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SUBJECT: Special Rept 2-SR-89-004:on 890406,post-accident sampling sys inoperable for period greater than 7 days.

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192-00475-JGH/TDS/JEM
May 3, 1989

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

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 2
Docket No. STN 50-529 (License No. NPF-51)
Special Report 2-SR-89-004
File: 89-020-404

Attached please find Special Report 2-SR-89-004 prepared and submitted pursuant to Technical Specifications 3.3.3.1 ACTION 28 and 6.9.2. This report discusses the Post Accident Sampling System being inoperable for more than 7 days.

If you have any questions, please contact T. D. Shriver, Compliance Manager, at (602) 393-2521.

Very truly yours,

J. G. Haynes
Vice President
Nuclear Production

JGH/TDS/DAJ/kj

Attachment

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PALO VERDE NUCLEAR GENERATING STATION

PASS Inoperable for Greater Than 7 Days

License No. NPF-51

Docket No. 50-529

Special Report 2-SR-89-004

This Special Report is being submitted in accordance with Technical Specifications 3.3.3.1 ACTION 28-2 and 6.9.2 to report an event in which the Post Accident Sampling System (PASS) was inoperable for a period greater than 7 days. The 7 day limit for inoperability was exceeded at approximately 0800 MST on April 6, 1989.

At approximately 0800 MST on March 30, 1989, Palo Verde Unit 2 was in Mode 3 (HOT STANDBY) at approximately 565 degrees F Reactor Coolant System (RCS) temperature and approximately 2255 psia pressurizer pressure when PASS was declared inoperable due to the planned isolation of the demineralized water supply to PASS. In accordance with Technical Specification 3.3.3.1 ACTION 28-1 the Preplanned Alternate Sampling Program (PASP) was initiated at 1924 MST on April 3, 1989.

Prior to the event, at approximately 1630 MST on March 27, 1989, Palo Verde Unit 1 Chemistry personnel identified that a portion of the Demineralized Water System (DW) was contaminated. Subsequent investigation in Unit 1 identified backflow from the Reactor Coolant System Hot Leg Loop 1 sample line backwards through two (2) check valves and one (1) normally closed solenoid valve into the DW system. The DW system is connected into the RCS sample line to provide flush water for sample lines routed to the sample sink in the Chemistry Hot Laboratory. Flushing of the sample lines is to maintain radiation exposure As Low As Reasonably Achievable (ALARA) in the event that PASP is utilized for PASS.

On March 30, 1989, Unit 1 Operations personnel informed Units 2 and 3 personnel of the contamination of the Unit 1 DW lines. Unit 3 personnel investigated, but did not identify any contamination of the DW system. Unit 2 personnel investigated and identified contamination in the Unit 2 DW system. At approximately 0800 MST on March 30, 1989, Unit 2 personnel isolated the contaminated portion of the DW system by shutting isolation valve DWN-V-122. Shutting DWN-V-122 isolated several DW service lines including the DW supply to PASS and the DW supply to the RCS Hot Leg sample line that is used when PASP is being utilized. Unit 2 personnel determined that the valves in the DW supply line to PASP had leaked contaminated RCS back to the DW header. These valves were SSN-UV-564 (solenoid valve), SSN-V-856 (check valve), and SSN-V-857 (check valve). The DW supply line to PASS is required for operability of PASS, therefore, PASS was declared inoperable when DWN-V-122 was shut at approximately 0800 MST on March 30, 1989.

The cause of the valves backleakage is not known at this time. A Root Cause of Failure will be performed by August 31, 1989. As an interim corrective action a Temporary Modification Request was approved on March 31, 1989. This modification isolates the DW system from the RCS Hot Leg sample line. This is

accomplished by removing a section of the DW line between the first check valve and the tee into the RCS sample line and then capping the two open ends of the line. The modification was completed in Unit 2 on April 9, 1989. After successful completion of Surveillance Test 74ST-2SS04 (PASS Functional Test) PASS was declared operable at 1140 MST on April 11, 1989. The modification was completed in Unit 1 on April 7, 1989 and will be implemented in Unit 3 by May 23, 1989.

Additional sampling and analysis of the DW systems have been performed in Units 1 and 2 since the modification was completed. No further radioactive contamination has been identified in the DW systems.

Additionally, an investigation is being performed to review other similar connections between contaminated systems and "clean" flushing water systems. This investigation will be conducted to determine if additional controls are required to preclude other situations of cross-contamination.

This report will be supplemented by December 31, 1989, to report the root cause of the valves' leakage and any further corrective action that may be required due to the investigation.