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United States Nuclear Regulatory Commission
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Perry Nuclear Power Plant
Docket No. 50-440
Inoperable Loose-Part Detection System Instrumentation - Special Report

Gentlemen:

In accordance with the provisions of Perry Nuclear Power Plant Operational Requirements Manual 6.2.10, "Loose-Part Detection System," the attached Special Report is being submitted to notify the Nuclear Regulatory Commission of an inoperable Loose-Part Detection System Channel.

If you have questions or require additional information, please contact Mr. Vernon K. Higaki, Manager - Regulatory Affairs at (440) 280-5294.

Very truly yours,

for William R. Kanda
Vice President, Nuclear

Attachment

cc: NRC Region III
NRC Resident Inspector Office
NRC Project Manager

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SPECIAL REPORT

INOPERABLE LOOSE-PARTS DETECTION SYSTEM INSTRUMENTATION

On September 1, 2002, in accordance with Operational Requirements Manual (ORM) 6.2.10, "Loose-Part Detection System," Channel 1 of the Loose-Part Detection System was declared not OPERABLE. The ORM ACTION requires submittal of a Special Report when one or more channels have been inoperable for more than 30 days.

This system is designed to continuously monitor for any indication of loose parts in the Nuclear Boiler system. There are eight individual channels that monitor the Reactor Pressure Vessel (RPV). Two channels, 1 and 3 are located at about the 648-foot elevation at the 90-degree azimuth. These channels monitor the reactor vessel components with sensors physically mounted near piping penetrations. Each channel consists of a sensor, preamplifier, and signal processing electronics, which input to an audible speaker, a dB meter, Control Room annunciator, loose parts events analysis computer and a laser printer.

The cause of Channel 1 inoperability has been determined to be due to either a defective preamplifier or a defective sensor. In order to repair the sensor, an entry into the Drywell is required. Additionally, verification testing is required to ensure the channel functions properly following repair of either the sensor or preamplifier. The testing requires impacting the RPV, also located in the Drywell, with a calibrated impact tool within 3 feet of the sensor location. Access to the Drywell requires the reactor to be shutdown due to the harsh environment for workers and from high radiation doses. The other channel that monitors approximately the same location, Channel 3 remains OPERABLE and provides a similar level of vibration and loose parts detection and monitoring of this RPV area. Parts to repair this channel were not available during the latter part of September when the plant was shutdown and Drywell access was available.

A similar failure of Channel 10, which monitors the RPV bottom head area was reported in letter PY-CEI/NRR-2591L, dated September 4, 2001. As previously reported, the Perry Plant staff is currently preparing a design change to eliminate the Loose-Part Detection System per the recommendation in Topical Report NEDC-32975, "Regulatory Relaxation for BWR Loose Parts Monitoring" (TAC No. MA9643) subsequently approved by Stuart A. Richards, Director, Project Directorate IV and Decommissioning Division of Licensing Project Management Office of Nuclear Reactor Regulation on January 25, 2001. The present schedule will eliminate the Loose-Part Detection System by the end of the next refuel outage (RF09) and currently it is not planned to repair either inoperable channel.