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U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

SUBJECT: Special Report of Inoperability of Main Steam Line Gross Gamma  
Activity Monitor

Palisades Nuclear Plant  
Docket No. 50-255  
License No. DPR-20

Dear Sir or Madam:

The Palisades Nuclear Plant Offsite Dose Calculation Manual, Appendix A, Table 1-1, Action 4, requires that a special report be submitted to the Nuclear Regulatory Commission within 30 days for the inoperability of RIA-2324, main steam safety and dump valve discharge line gross gamma activity monitor, when the instrument is not restored to operable status within seven days. The enclosed report summarizes the actions taken, the cause of the inoperability, and the plans and schedule for restoring the instrument to operable status.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

Sincerely,

A handwritten signature in blue ink, appearing to read "JAH".

JAH/mrp

Enclosure: MAIN STEAM SAFETY AND DUMP VALVE DISCHARGE LINE GROSS  
GAMMA ACTIVITY MONITOR

CC Administrator, Region III, USNRC  
Project Manager, Palisades, USNRC  
Resident Inspector, Palisades, USNC

## **ENCLOSURE**

### **MAIN STEAM SAFETY AND DUMP VALVE DISCHARGE LINE GROSS GAMMA ACTIVITY MONITOR**

#### **BACKGROUND**

On September 6, 2018, RIA-2324, main steam safety and dump valve discharge line gross gamma activity monitor, failed during monthly testing per Palisades Nuclear Plant Technical Specification Surveillance Procedure MR-14, "Process Monitor Function Checks- Monthly," and was declared non-functional in accordance with plant procedures.

#### **ACTIONS TAKEN**

The preplanned compensatory action of aiming RIA-2328, main steam line and stack gas alternate radiation monitor, at the atmospheric dump valves was taken in accordance with plant procedures immediately upon RIA-2324 being declared non-functional. A work order was generated to troubleshoot and repair RIA-2324.

The site identified that the detector, RE-2324, had failed during handling as part of MR-14 testing. During this test, the detector is removed from its housing and exposed to a radiation source to verify upscale indication on RIA-2324.

A new detector was obtained from stock and installed on September 20, 2018. The new detector read approximately 20 counts per minute (cpm), which is expected during normal operation. Subsequently, noise was noted on the signal. Troubleshooting of the noise determined an additional issue with the detector preamplifier. As a result, RIA-2324 will remain non-functional until this issue is resolved and post-maintenance testing is complete.

#### **CAUSE OF INSTRUMENT INOPERABILITY**

The initial cause of RIA-2324 being non-functional was due to a detector that failed during handling as part of monthly testing.

#### **PLANS AND SCHEDULE FOR RESTORING INSTRUMENT OPERABILITY**

A new detector was installed and energized on September 20, 2018. Troubleshooting identified an additional issue with noise associated with the detector preamplifier. The site plans to declare RIA-2324 functional following the resolution of the noise issue and successful completion of post maintenance testing.