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102-08373-BJR/SPD
December 22, 2021

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Sirs:

Subject: **Palo Verde Nuclear Generating Station (PVNGS) Unit 3**
Docket No. STN 50-530 / License No. NPF 74
Special Report 3-SR-2021-001-00

Enclosed please find Special Report 3-SR-2021-001-00, which is prepared and submitted pursuant to PVNGS Technical Specifications 5.6.6, PAM Report. This report discusses the inoperability of the Qualified Safety Parameter Display System, that comprises a portion of the post accident monitoring instrumentation.

In accordance with 10 CFR 50.4, copies of this Special Report are being forwarded to the Nuclear Regulatory Commission (NRC) Regional Office, NRC Region IV, and the Senior Resident Inspector.

Arizona Public Service Company makes no commitments in this letter. If you have questions regarding this submittal, please contact Michael DiLorenzo, Department Leader, Regulatory Affairs, at (623) 393-3495.

Sincerely,

Rash, Bruce
(Z77439)

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Enclosure

cc: S. A. Morris
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NRC Region IV Regional Administrator
NRC NRR Project Manager for PVNGS
NRC Senior Resident Inspector for PVNGS

**Palo Verde Nuclear Generating Station (PVNGS) Unit 3
Special Report 3-SR-2021-001-00
Qualified Safety Parameter Display System (QSPDS) Inoperable**

Reporting Requirement:

PVNGS Technical Specification (TS) 5.6.6, PAM Report, requires submittal of the report within 14 days required by TS 3.3.10, Post Accident Monitoring (PAM) Instrumentation, Limited Condition for Operation (LCO) Condition 'B'. The report shall outline the preplanned alternate method of monitoring, the cause of the inoperability, and the plans and schedule for restoring the instrumentation channels of the Function to OPERABLE status.

Initial Conditions:

On November 15, 2021, LCO 3.3.10 Condition 'A' was entered when the 'B' channel of the Unit 3 QSPDS was declared inoperable during the performance of the QSPDS Channel 'B' calibration surveillance test in accordance with surveillance requirement 3.3.10.2. Condition 'A' requires restoration of the required channel to an OPERABLE status within 30 days.

The post-accident monitoring functions that were affected by the inoperable channel (per Table 3.3.10-1) were:

- Reactor Vessel Water Level
- Core Exit Temperature Quadrants 1-4
- Reactor Coolant System Subcooling Margin Monitoring

A failure of a power supply that occurred during the surveillance test did not allow the test to be completed. Condition 'B' of LCO 3.3.10, for required action and associated completion time of Condition 'A' not met, was entered at 09:36 Mountain Standard Time (MST) on December 15, 2021. Condition B required immediate initiation of action required by TS 5.6.6.

Actions Taken:

While the 'B' channel was inoperable, the OPERABLE 'A' channel of the QSPDS provided the primary method for post-accident monitoring. If both channels of the QSPDS became unavailable during actual accident conditions, the following existing procedures were in place to be used as alternate methods of monitoring for each of the affected functions:

Reactor Vessel Water Level:

The QSPDS User's Guide procedure provides a method for monitoring reactor vessel inventory with reactor vessel level monitoring system inoperable.

Core Exit Temperatures

The Flex Support Guidelines - Modes 1,2,3, or 4 procedure provides a method for obtaining core exit temperatures.

Reactor Coolant System Subcooling Margin Monitoring

The Determination of Subcooled Margin procedure provides guidance on calculating subcooled margin using various indicators of reactor coolant system temperature and pressure.

Channel 'A' of the QSPDS remained OPERABLE and the alternate methods of monitoring remained available until the 'B' channel of the QSPDS was repaired, tested, and returned to an OPERABLE status on December 15, 2021, at 13:58 MST.

Cause of the Inoperability:

The cause of the failed QSPDS channel was a failed power supply. Repair of the failed power supply was delayed due to equipment obsolescence issues and supply chain delays, causing the station to exceed the 30-day completion time of LCO 3.3.10, Condition 'A'.

Plans and Schedule for Restoring the System to OPERABLE Status:

Channel 'B' of the QSPDS was restored to an OPERABLE status as described above.