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SUBJECT: Special Rept 3-SR-88-03: on 880714, radioactive gaseous effluent monitors declared inoperable greater than 72 h.

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192-00400-JGH/TDS/DAJ
August 10, 1988

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

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 3
Docket No. STN 50-530 (License No. NPF-74)
Special Report 3-SR-88-003
File: 88-020-404

Attached please find Special Report 3-SR-88-003 prepared and submitted pursuant to Technical Specifications 3.3.3.8 and 6.9.2. This report discusses an inoperable Plant Vent Monitor.

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

Very truly yours,

J. G. Haynes

J. G. Haynes
Vice President
Nuclear Production

JGH/TDS/DAJ/kj

Attachment

cc: D. B. Karner (all w/a)
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PALO VERDE NUCLEAR GENERATING STATION

Radiation Monitoring Unit Inoperable for Greater Than 72 Hours

License No. NPF-74

Docket No. STN 50-530

Special Report No. 3-SR-88-003

This Special Report is being submitted pursuant to Technical Specification 3.3.3.8 ACTION 42b and Technical Specification 6.9.2 to report an event in which a Radioactive Gaseous Effluent Monitor (Plant Vent High Range Gaseous Activity Monitor RU-144) was inoperable for greater than 72 hours. The 72 hour limit for returning to operability was exceeded at approximately 0500 MST on July 14, 1988. Pursuant to Technical Specification 3.3.3.8 ACTION 42a the Preplanned Alternate Sampling Program was initiated to monitor the Plant Vent System.

At approximately 0500 MST on July 11, 1988, Palo Verde Unit 3 was in Mode 1 (POWER OPERATIONS) at approximately 100% power when the Plant Vent System Radioactive Gaseous Effluent Monitors (RU-143 and RU-144) were declared inoperable for the implementation of a Plant Change Package (PCP) which would improve the monitors' reliability and for the performance of 18 month surveillance testing. Monitors RU-143 and RU-144 work as a pair with RU-143 being the low range monitor and RU-144 being the high range monitor. Normal configuration consists of RU-143 operating and RU-144 in standby. When RU-143 reaches a predetermined setpoint, RU-144 starts and RU-143 goes to standby. RU-144 is provided for tracking of postulated accident releases.

An authorized work document was issued to implement the PCP for RU-143 which would change the default parameters in the monitor's software. In the event of a Loss of Power (LOP), the default parameters provide conservative setpoints upon restoration of power. The new default parameters will improve the reliability of RU-143 by assuring that the setpoints provide sufficient operating margin to minimize spurious alarms following a loss of power, but, are still conservative enough to ensure that the limits of TS 3.11.2.1 are not exceeded. The software was successfully installed and the 18 month surveillance testing was commenced.

The 18 month surveillance test procedure had recently been revised to require obtaining additional data for monitoring detector performance. The additional data was intended to be utilized to enhance ANPP's methodologies for monitoring detector performance. During field implementation of the new procedure, it was discovered that not all of the information required by the new procedure could be obtained and surveillance testing was discontinued. During ANPP's investigation into the procedural problems, it was discovered that the procedure requested data that could not be obtained due to test equipment limitations. The procedure was revised to return to the original testing methodology and surveillance testing was continued.

During ANPP's investigation into the procedural problems, it was identified that a high voltage circuit board on RU-143 had incorrect diodes installed. The incorrect diodes would not allow the high voltage to the detector to reach

maximum output. The inability to achieve maximum high voltages does not affect monitor performance since the voltages which cannot be obtained are above that necessary for detector performance. Futhermore, the incorrect diodes are in the particulate sampling channel of the monitor and are not required for Technical Specification OPERABILITY considerations. The incorrect diodes were supplied by the original equipment manufacturer (Kaman Electronics) as part of the high voltage board and will be replaced by ANPP per approved work documentation.

It was also discovered than an air-flow sampling pump was not providing specified flow. The air pump was replaced and surveillance testing completed. The unsatisfactory air pump performance is not considered to have any adverse impact on the health and safety of the public since air flow was above the minimum required (a low air-flow alarm would have provided indication of air-flow below minimum). RU-143 and RU-144 were returned to service at approximately 1520 MST on August 4, 1988. The monitor was out of service for approximately 24 days.