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 unit inoperable for greater than 72 h.

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Arizona Public Service Company

PALO VERDE NUCLEAR GENERATING STATION  
P O BOX 52034 • PHOENIX, ARIZONA 85072-2034

192-00505-JGH/TDS/DAJ  
August 3, 1989

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

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station  
Unit 1  
Docket No. STN 50-528 (License NPF-41)  
Supplement to Special Report 1-SR-89-003-01  
File: 89-020-404

Attached please find Supplement Number 1 to Special Report 1-SR-89-003 prepared and submitted pursuant to Technical Specifications 3.3.3.8 ACTION 42(b) and 6.9.2. This report discusses an inoperable radiation monitor.

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 UNIT 1

Radiation Monitoring Unit Inoperable for Greater Than 72 Hours

License No. NPF-41

Docket No. 50-528

Special Report No. 1-SR-89-003-01

This Special Report is submitted in accordance with Technical Specification 3.3.3.8 ACTION 42(b) and 6.9.2 for an event in which the Unit 1 Condenser Evacuation System high range effluent monitor (RU-142) was inoperable for greater than 72 hours. The 72 hour limit for inoperability was exceeded at approximately 1135 MST on April 2, 1989. Pursuant to Technical Specification 3.3.3.8 ACTIONS 37 and 40, the Preplanned Alternate Sampling Program (PASP) was initiated at approximately 1135 MST on March 30, 1989.

At approximately 1135 MST on March 30, 1989, RU-142 was declared inoperable as a result of the Condenser Evacuation System low range effluent monitor (RU-141) being declared inoperable. RU-141 was declared inoperable due to engineering concerns regarding the effects of moisture in the gas channel. Radioactive effluent monitor RU-141 continuously monitors the condenser vacuum pump/gland seal exhaust for gaseous activity resulting from primary to secondary leakage. Monitors RU-141 and RU-142 work as a pair with RU-141 as the low range monitor and RU-142 as the high range monitor. Normal configuration consists of RU-141 operating with RU-142 in standby. Based upon gas channel readings, low range monitor RU-141 automatically starts RU-142 and initiates filtration of the condenser vacuum pump/gland seal exhaust whenever a HIGH-HIGH alarm condition is registered. RU-142 is provided for tracking radioactive effluents during postulated accident scenarios. RU-142 must be declared inoperable when RU-141 is inoperable.

PVNGS has experienced several instances wherein moisture buildup has resulted in Condenser Evacuation System radioactive effluent monitor improper operation. In order to correct this problem, PVNGS engineering personnel, with the assistance of an independent consulting firm, were reviewing the design of the monitor. During this review, information was obtained from the independent consulting firm on March 27, 1989, which brought into question the sensitivity, and thus the accuracy, of the gas chamber. This information was reviewed by PVNGS engineering and management personnel. As a prudent measure, RU-141 was declared inoperable until engineering resolution of the moisture problem could be effected.

As an interim measure to ensure that the monitors are available until the long-term design modifications are implemented, an engineering evaluation was conducted to determine if additional heat tracing would be effective. Based upon the results of this evaluation, it appears that additional heat tracing should preclude moisture collection in the detection chamber during the non-winter months. Therefore, heat tracing will be installed in RU-141 and -142 prior to restart from the current Unit 1 outage. The heat tracing has been installed in Units 2 and 3.

Based upon the results of the evaluation provided by the independent consultant firm, long term design modifications will be implemented to



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permanently resolve the moisture problem. The design modifications are expected to be ready for implementation in Palo Verde Units 1, 2, and 3 by August 31, 1989. Pending parts availability implementation of the design modifications is expected by October 31, 1989.

