



Technical Requirements Manual T3.3.103

Palo Verde Nuclear
Generating Station

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U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-37
Washington, D.C. 20555-0001

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1
Docket No. STN 50-528
Special Report 1-SR-2000-001**

Attached please find Special Report 1-SR-2000-001 prepared and submitted pursuant to the PVNGS Technical Requirements Manual section T3.3.103. This report discusses the inoperability of the seismic monitoring system.

No commitments are being made to the NRC by this letter.

If you have any questions, please contact Daniel G. Marks, Section Leader, Regulatory Affairs, at (623) 393-6492.

Sincerely,

WEI/DGM/DLK/kg

Attachment

cc: E. W. Merschoff (all with attachment)
J. N. Donohew
J. H. Moorman

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ATTACHMENT

Special Report No. 1-SR-2000-001

Palo Verde Nuclear Generating Station Unit 1

Seismic Monitoring System Inoperable

Docket No. STN 50-528

Special Report No. 1-SR-2000-001

Reporting Requirement:

The Palo Verde Nuclear Generating Station (PVNGS) technical requirements manual (TRM) section T3.3.103 condition B requires a report be submitted to the commission if the Seismic Monitoring (SM) system is INOPERABLE for greater than 30 days. The report should include the action(s) taken, cause of the inoperability, and plans for restoring the instrument to OPERABLE status.

Identification of the INOPERABLE equipment:

On November 28, 2000, civil design engineering personnel discovered that the spatial orientation of the SM system accelerometers was incorrect while reviewing the system for an upcoming system replacement modification. On November 30, 2000 the control room staff was notified of the nonconforming condition. The UFSAR Section 3.7.4.2.1 states that "Accelerometers have their principal axes oriented identically, with one horizontal axis parallel to the major horizontal axis assumed in the seismic analysis." Contrary to this, the principal axes of the SM accelerometers are not aligned with respect to the axes assumed in the "seismic analysis." SM accelerometer axes are aligned to geographical north, which is 40 degrees east of the axes assumed in the seismic analysis (plant north). This condition translated into non-conservative values being used as action triggers in Palo Verde's Analysis of Seismic Event procedure.

On November 30, 2000 at 1552 MST Operations personnel declared the SM system INOPERABLE and entered Condition A of TLCO T3.3.103.

Cause of the INOPERABILITY:

The cause of the INOPERABILITY is the SM system accelerometers were incorrectly oriented during initial construction.

Action taken:

On November 30, 2000 at 1552 MST Operations personnel declared the SM system INOPERABLE and entered Condition A of TLCO T3.3.103. Operations personnel and the Shift Technical Advisors are aware that the SM system will render non-conservative data in the event of a seismic event.

Plans for restoring the instrument to OPERABLE status:

A setpoint change will be made to the circuitry of the SM system to compensate for the 40-degree error in the accelerometer orientation and the procedure used to analyze seismic events will be revised to more accurately interpret SM system data. These actions will result in the SM system providing the required functions at the appropriate motion magnitudes and return the system to an OPERABLE condition. These actions are planned to be completed by February 2, 2001.

Additionally, the system reviews that led to the discovery of the accelerometer orientation problem were being performed in preparation for a modification to replace the existing SM system with an improved design. This modification is scheduled to be implemented during the next Unit 1 refueling outage in the spring of 2001.