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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 NRC of an inoperable Loose-Part Detection System Channel.

If you have questions or require additional information, please contact Mr. Gregory A. Dunn, Manager - Regulatory Affairs at (216) 280-5305.

Very truly yours,

John K. Wood

Attachment

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

IE22

SPECIAL REPORT

INOPERABLE LOOSE-PARTS DETECTION SYSTEM INSTRUMENTATION

On July 30, 2001, in accordance with Operational Requirements Manual (ORM) 6.2.10, "Loose-Part Detection System," channel 10, (i.e. control rod drive housing area under vessel at 270 degrees azimuth) of the Loose-Part Detection System was declared not OPERABLE. The ORM ACTION requires submittal of a Special Report when one or more channels has been inoperable for more than 30 days, which occurred on August 29, 2001.

This system is designed to continuously monitor for any indication of loose parts in the Nuclear Boiler system. There are eight individual channels, four of which are under-vessel channels at 90-degree intervals, that monitor the reactor vessel components with sensors physically mounted near natural collection areas. 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 10 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 Reactor Pressure Vessel (RPV) lower head, also located in the drywell, with a calibrated impact tool within 3 feet of each 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 3 undervessel channels (9, 11, and 12) remain OPERABLE and provide a significant level of vibration and loose parts detection and monitoring of the RPV bottom head area.

The Perry Plant staff is currently preparing a design change, 01-5011, to eliminate the Loose-Parts 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-Parts Detection System by the end of the next refuel outage (RF09).