

2024 Environmental Dashboard: Toronto (Uranium)

At BWXT Nuclear Energy Canada's (BWXT NEC) Toronto facility, air and water emissions are continuously measured for the presence of uranium and results show the 1025 Lansdowne Avenue facility has very low emissions.

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: Water is used in the production process and to clean protective clothing, floors and other janitorial functions. The water is first held in storage tanks at the facility, treated to remove uranium dioxide, tested and only released in batches once the test results confirm it meets release requirements. The Licence Release Limit for uranium water emissions is 1,000 mg/L (weekly composite) and the Action Level is 3 mg/L.

Air: The Toronto facility performs continuous in-stack sampling and boundary air monitoring for uranium:

Stack: The facility performs continuous in-stack monitoring of its six stacks, drawing a sample of air across a filter capable of trapping uranium dust. The samples are analyzed in-house daily and verified externally by an independent laboratory. The Action Level is 1 $\mu\text{g}/\text{m}^3$ and the most conservative (lowest) Licence Release Limit for stack (air) uranium emissions of all six stacks is 47 $\mu\text{g}/\text{m}^3$.

Boundary: Boundary samples are high volume air samples drawn at five positions strategically located around the facility perimeter. Boundary samples are analyzed externally by an independent laboratory. In both cases the external independent laboratory tests the filter papers by delayed neutron activation analysis. The Action Level is 0.08 $\mu\text{g}/\text{m}^3$.

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 [Environmental Monitoring](#) page of our website or refer to our Annual Compliance Reports, a thorough document submitted to the CNSC annually, which can be found on our website [here](#).

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 1	0.14	1000	0
Jan 8	0.26	1000	0
Jan 15	0.22	1000	0
Jan 22	0.15	1000	0
Jan 29	0.13	1000	0
Feb 5	0.14	1000	0
Feb 12	0.21	1000	0
Feb 19	0.12	1000	0
Feb 26	0.20	1000	0
Mar 4	0.20	1000	0
Mar 11	0.11	1000	0
Mar 18	0.08	1000	0
Mar 25	0.10	1000	0
Apr 1	0.09	1000	0
Apr 8	0.17	1000	0
Apr 15	0.12	1000	0
Apr 22	0.08	1000	0
Apr 29	0.15	1000	0
May 6	0.10	1000	0
May 13	0.11	1000	0
May 20	0.14	1000	0
May 27	0.17	1000	0
Jun 3	0.14	1000	0
Jun 10	0.37	1000	0
Jun 17	0.22	1000	0
Jun 24	0.14	1000	0
Jul 1	0.12	1000	0
Jul 8	0.09	1000	0
Jul 15	0.15	1000	0
Jul 22	0.28	1000	0
Jul 29	0.31	1000	0
Aug 5	0.21	1000	0
Aug 12	0.24	1000	0
Aug 19	0.16	1000	0
Aug 26	0.12	1000	0
Sep 2	0.17	1000	0
Sep 9	0.11	1000	0
Sep 16	0.12	1000	0
Sep 23	0.10	1000	0
Sep 30	0.25	1000	0
Oct 7	0.18	1000	0
Oct 14	0.21	1000	0
Oct 21	0.23	1000	0
Oct 28	0.14	1000	0
Nov 4	0.11	1000	0
Nov 11	0.11	1000	0
Nov 18	0.12	1000	0
Nov 25	0.09	1000	0
Dec 2	0.11	1000	0
Dec 9	0.11	1000	0
Dec 16	0.06	1000	0
Dec 23	0.17	1000	0

