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Al Kaplan

VICE PRESIDENT
NUCLEAR GROUP

February 21, 1989
PY-CEI/NRR-0975 L

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

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

Dear Sir:

Attached is a Special Report concerning inoperable Loose-Part Detection System Instrumentation. This report satisfies the conditions of Perry Technical Specifications 3.3.7.8 and 6.9.2.

If there are any questions, please feel free to call .

Very truly yours,

M. D. Lyster for

Al Kaplan
Vice President
Nuclear Group

AK/sc

Attachment

cc: T. Colburn
Resident Inspector
USNRC Region III
Director, Office of Resource Management

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SPECIAL REPORT - INOPERABLE
LOOSE-PART DETECTION SYSTEM INSTRUMENTATION

On January 12, 1989 the Vibration and Loose-Part Monitoring (V&LPM) System experienced a series of spurious alarms attributed to excessive background noise. Channel 8 was declared inoperable and the Plant entered Technical Specification action statement 3.3.7.8 requiring a special report if one or more V&LPM channels are inoperable for more than thirty days. The thirty day time limit to restore channel 8 to an operable status was exceeded on February 11, 1989. All aspects of the Technical Specification action statement were met.

This system is designed to continuously monitor the Nuclear Boiler for any indication of loose parts in the Nuclear Boiler System. Ten individual channels monitor the reactor vessel components with sensors physically mounted near natural collection areas. Each channel consists of a detector, pre-amplifier and signal processing electronics which input to a tape recorder, audible speaker, a dB meter, control room annunciator, a spectrum analyzer, an x-y plotter, a loose-part locator, and a printer. Channel 8 monitors the 'B' recirculation discharge line and channel 4 monitors injection nozzle 'E' from the 'B' feedwater line.

The cause of the spurious alarms was evaluated by the Shift Technical Advisor and the System Engineer to be excessive background noise and not a loose part. Substitution of the channel 8 preamplifier with another preamplifier did not result in lower noise. Therefore, it was concluded that the problem is with equipment inside the Drywell. The channel could not be returned to an operable status because access to the Drywell requires the plant to be shutdown. Currently channel 8 is inoperable and disconnected via lifted lead, per PAP-1402, "Control of Lifted Leads, Jumpers, Temporary Electrical Devices and Mechanical Foreign Items". The channel will remain inoperable per Technical Specifications until the plant is placed in cold shutdown for a refuel outage in late February, 1989. The channel will be reworked and returned to service during our first refueling outage.

Additionally, channel 4 was declared inoperable on January 22, 1989 due to a significant decrease in dB meter reading for its loose parts output. Presently, channel 4 will exceed its thirty day action statement of inoperability on February 21, 1989. Troubleshooting revealed a bad loose-parts amplifier section. A new amplifier card was installed and aligned. However, channel 4 will remain inoperable per Technical Specifications until the channel calibration surveillance, SVI-R63-T1472D can be performed which requires Drywell entry for pinging and the plant in cold shutdown. This work is also being added to the first refuel outage scope.