WOLF CREEK
NUCLEAR OPERATING CORPORATION

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May 3, 1994

WO 94-0048

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

Subject: Docket No. 50-482: Special Report 94-001 on Inoperable Seismic Monitoring Instrumentation

Gentlemen:

The attached Special Report is being submitted in accordance with Technical Specifications 3.3.3.3 and 6.9.2 concerning the inoperability of seismic monitoring instrumentation.

Very truly yours,

Otto L. Maynard

OLM/jad

Attachment

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Special Report 94-001
Inoperable Seismic Monitoring Instrumentation

On March 29, 1994, at 0911 CST, a seismic monitoring channel was declared inoperable. Because the period of inoperability extended beyond 30 days, this Special Report is being submitted pursuant to the requirements of Technical Specifications 3.3.3.3 and 6.9.2. The same monitor was also the subject of Special Report 87-006.

During the performance of surveillance procedure STS IC-894, "Channel Calibration Triax Time History and Response Spectrum Recording System," the vertical channel of triaxial Strong Motion Accelerometer (SMA) SG AE-0003 did not respond as expected to input signals. The channel was declared inoperable, and Technical Specification 3.3.3.3 Action "a" was entered. Corrective Work Request 01989-94 was issued to repair the channel. Access to the monitor has not been possible due to its location on the exterior of the reactor cavity west wall at elevation 2013'-4" within the Biological Shield Wall. In order to minimize radiation exposure of the technicians, repair of the channel will consist of replacing the entire accelerometer package and performing the calibration procedure. The repair will be completed prior to startup following the upcoming seventh refueling outage.

The triaxial SMA's are part of the Seismic Instrumentation System. They are not required for the safe shutdown of the plant, but they do provide information that could indicate that a shutdown is necessary.

Triaxial SMA's are installed at six appropriate locations to provide data on the frequency, amplitude, and phase relationship of the seismic response. Data from the SMA's are fed into the spectrum analyzer located in the Control Room to produce earthquake spectra immediately following an earthquake. The subject instrument is not a trigger for the spectrum analyzer. Three SMA's monitor the Reactor Building:

- on the Containment base slab (SG AE-0001);
- on the Containment building at the operational floor level, above and axially aligned with the SMA on the base slab (SG AE-0002);
- on the outside wall of the reactor support structure (SG AE-0003).

In addition, as part of the Seismic Instrumentation System in the Reactor Building, Peak Recording Accelerographs (PRA's) are provided to record the peak acceleration experienced during a seismic event. Three PRA's monitor the Reactor Building:

- on the Containment at elevation 2119' (SG AR-0005);
- on the steam generator C support at elevation 2047' (SG AR-0008);
- on the Reactor Coolant System Loop 2 cross-over leg piping at elevation 2006' (SG AR-0007).

Based on the above, even with SMA SG AE-0003 inoperable, the remaining Seismic Instrumentation will still provide sufficient capability to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility in order to determine whether a plant shutdown is required pursuant to Appendix A of 10 CFR 100. The instrumentation is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes," April 1974.