

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

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 LEVINE,J.M. Arizona Public Service Co. (formerly Arizona Nuclear Power  
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SUBJECT: Special rept 1-SR-91-001-01:on 910111,fuel bldg ventilation  
 sys high range radioactive gaseous effluent monitor declared  
 inoperable for period greater than 72 h.Inoperable in order  
 to perform scheduled 18-month surveillance testing & maint.

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**Arizona Public Service Company**

PALO VERDE NUCLEAR GENERATING STATION  
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192-00745-JML/TRB/KR  
October 10, 1991

JAMES M. LEVINE  
VICE PRESIDENT  
NUCLEAR PRODUCTION

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
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Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Unit 1  
Docket No. STN 50-528 (License No. NPF-41)  
Special Report 1-SR-91-001-01  
File: 91-020-404

Attached please find Supplement 1 to Special Report 1-SR-91-001 prepared and submitted pursuant to Technical Specifications 3.3.3.8 ACTION 42(b) and 6.9.2. This report discusses a radiation monitor being inoperable for greater than 72 hours. This supplement is being provided to reformat the information provided and to clarify the circumstances which contributed to the monitor being out of service. We are forwarding a copy of the Special Report to the Regional Administrator of the Region V office.

If you have any questions, please contact D. A. Johnson, Compliance Supervisor, at (602) 393-3703.

Very truly yours,

*James M. Levine*

JML/TRB/KR/nk

Attachment

cc: W. F. Conway (all with attachment)  
J. B. Martin  
D. H. Coe

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PALO VERDE NUCLEAR GENERATING STATION UNIT 1

Radiation Monitoring Unit Inoperable Greater Than 72 Hours

License No. NPF-41

Docket No. 50-528

Special Report 1-SR-91-001-01

Initial Conditions:

This Special Report is being submitted pursuant to Technical Specification (TS) 3.3.3.8 ACTION 42(b) and TS 6.9.2 to report an event in which the Fuel Building Ventilation System High Range Radioactive Gaseous Effluent Monitor (RU-146) was inoperable for a period greater than 72 hours. The 72-hour period for returning the monitor to service was exceeded at approximately 1355 MST on January 11, 1991. On January 11, 1991, Palo Verde Unit 1 was in Mode 1 (POWER OPERATION) at approximately 100 percent power.

Background Information:

Radiation Monitors RU-145 (Fuel Building Ventilation System Low Range Radioactive Effluent Monitor) and RU-146 monitor the Fuel Building Ventilation Exhaust for release of radioactivity due to a fuel handling accident. Radiation Monitors RU-145 and RU-146 work as a pair with RU-145 being the low range monitor for normal radioactive gaseous effluents and RU-146 being the high range monitor for post-accident radioactive gaseous effluents. Normal configuration consists of RU-145 operating and RU-146 in standby. When RU-145 reaches a predetermined setpoint, RU-146 starts and RU-145 goes to standby. RU-145 initiates a Fuel Building Essential Ventilation Actuation Signal (FBEVAS) when the activity exceeds a predetermined setpoint, RU-146 starts and RU-145 goes to standby. RU-145 initiates a Fuel Building Essential Ventilation Actuation Signal (FBEVAS) when the activity exceeds a predetermined limit. Since RU-145 and RU-146 work in tandem, RU-146 must be declared inoperable if RU-145 is out of service.

Actions Taken:

On January 8, 1991, at approximately 1355 MST, Radiation Monitors RU-145 and RU-146 were removed from service in accordance with an approved work document for scheduled 18-month calibration and surveillance tests (ST). Alternate sampling was initiated in accordance with the Preplanned Alternate Sampling Program to monitor the Fuel Building Ventilation System fulfilling TS 3.3.3.8 ACTIONS 36, 37, 40 and 42, as applicable.

Based on Palo Verde experience, the average performance interval for the high and low range effluent monitor 18-month ST is approximately 120 hours. Additionally, during the performance of the calibration and surveillance, the RU-145 detector would not pass the surveillance testing acceptance criteria due to a faulty low voltage power supply. While waiting for a replacement power supply, testing began on RU-146. The power supply failure has been addressed in previous root cause of failure (RCF) evaluations. Based on the RCF, when the power supply malfunction is detected, an upgraded replacement



power supply is being installed in the monitors. Additional corrective maintenance was also performed to replace a hexadecimal display board for RU-145 which was discovered to be functioning improperly.

Corrective maintenance and the 18-month STs were completed and the monitors were returned to service at approximately 1250 MST on January 13, 1991.

Cause of the Inoperability:

RU-146 was inoperable in order to perform scheduled 18-month surveillance testing and corrective maintenance, as described above.

Plans and Schedule for Restoring the System to Service:

Radiation monitors RU-145 and RU-146 were returned to an OPERABLE status following satisfactory completion of the STs at approximately 1250 MST on January 13, 1991. The monitors were out of service approximately 5 days.

