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PNP 2011-009

February 10, 2011

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 50-255
License No. DPR-20

Dear Sir or Madam:

The Palisades Plant Offsite Dose Calculation Manual, Appendix A, Table A-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 7 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 black ink, appearing to be "PKA", written over a large, stylized flourish.

PKA/TAD

Enclosure (1)

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

ENCLOSURE

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

BACKGROUND

RIA-2324, Main Steam Safety and Dump Valve Discharge Line Gross Gamma Activity Monitor, was declared inoperable on January 11, 2011, for replacement of the analog type monitor with a new modern digital monitor.

ACTIONS TAKEN

The preplanned alternate method of monitoring was placed in-service as a compensatory measure. Installation of the new digital monitor was completed and it was returned to operable status on January 28, 2011. However, the new digital monitor exhibited regular indication spikes, similar to previous indications seen on the analog monitor, which resulted in numerous unexpected control room alarms. On February 3, 2011, the monitor was again declared inoperable to allow troubleshooting the cause of the intermittent spikes.

CAUSE OF INSTRUMENT INOPERABILITY

Troubleshooting identified that electromagnetic interference was inducing noise on the preamplifier power input from the monitor. This noise would enter the preamplifier and be amplified and returned to the monitor. The monitor interpreted the noise as a high radiation signal, resulting in spiking and subsequent alarms. The cause of the electromagnetic interference was determined to be insufficient grounding of the cabling for both the monitor and the preamplifier.

PLANS AND SCHEDULE FOR RESTORING INSTRUMENT OPERABILITY

On February 9, 2011, a jumper was connected from the preamplifier board terminal board ground to the junction box chassis. This grounded the high voltage, signal, and overall cable shields at the preamplifier end of the cabling. Grounding of the cabling on both the monitor and the preamplifier ends has improved the overall shielding, resulting in elimination of the spikes. No noise (spiking) has been present on RIA-2324 since the time this jumper was installed.

RIA-2324 will be monitored for an appropriate period of time, with the compensatory measure remaining in place, before declaring the monitor operable. RIA-2324 is expected to be restored to operable status not later than March 11, 2011.