US Army Corps of Engineers®
Buffalo District

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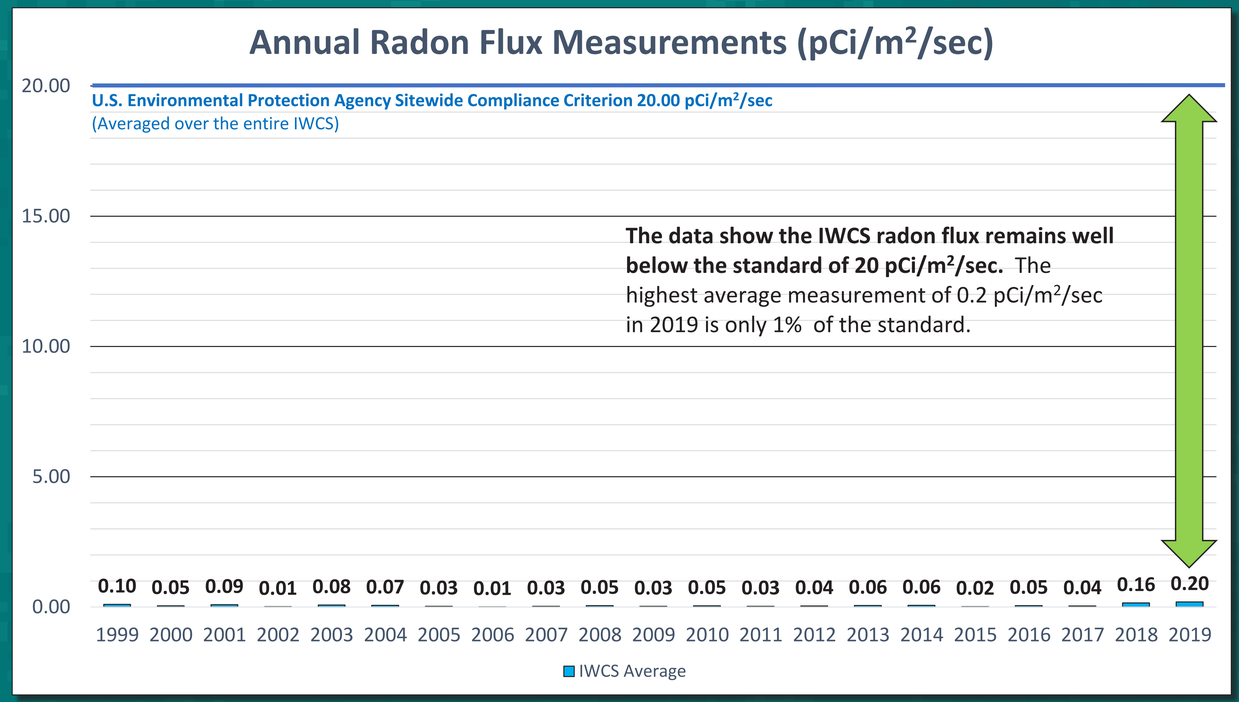
Niagara Falls Storage Site
Radon Flux Monitoring

- Radon-222 flux is measured annually at 180 locations over the Interim Waste Containment Structure.
- The U.S. Environmental Protection Agency compliance limit for radon flux is 20 picocuries per square meter per second (pCi/m²/s), averaged over all 180 locations.
- Historically, radon flux results when averaged for all 180 monitoring locations have been less than 1 pCi/m²/s. (*See graph.*) Typically, radon flux results at individual locations are under 0.5 pCi/m²/s.
- In 2018, an unexpected result occurred at one of the 180 locations (19.278 pCi/m²/s). *(See inset.)*
- Follow-up monitoring was performed at 16 additional locations around this unexpected result. *(See inset.)*
- Those results were comparable to background and previous results, ranging from non-detect to 0.0884 pCi/m²/s.
- In 2019, another unexpected result occurred at one of 180 locations, adjacent to the location from 2018. This radon flux result was 23.050 pCi/m²/s.
- In both 2018 and 2019, the other 179 locations showed typical results around 1 pCi/m²/s.
- The average of the radon flux results over the entire Interim Waste Containment Structure remains well under the compliance limit.
- The Interim Waste Containment Structure continues to mitigate the release of radon-222 and remains protective of human health and the environment.
- The Corps is performing further field investigations to better understand the reasons for the unexpected results.



Description: This chart shows the overall radon gas flow (called "radon flux") for the entire Interim Waste Containment Structure (IWCS) and compares it against the U.S. Environmental Protection Agency Sitewide Compliance Criterion of 20 pCi/m²/sec. The chart shows the average values of 180 measurement points across the IWCS over the timeframe 1999-2019.

The Interim Waste Containment Structure continues to mitigate the release of radon-222 and remains protective of human health and the environment.