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RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 91-002-01:on 910206,surveillance performance prohibited by tech spec noted.Caused by misinterpretation of basis for performing Tech Spec.Event discussed w/mgt & investigation of event discussed.W/910424 ltr.

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Arizona Public Service Company
PALO VERDE NUCLEAR GENERATING STATION
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JAMES M. LEVINE
VICE PRESIDENT
NUCLEAR PRODUCTION

192-00719/JML/TRB/KR
April 24, 1991

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Mail Station P1-37
Washington, D.C. 20555

Dear Sirs:

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1
Docket No. STN 50-528 (License No. NPF-41)
Licensee Event Report 91-002-01
File: 91-020-404

Attached please find Supplement 1 to Licensee Event Report (LER) No. 91-002 prepared and submitted pursuant to 10CFR50.73. In accordance with 10CFR50.73(d), we are forwarding a copy of the LER to the Regional Administrator of the Region V office.

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

Very truly yours,

James M Levine

JML/TRB/KR/dmn

Attachment

cc: W. F. Conway (all with attachment)
J. B. Martin
D. H. Coe
A. C. Gehr
A. H. Gutterman
INPO Records Center

IE22

NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Palo Verde Unit 1	0 5 0 0 0 5 2 8	1 OF 0 6

TITLE (4)

Surveillance Performance Prohibited by Technical Specification

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
									Palo Verde Unit 2	0 5 0 0 0 5 2 9
0 2	0 6	9 1	9 1	0 0 2	0 1	0 4	2 4	9 1	Palo Verde Unit 3	0 5 0 0 0 5 3 0

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
Thomas R. Bradish, Compliance Manager	6 0 2 3 9 3 - 2 5 2 1

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On February 6, 1991, at approximately 1200 MST, Palo Verde Unit 1 was in Mode 5 (COLD SHUTDOWN) and Palo Verde Units 2 and 3 were operating at approximately 100 percent power when Compliance personnel determined that the 18 month Technical Specification (TS) required surveillances to demonstrate operability of each Emergency Diesel Generator (EDG) were conducted during unit operation. This was contrary to the TS requirement that the surveillances be performed during shutdown.

The cause of the event was a misinterpretation of the basis for performing the TS required surveillance while shutdown. The phrase "during shutdown" was incorrectly interpreted as only applying to the surveillance requirements which could not be performed within the 72 hour ACTION period for the EDG being out of service.

The event was discussed with responsible PVNGS management and a memorandum was issued to ensure that TS required surveillances would only be performed during Modes 4 (HOT SHUTDOWN), 5, or 6 (REFUELING - including core defueled) when TS states "during shutdown."

There have been no previous similar events reported pursuant to 10CFR50.73.

I. DESCRIPTION OF WHAT OCCURRED:

A. Initial Conditions:

At 1200 MST on February 6, 1991, Palo Verde Unit 1 was in Mode 5 (COLD SHUTDOWN) with the Reactor Coolant System (RCS)(AB) at approximately 110 degrees Fahrenheit and at atmospheric pressure, and Palo Verde Units 2 and 3 were in Mode 1 (POWER OPERATION) at approximately 100 percent power.

B. Reportable Event Description (Including Dates and Approximate Times of Major Occurrences):

Event Classification: Operation prohibited by the PVNGS Technical Specifications (TS).

At approximately 1200 MST on February 6, 1991, Compliance personnel (utility, non-licensed), performing an investigation in response to questions asked by the NRC resident inspector (non-utility, non-licensed), determined that the 18 month TS required surveillances to demonstrate operability of each Emergency Diesel Generator (EK)(DG) (EDG) were conducted in Units 1, 2, and 3 during unit operation. This was contrary to the TS requirement that the surveillances be performed during shutdown. TS surveillance requirement 4.8.1.1.2.d states that "Each diesel generator shall be demonstrated OPERABLE: ... At least once per 18 months during shutdown by: ... Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service."

The manufacturer's recommendations are implemented using two (2) approved EDG surveillance test (ST) procedures: one for the diesel engine and the other for the diesel generator and its associated electrical equipment. During the investigation, APS identified examples when both the diesel engine and diesel generator STs were performed during unit operation in Units 1, 2, and 3. A more in-depth investigation would be necessary to determine each occasion when the EDG STs were performed during unit operation. Because that information would not change or add to the understanding of the event, no further investigation to identify other examples is currently planned.

As part of the investigation of this event, TSs were reviewed to identify additional surveillances which are required to be

performed during shutdown and to determine if safety concerns other than safety equipment unavailability were created by potential performance of the STs during unit operation. Three types of TS required surveillances to be performed during shutdown were found:

1. Conditional type STs that are only required when the unit is shutdown (e.g., "every 31 days of cumulative operation during shutdown"),

2. Physical restraint type STs that cannot be performed while at power (e.g., eddy current testing requires the steam generators to be open), and

3. Availability type STs that could be performed at power, however, TS restricts the performance to during shutdown.

Since the conditional and physical restraint type STs (Types 1 and 2) do not present the same potential for performance while at power, no further evaluation for these STs is required.

