



Energy Harbor Nuclear Corp  
Perry Nuclear Power Plant  
10 Center Road  
Perry, Ohio 44081

**Rod L. Penfield**  
Site Vice President, Perry Nuclear

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January 24, 2024  
L-24-017

ATTN: Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, DC 2055-0001

**SUBJECT:**

Perry Nuclear Power Plant  
Docket No. 50-440, License No. NPF-58  
30-Day Voluntary Report in Accordance with Industry Groundwater Protection Initiative

The Perry Nuclear Power Plant is submitting the attached voluntary 30-day report in accordance with Nuclear Energy Institute (NEI) 07-07, "Industry Groundwater Protection Initiative - Final Guidance Document," Rev. 1. Samples obtained from a plant underdrain piezometer tube contained tritium at a concentration that exceeded the threshold value for voluntary reporting in accordance with NEI 07-07. The initial NRC notification of this condition was completed on January 5, 2024.

There are no regulatory commitments contained in this letter. If there are any questions or if additional information is required, please contact Mr. Eli Crosby, Manager Radiation Protection/Chemistry, at (440) 280-5032.

Sincerely,

A handwritten signature in black ink, appearing to read "Rod L. Penfield", written over a horizontal line.

Rod L Penfield

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Enclosure:

30-Day Voluntary Report in Accordance with Industry Groundwater Protection Initiative

Cc: NRC Regional Administrator – Region III  
NRC Project Manager  
NRC Resident Inspector  
Ashtabula County Emergency Management Agency  
Geauga County Emergency Management Agency  
Lake County Emergency Management Agency  
Ohio Radiological Branch Chief

**Enclosure  
L-24-017**

**30-Day Voluntary Report in Accordance with Industry Groundwater Protection  
Initiative**

## 30-Day Voluntary Report

### Description of Event

On January 5, 2024, Perry Nuclear Power Plant (PNPP) received confirmatory analysis results from a Piezometer Tube in the Plant Underdrain System undergoing routine chemistry sampling. The analysis determined that tritium levels exceeded the NEI 07-07, "Industry Groundwater Protection Initiative Final Guidance", voluntary reporting threshold of 20,000 pico-Curies/liter (pCi/L) for Piezometer Tube 6, which is located inside the plant Protected Area (PA). In accordance with the NEI guidance, reports to required agencies were made the same day. The following information is provided consistent with the NEI reporting guidelines:

- i. This voluntary special 30-day report is submitted in accordance with NEI 07-07, "Industry Groundwater Protection Initiative - Final Guidance Document," Rev. 1.
- ii. On January 4, 2024, PNPP received analysis results for a sample from Piezometer Tube 6. The tritium activity level was determined to be 291,000 pCi/L, and subsequent tests have confirmed continued elevated tritium levels.
- iii. Initial actions taken by the plant included notification to the local counties' Emergency Management Agencies, the Ohio Radiological Branch Supervisor, NEI, INPO, and the Nuclear Regulatory Commission. A Radwaste System pipe leak has been identified and the leak has since been corrected. An experienced vendor is also assisting PNPP in actions to continue monitoring and remediating the condition. As part of activity mitigation to groundwater, pumping of water from Piezometers 6, 13, 14, and 21 to the Radwaste system is currently in place.
- iv. Monitoring of the site's effluent pathways indicates that tritium from this groundwater event has not migrated off the plant property outside of an approved plant effluent pathway. The location of the exceedance was in an internal plant piezometer located in Intermediate Building Unit 1. This piezometer has been included as an early detection and mitigation of groundwater contamination as a part of PNPP's groundwater protection program. The groundwater in the area moves toward the site's underdrain system and will be discharged via a permitted pathway. There is no estimated annual dose increase to any member of the public associated with the event.
- v. Since there is no estimated annual dose increase to a member of the public from the groundwater pathway, no corrective actions are necessary to reduce the projected annual dose to a member of the public to less than the limits in 10 CFR 50, Appendix I.