

PRIORITY 1

ACCELERATED RIDS PROCESSING

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9505310238 DOC. DATE: 95/05/25 NOTARIZED: NO DOCKET #
 FACIL: STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Public Service Co. 05000530
 AUTH. NAME: LEVINE, J.M. AUTHOR AFFILIATION: Arizona Public Service Co. (formerly Arizona Nuclear Power
 RECIP. NAME: RECIPIENT AFFILIATION: Document Control Branch (Document Control Desk)

SUBJECT: Special report on 950416, loose-part detection system channel 1 declared inoperable. Caused by malfunction of coaxial cable connector to transducer. Channel will be reworked & returned to service during first available outage of sufficient duration.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTTR 1 / ENCL 1 SIZE: 3
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Report, etc.

NOTES: Standardized plant. 05000530

RECIPIENT		COPIES		RECIPIENT		COPIES	
ID CODE/NAME		LTTR	ENCL	ID CODE/NAME		LTTR	ENCL
PD4-2 PD		1	1	THOMAS, C		1	1
INTERNAL: ACRS		1	1	AEOD/SPD/RAB		2	2
AEOD/SPD/RRAB		1	1	FILE CENTER		1	1
NRR/DE/ECGB		1	1	NRR/DE/EELB		1	1
NRR/DE/EMEB		1	1	NRR/DISP/PIPB		1	1
NRR/DOPS/OECB		1	1	NRR/DRCH/HHFB		1	1
NRR/DRCH/HICB		1	1	NRR/DRCH/HOLB		1	1
NRR/DSSA/SPLB		1	1	NRR/DSSA/SPSB/B		1	1
NRR/DSSA/SRXB		1	1	RES/DSIR/EIB		1	1
RGN4 FILE 01		1	1				
EXTERNAL: L ST LOBBY WARD		1	1	LITCO BRYCE, J H		2	2
NOAC MURPHY, G.A		1	1	NOAC POORE, W.		1	1
NRC PDR		1	1	NUDOCS FULL TXT		1	1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 504-2083) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED

TOTAL NUMBER OF COPIES REQUIRED: LTTR 27 ENCL 27

P
R
I
O
R
I
T
Y

1

D
O
C
U
M
E
N
T

1A-2

Arizona Public Service Company

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

192-00932-JML/BAG/RAS

May 25, 1995

JAMES M. LEVINE
VICE PRESIDENT
NUCLEAR PRODUCTION

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Station P1-37
Washington, DC 20555-0001

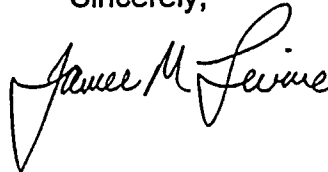
Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 3
Docket No. STN 50-530 (License No. NPF-74)
Special Report 3-SR-95-001**

Attached please find Special Report 3-SR-95-001 prepared and submitted pursuant to Technical Specification (TS) Limiting Condition for Operation 3.3.3.7 ACTION (a) and TS 6.9.2. This report discusses the inoperability of one (1) Loose-Part Detection System channel for more than thirty (30) days.

If you have any questions, please contact Burt Grabo, Section Leader, Nuclear Regulatory Affairs, at (602) 393-6492.

Sincerely,



JML/BAG/RAS/rv

Attachment

cc: L. J. Callan (all with attachment)
K. E. Perkins
K. E. Johnston

9505310238 950525
PDR ADCK 05000530
S PDR

TE22

PALO VERDE NUCLEAR GENERATING STATION UNIT 3

Loose-Part Detection System

License No. NPF-74

Docket No. STN 50-530

Special Report 3-SR-95-001

Initial Conditions:

At approximately 0922 MST on April 16, 1995, Palo Verde Unit 3 was in Mode 1 (POWER OPERATION) operating at 100 percent power when Loose-Part Detection System channel 1 was declared inoperable. The thirty day period for returning the channel to an operable status was exceeded at approximately 0922 MST on May 16, 1995. This Special Report is being submitted pursuant to Technical Specification (TS) Limiting Condition for Operation (LCO) 3.3.3.7 ACTION (a) and TS 6.9.2 to report the inoperability of one (1) Loose-Part Detection System channel for more than thirty days. The remaining seven (7) channels continue to function properly. TS LCO 3.3.3.7 is applicable in Mode 1 and Mode 2 (STARTUP).

System Information:

The Loose-Part Detection System is designed to detect and record signals resulting from loose part impacts occurring within the Reactor Coolant System (RCS). The Loose-Part Detection System has eight channels each utilizing high temperature piezoelectric accelerometers (transducers) which are located in areas where loose parts are most likely to become trapped. The eight transducers are positioned on the Reactor Vessel upper head (channels 1 and 2), the Reactor Vessel lower head (channels 3 and 4), Steam Generator No. 1 (channels 5 and 6) and Steam Generator No. 2 (channels 7 and 8). High temperature, low noise, radiation hardened, flame-retardant coaxial cables connect the accelerometers to preamplifiers which are located outside of the primary shield. The transducers detect loose parts using acoustic signals which are generated when loose parts impact an RCS component or structure. Signals in excess of the alarm setpoint will result in a "latch on" type alarm (i.e., the alarm will remain on when the system returns to normal and will not clear until the alarm is manually reset). There is one alarm indicator in the Control Room for the eight channels.

Actions Taken:

On April 16, 1995, during routine daily monitoring of the of the Loose-Part Detection System, Operations personnel determined that channel 1 was INOPERABLE. This operability determination was preceded by recurrent losses of the signal, which became increasingly frequent until the channel was finally declared inoperable. Troubleshooting activities were not performed due to the radiological exposure which would be received because of the transducer's location on the Reactor Vessel upper head.

TS LCO 3.3.3.7 ACTION (a) was entered and applicable plant corrective action documents were initiated. During this time the other channels functioned normally.

Cause of the Malfunction:

The apparent failure of channel 1 is due to the malfunction of the coaxial cable connector to the transducer. This failure determination is based upon past failures of the cable connector to the accelerometer. An equipment root cause of failure analysis will not be performed to verify or rectify the Loose-Part Detection System channel 1 problem due to the radiological exposure which would be received because of the transducer's location on the Reactor Vessel upper head. However, modifications are being considered which will enhance the coaxial cable connectors and may prevent similar malfunctions.

Plans for Restoring the Channel to OPERABLE Status:

The inoperable Loose-Part Detection System channel will be reworked and returned to service during the first available outage of sufficient duration. The remaining seven (7) channels continue to function properly. Shift Technical Advisors and Operations personnel will continue to perform shiftly aural checks on Channels 2 through 8 (i.e., during dayshift and nightshift).



1
Y