Stack (Air)			
Status: no action level exceedances			
Week	Average Concentration (µg/m ³)	Licence Release Limit (µg/m ³)	Number of Action Level Exceedances
Jan 1	0.02	47	0
Jan 8	0.02	47	0
Jan 15	0.01	47	0
Jan 22	0.02	47	0
Jan 29	0.02	47	0
Feb 5	0.03	47	0
Feb 12	0.02	47	0
Feb 19	0.01	47	0
Feb 26	0.02	47	0
Mar 4	0.01	47	0
Mar 11	0.02	47	0
Mar 18	0.02	47	0
Mar 25	0.03	47	0
Apr 1	0.03	47	0
Apr 8	0.03	47	0
Apr 15	0.03	47	0
Apr 22	0.03	47	0
Apr 29	0.04	47	0
May 6	0.01	47	0
May 13	0.05	47	0
May 20	0.01	47	0
May 27	0.04	47	0
Jun 3	0.09	47	0
Jun 10	0.04	47	0
Jun 17	0.05	47	0
Jun 24	0.03	47	0
Jul 1	0.02	47	0
Jul 8	0.01	47	0
Jul 15	0.01	47	0
Jul 22	0.02	47	0
Jul 29	0.01	47	0
Aug 5	0.01	47	0
Aug 12	0.01	47	0
Aug 19	0.01	47	0
Aug 26	0.01	47	0
Sep 2	0.01	47	0
Sep 9	0.02	47	0
Sep 16	0.01	47	0
Sep 23	0.01	47	0
Sep 30	0.01	47	0
Oct 7	0.01	47	0
Oct 14	0.01	47	0
Oct 21	0.01	47	0
Oct 28	0.02	47	0
Nov 4	0.02	47	0
Nov 11	0.01	47	0
Nov 18	0.01	47	0
Nov 25	0.01	47	0
Dec 2	0.01	47	0
Dec 9	0.01	47	0
Dec 16	0.02	47	0
Dec 23	0.01	47	0

Boundary (Air)			
Status: no action level exceedances			
Week	Average Concentration (µg/m ³)	Action Level (µg/m ³)	Number of Action Level Exceedances
Jan 1	0.0001	0.08	0
Jan 8	0.0001	0.08	0
Jan 15	0.0001	0.08	0
Jan 22	0.0001	0.08	0
Jan 29	0.0002	0.08	0
Feb 5	0.0001	0.08	0
Feb 12	0.0001	0.08	0
Feb 19	0.0001	0.08	0
Feb 26	0.0001	0.08	0
Mar 4	0.0002	0.08	0
Mar 11	0.0002	0.08	0
Mar 18	0.0002	0.08	0
Mar 25	0.0002	0.08	0
Apr 1	0.0002	0.08	0
Apr 8	0.0002	0.08	0
Apr 15	0.0002	0.08	0
Apr 22	0.0002	0.08	0
Apr 29	0.0002	0.08	0
May 6	0.0002	0.08	0
May 13	0.0002	0.08	0
May 20	0.0002	0.08	0
May 27	0.0002	0.08	0
Jun 3	0.0002	0.08	0
Jun 10	0.0002	0.08	0
Jun 17	0.0002	0.08	0
Jun 24	0.0002	0.08	0
Jul 1	0.0001	0.08	0
Jul 8	0.0002	0.08	0
Jul 15	0.0001	0.08	0
Jul 22	0.0001	0.08	0
Jul 29	0.0001	0.08	0
Aug 5	0.0002	0.08	0
Aug 12	0.0003	0.08	0
Aug 19	0.0001	0.08	0
Aug 26	0.0002	0.08	0
Sep 2	0.0001	0.08	0
Sep 9	0.0002	0.08	0
Sep 16	0.0002	0.08	0
Sep 23	0.0004	0.08	0
Sep 30	0.0001	0.08	0
Oct 7	0.0001	0.08	0
Oct 14	0.0002	0.08	0
Oct 21	0.0002	0.08	0
Oct 28	0.0001	0.08	0
Nov 4	0.0001	0.08	0
Nov 11	0.0002	0.08	0
Nov 18	0.0002	0.08	0
Nov 25	0.0001	0.08	0
Dec 2	0.0001	0.08	0
Dec 9	0.0002	0.08	0
Dec 16	0.0001	0.08	0
Dec 23	0.0001	0.08	0

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