



# THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

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PERRY NUCLEAR POWER PLANT

Al Kaplan

VICE PRESIDENT  
NUCLEAR GROUP

September 19, 1988  
PY-CEI/NRR-0915 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

Gentlemen:

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.

Please feel free to call me should you have any further questions.

Very truly yours,

Al Kaplan  
Vice President  
Nuclear Group

AK/sc

Attachment

cc: T. Coiburn  
K. Connaughton  
USNRC Region III  
Director, Office of Resource Management

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SPECIAL REPORT-INOPERABLE LOOSE-PART  
DETECTION SYSTEM INSTRUMENTATION

On August 10, 1988 the Vibration and Loose-Part Monitoring (V&LPM) System experienced a loss of the channel 4 detection string. Channel 4 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 4 to an operable status was exceeded on September 9, 1988. 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.

The cause of failure was a failed pre-amplifier in channel 4, which resulted in a complete loss of signal. The pre-amplifier was replaced on August 17, 1988. With the replacement pre-amplifier, the channel 4 signal and frequency spectrum indication appeared normal. However, the recalibration surveillance, "Loose Parts Monitoring System Channel 4 Calibration for 1R63-N040", could not be performed following pre-amplifier replacement to return the channel to an operable status. The surveillance test requires access to the detector, which is located inside the Drywell, and can only be performed with the plant shutdown.

Currently channel 4 is in operation with all signal indications appearing normal for the existing plant conditions. The channel will remain inoperable per Technical Specifications until the plant is placed in cold shutdown when SVI-R63-T1472D can be performed. The next planned shutdown will be for refueling in February, 1989. This work has been placed on our forced outage list to be completed should an unplanned outage of sufficient duration occur.