



**CENTERIOR  
ENERGY**

**PERRY NUCLEAR POWER PLANT**

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VICE PRESIDENT - NUCLEAR

February 16, 1994  
PY-CEI/NRR-1755 L

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

Perry Nuclear Power Plant  
Docket No. 50-440  
Special Report - Inoperable Seismic  
Monitoring Instrumentation

Gentlemen:

Enclosed is a Special Report concerning inoperable Seismic Monitoring Instrumentation. This report satisfies the reporting requirements of Technical Specifications 3.3.7.2 and 6.9.2.

If you have questions or require additional information, please contact Henry Hegrat - Regulatory Affairs, at (216) 280-5606.

Very truly yours,

Robert A. Stratman

RAS:DAH:sc

Enclosure: Special Report - Inoperable Seismic Monitoring Instrumentation

cc: NRC Regional Administrator, RIII  
NRC Project Manager  
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SPECIAL REPORT  
INOPERABLE SEISMIC MONITORING INSTRUMENTATION

On January 7, 1994 the triaxial time-history accelerographs for the reactor building foundation (D51-N101, D51-N100, & D51-N110) and the containment vessel (D51-N111) were declared inoperable during the performance of surveillance testing. An amplifier card and a motor driver card were replaced and the associated instrumentation was recalibrated. The surveillance testing was completed satisfactorily on January 26.

On January 25 the High Pressure Core Spray (HPCS) pump base mat triaxial response-spectrum recorder (D51-R180) was removed from service for required calibrations. Currently, the plant is in refueling outage (RF0) 4 and this instrument will not be returned to operation until after refueling outage work in the area is complete. Additionally, the triaxial peak accelerographs for the reactor recirculation pump (D51-R120) and the HPCS piping in the reactor building (D51-R130) and the triaxial response-spectrum recorder for the reactor recirculation piping support (D51-R170) will be removed from the drywell for calibration and will not be reinstalled until after refueling outage work in the area is complete.

Since these instruments will be inoperable for greater than 30 days, this special report is being submitted in accordance with the requirements of Technical Specification 3.3.7.2, "Seismic Monitoring Instrumentation," and 6.9.2, "Special Reports."

The current refueling outage (RF04) began on February 5, 1994 and is expected to last for 85 days. The subject seismic instrumentation is located in high traffic areas which increases the chance of these instruments being damaged during drywell work. Therefore, these instruments will not be reinstalled until the completion of major drywell work.

The triaxial peak accelerograph recorders are designed to sense and record low frequency accelerations in three orthogonal directions. Three diamond tipped scribes trace a permanent record on metal plates by a series of sensitive adjustable components. The recorders are self contained and the plates are easily removed for analysis after a seismic event. The triaxial response spectrum recorder also senses and records low frequency accelerations. It is composed of three detector assemblies which are identical but have orientations in three different planes (east-west, north-south, vertical). The recorder uses reed stylus mechanisms to trace metal plates. Each detector has twelve reeds, each with its own plate, corresponding to various frequencies. The plates can be removed and analyzed for a frequency spectrum after a seismic event. Both types of recorders are passive in nature and are used for data collection.

SPECIAL REPORT  
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These out of service instruments will not significantly degrade the ability to detect/record seismic motion within the plant. The Perry Plant is a fully instrumented Regulatory Guide 1.112 facility. With these three instruments removed from service, several instrumented locations remain available including both a triaxial response spectrum recorder and critical instruments at the Containment base mat. At this location a strong motion triaxial time-history accelerograph is available, with the ability to alarm at the Control Room. The strong motion triaxial accelerograph provides a permanent paper/magnetic record locally at the electrical equipment room, and the triaxial response spectrum recorder provides spectral information directly to the Control Room. In the event of an earthquake during this refueling time period, the ability to adequately record the event and take appropriate action is maintained.