



PERRY NUCLEAR POWER PLANT

10 CENTER ROAD
PERRY, OHIO 44081
(216) 259-3737

Mail Address:
P.O. BOX 97
PERRY, OHIO 44081

Donald C. Shelton
SENIOR VICE PRESIDENT
NUCLEAR

May 31, 1996
PY-CEI/NRR-2056L

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

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

Gentlemen:

In accordance with the provisions of Perry Nuclear Power Plant Technical Specifications Sections 3.3.7.8 and 6.9.2, the enclosed Special Report is being submitted to notify the NRC of an inoperable Loose-Part Detection system instrumentation channel.

If you have questions or require additional information, please contact Mr. James D. Kloosterman, Manager - Regulatory Affairs at (216) 280-5833.

Very truly yours,

Richard A. Smith for D.C. Shelton

For Donald C. Shelton

040017

DTG:dtg

Enclosure: Special Report - Loose-Part Detection System Instrumentation

cc: NRC Project Manager
NRC Resident Inspector
NRC Region III

9606040195 960531
PDR ADOCK 05000440
S PDR

Operating Companies
Cleveland Electric Illuminating
Toledo Edison

JE221

SPECIAL REPORT

INOPERABLE LOOSE-PART DETECTION SYSTEM INSTRUMENTATION

On April 21, 1996, one channel of the Vibration and Loose Parts Monitoring System (V&LPMS) was declared inoperable due to an abnormally low background level being detected. In accordance with Technical Specifications (TS) Sections 3.3.7.8 and 6.9.2, a Special Report is required to be submitted to the NRC within 10 days following one or more V&LPMS channels being inoperable for more than 30 days. The inoperable V&LPMS channel exceeded the 30 day TS Action time limit on May 21, 1996.

The V&LPMS is designed to continuously monitor the reactor vessel for indication of loose parts. The V&LPMS has eight channels required by TS which monitor the reactor vessel components by accelerometer sensors physically mounted near natural collection areas. Each channel consists of a sensor, pre-amplifier, and signal processing electronics that collectively provide inputs to an audible speaker, a decibel meter, a control room annunciator, a Loose Parts Events Analysis computer, and a printer.

V&LPMS channel 1 is mounted on an instrumentation line in the upper plenum of the reactor vessel. On April 21, 1996, it was noted that the output signal from the accelerometer was much lower than expected; therefore, channel 1 was considered inoperable and removed from service. It was anticipated that the channel would be returned to service within the 30 day allowed outage time. The problem was originally identified as a faulty channel select switch, and subsequently the part was ordered and replaced. However, after the switch was replaced there was further evidence that either a faulty cable or sensor located in the drywell exists.

A root cause for the low output signal cannot be determined nor can a channel calibration be performed, until a drywell entry can be made. The corrective actions required to return this channel to an operable status include: further troubleshooting of the channel components inside the drywell to determine the cause(s) of the equipment malfunction; repair of the defective component(s); and, subsequent channel calibration. Therefore, the affected channel will remain out-of-service with an unknown root cause(s) until the drywell can be accessed during the next plant shutdown of sufficient duration coincident with a drywell entry and associated inspections.

Although one channel is inoperable, seven of the eight TS required V&LPMS channels remain operable. Also, the V&LPMS continues to meet the guidance provided by Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," Revision 1, dated May 1981, by maintaining at least two sensors operable at each natural collection region (i.e., reactor vessel upper and lower plenums). Therefore, continued plant operation with channel 1 out-of-service is acceptable.