30		410	
Jun 6		410	
Jun 13		410	
Jun 20		410	
Jun 27		410	
Jul 4		410	
Jul 11		410	
Jul 18		410	
Jul 25		410	
Aug 1		410	
Aug 8		410	
Aug 15		410	
Aug 22		410	
Aug 29		410	
Sep 5		410	
Sep 12		410	
Sep 19		410	
Sep 26		410	
Oct 3		410	
Oct 10		410	
Oct 17		410	
Oct 24		410	
Oct 31		410	
Nov 7		410	
Nov 14		410	
Nov 21		410	
Nov 28		410	
Dec 5		410	
Dec 12		410	
Dec 19		410	
Dec 26		410	

Note: if you would like the Dashboard table in .xls format (Excel), please email us at questions@bwxt.com.