Each of the availability type STs (Type 3) was evaluated to determine if safety concerns other than safety equipment unavailability were created by potential performance of the STs during unit operation. This evaluation did not identify any such safety concerns. As with the EDG ST, a more in-depth investigation would be necessary to determine each occasion when the availability type STs were performed during unit operation. Because that information would not change or add to the understanding of the event, no further investigation to identify other examples is currently planned.

C. Status of structures, systems, or components that were inoperable at the start of the event that contributed to the event:

Not applicable - no structures, systems, or components were inoperable at the start of the event which contributed to this event.

D. Cause of each component or system failure, if known:

Not applicable - no component or system failures were involved.

E. Failure mode, mechanism, and effect of each failed component, if known:

Not applicable - no component failures were involved.

F. For failures of components with multiple functions, list of systems or secondary functions that were also affected:

Not applicable - no failures of components with multiple functions were involved.

G. For a failure that rendered a train of a safety system inoperable, estimated time elapsed from the discovery of the failure until the train was returned to service:

Not applicable - no failures that rendered a train of a safety system inoperable were involved.

H. Method of discovery of each component or system failure or procedural error:

There were no component or system failures or procedural errors identified.

I. Cause of Event:

The cause of the event was that responsible PVNGS management misinterpreted the TS requirement to perform the surveillances during shutdown (i.e., unit shutdown) (SALP Cause Code A: Personnel Error). The basis for performing the manufacturer's recommended inspections "during shutdown" was misinterpreted because the full scope manufacturer's recommended inspection could not be performed within the 72 hour ACTION limit. Therefore, responsible PVNGS management considered that the phrase "during shutdown" applied to only those portions of the ST which could not be performed within the 72 hour ACTION period for the EDG being out of service (e.g., engine teardown for selected inspections). When the specified surveillance interval of 18 months occurred, the EDG was subjected to a more limited inspection which could be performed within the 72 hour ACTION limit to demonstrate operability. Manufacturer's concurrence was obtained in determining the extent of the inspection activities necessary to demonstrate operability of the EDG.

Contributing to the cause of the event was that the 18 month surveillance interval due date became out of synchronization with the next scheduled refueling outage date due to previous unplanned extended unit refueling outages. In general, the 18 month surveillance interval corresponds with the 18 month refueling cycle when the unit is shutdown. The 18 month EDG STs interval dates occurred prior to the unit refueling outages because of previous extended unit outages.

No unusual characteristics of the work location (e.g., noise, heat, poor lighting) directly contributed to this event. There were no procedural errors which contributed to this event.

J. Safety System Response:

Not applicable - there were no safety system responses and none were necessary.

K. Failed Component Information:

Not applicable - no component failures were involved.

II. ASSESSMENT OF THE SAFETY CONSEQUENCES AND IMPLICATIONS OF THIS EVENT:

The OPERABILITY of the alternating current (AC) power sources, as well as the direct current (DC) power sources and associated distribution systems, during unit operation, ensures that sufficient power will be available to supply the safety-related equipment required for (1) the safe shutdown of the plant and (2) the mitigation and control of accident conditions within the plant. The EDGs are required to supply power to components necessary to maintain the reactor in a safe shutdown condition in the event offsite power is lost.

The 18 month EDG STs were performed during unit operation to support the demonstration of operability of the EDGs. The EDG ST inspection activities did not involve the disassembly of the EDGs nor did they affect the EDG availability over an extended period of time. Major inspection activities that involved the disassembly of the EDGs or affected availability over an extended period of time (i.e., greater than 72 hours) were conducted during plant shutdown. The performance of the EDG STs while at power reduced the availability of the EDGs for less than 72 hours and was necessary to affirm confidence in the EDGs' operable status. No other no adverse safety consequences or implications resulted from this event.

III. CORRECTIVE ACTION:

A. Immediate:

The Vice President Nuclear Production discussed the event with responsible PVNGS management and issued a memorandum to ensure that TS required surveillances would only be performed during Modes 4 (HOT SHUTDOWN), 5, or 6 (REFUELING - including core defueled) when TS states "during shutdown," unless relief from the specific TS requirement has been received from the NRC.

B. Action to Prevent Recurrence:

An investigation of this event was conducted in accordance with the PVNGS Incident Investigation Program. Based upon the results of the investigation, procedure change requests were submitted to place precautions in procedures that implement applicable TS surveillance requirements (i.e., perform during shutdown). The precautions will provide increased assurance that the ST will only be performed during unit shutdown.

IV. PREVIOUS SIMILAR EVENTS:

No other previous similar events have been reported pursuant to 10CFR50.73 where a TS required surveillance that was to be performed during shutdown was performed when the unit was at power.