

**PRELIMINARY NOTIFICATION – REGION III**

July 21, 2023

UPDATE TO PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE - PNO-III-23-001

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. Some of the information may not yet be fully verified or evaluated by the Region III staff.

**Facility**

Xcel Energy  
Monticello Nuclear Generating Plant  
Monticello, MN  
Docket: 50–263

**Licensee Emergency Classification**

- Notification of Unusual Event
- Alert
- Site Area Emergency
- General Emergency
- Not Applicable

**SUBJECT: UPDATE TO PNO-III-23-001 CONTROLLED SHUTDOWN OF MONTICELLO NUCLEAR GENERATING PLANT DUE TO INCREASED TRITIUM IN ON-SITE GROUNDWATER WELLS**

Update to the March 27, 2023, Preliminary Notification PNO-III-23-001 controlled shutdown of the Monticello plant. During the shutdown, the licensee determined the leak occurred from the control rod drive suction pipe that is below grade, which runs across a small gap between the reactor and turbine buildings. Resident inspectors observed in-person critical aspects of the licensee’s repair activities, which effectively stopped the leak by replacing the pipe on March 28, 2023.

On July 20, 2023, the licensee informed the State of Minnesota and issued a press release with their monitoring results, which identified detectable tritium levels in wells located near the Mississippi River.

NRC resident inspectors have closely followed the licensee’s actions to identify, stop, and mitigate the leak. The amount released has no potential of challenging any regulatory limits established to ensure public health and safety. The licensee must continue to track, monitor, and account for the plume, ensuring it is well characterized, in compliance with NRC limits and continues to not pose a threat to the public or environment.

The licensee has implemented recovery and mitigation plans by pumping the leaked tritiated water into on-site storage tanks and the plant’s waste processing systems and has removed a large quantity of the tritium that leaked.

NRC health physics inspectors continue to conduct on-site observations of the licensee’s actions related to groundwater sampling, modeling, and recovery efforts. Groundwater on the site generally flows towards the Mississippi River. If tritium reaches the river, the licensee will have to demonstrate the concentrations meet the NRC’s strict regulatory controls and limits to ensure public health and safety. The NRC will review the site’s assessment and control of any such liquid releases through our routine inspection program.

The NRC understands this issue may raise questions or be of concern and we have a link to more related information available on the NRC public website [Monticello] [Tritium and Effluent Release Issue](#).

Region III Government Liaison Officers have discussed this issue with the States of Minnesota and Wisconsin.

Region III, located in Lisle, IL, received notification of this occurrence by telephone call from the licensee at 4:30 p.m. CDT on July 18, 2023. The information presented herein has been discussed with the licensee and is current as of 2:00 p.m. CDT on July 21, 2023.

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