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SUBJECT: Special rept:on 931215,strong motion accelerometer channel of seismic monitoring sys inoperable for more than 30 days. Caused by single-axis accelerometer not responding.

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Arizona Public Service Company
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192-00873-JML/TRB/RJR
December 15, 1993

JAMES M. LEVINE
VICE PRESIDENT
NUCLEAR PRODUCTION

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

Dear Sirs:

Subject: **Palo Verde Nuclear Generating Station (PVNGS)**
Unit 1
Docket No. STN 50-528 (License No. NPF-41)
Special Report 1-SR-93-007
File: 93-020-404

Enclosed please find Special Report 1-SR-93-007 prepared and submitted pursuant to Technical Specification 3.3.3.3 ACTION (a) and Technical Specification 6.9.2. This report discusses the inoperability of one (1) Seismic Monitoring System accelerometer channel for more than 30 days.

If you have any questions, please contact B. A. Grabo, Supervisor, Nuclear Regulatory Affairs, at (602) 393-6492.

Sincerely,

James M. Levine

JML/TRB/RJR/rv

Enclosure

cc: W. F. Conway (all with attachment)
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K. E. Johnston
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PALO VERDE NUCLEAR GENERATING STATION UNIT 1

Seismic Monitoring System Strong Motion Accelerometer

License No. NPF-41

Docket No. 50-528

Special Report 1-SR-93-007

Initial Conditions:

This special report is being submitted pursuant to Technical Specification (TS) Limiting Condition for Operation (LCO) 3.3.3.3 ACTION (a) and TS 6.9.2 to report an event in which one (1) strong motion accelerometer channel of the Seismic Monitoring System was inoperable for a period greater than 30 days. This accelerometer is required to be operable at all times to meet the station seismic monitoring requirements of TS LCO 3.3.3.3. The 30 day period for returning the accelerometer to an OPERABLE condition was exceeded at approximately 0932 MST on December 15, 1993.

System Description:

The Seismic Monitoring System (SM) is installed in Unit 1 (only) and consists of six (6) tri-axial strong motion accelerometer assemblies, associated instrumentation, and recording equipment for measuring plant response to earthquake activity. Each tri-axial strong motion accelerometer assembly consists of three (3) single-axis accelerometers. All six (6) of the strong motion accelerometer channels are installed with a channel orientated vertical, a channel orientated true East-West, and a channel orientated true North-South. A response spectrum analyzer is provided to compare seismic acceleration response spectra with plant design response spectra to determine if design response spectra are exceeded. After an earthquake, the decision to continue operating the units or to shut them down is based on an analysis which is performed to determine whether or not the plant seismic Design Bases Response Spectra (DBRS) (i.e., allowable stresses) have been exceeded.

Cause of Malfunction:

During the performance of Surveillance Test (ST) 36ST-1SM01, the strong motion accelerometer assembly mounted on the Reactor Coolant Pump (RCP) upper end bell did not have an output to the SM cabinet. Troubleshooting identified that one (1) of the three (3) single-axis accelerometers which make-up this tri-axial channel was not responding.

Plans for Restoration:

The strong motion accelerometers are Terra Technology, Model SSA-302. The remainder of the system is operating properly and will supply sufficient information to allow detection and evaluation of an earthquake. The accelerometer that failed is located on an RCP housing and can not be replaced with the unit operating. The complete tri-axial assembly will be replaced during the next outage of sufficient duration.