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ACCESSION NBR:9410040104      DOC.DATE: 94/09/22      NOTARIZED: NO      DOCKET #  
 FACIL:STN-50-530 Palo Verde Nuclear Station, Unit 3, Arizona Publi 05000530  
 AUTH.NAME      AUTHOR AFFILIATION  
 GRABO,B.A.      Arizona Public Service Co. (formerly Arizona Nuclear Power  
 LEVINE,J.M.      Arizona Public Service Co. (formerly Arizona Nuclear Power  
 RECIP.NAME      RECIPIENT AFFILIATION

SUBJECT: LER 94-006-00:on 940823,shutdown cooling loop rendered  
 inoperable due to pump breaker racked down & in test  
 position.Training provided to licensed operators on  
 Procedure 40DP-90P26, "Operability...." W/940922 ltr.

DISTRIBUTION CODE: IE22T      COPIES RECEIVED:LTR / ENCL / SIZE: 7  
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:Standardized plant.

05000530

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	RES/DSIR/EIB	1 1	RGN4 FILE 01	1 1
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**Arizona Public Service Company**

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

192-00907-JML/BAG/DLK

September 22, 1994

JAMES M. LEVINE  
VICE PRESIDENT  
NUCLEAR PRODUCTION

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

Dear Sirs:

**Subject: Palo Verde Nuclear Generating Station (PVNGS)**  
**Unit 3**  
**Docket No. STN 50-530**  
**License No. NPF-74**  
**Licensee Event Report 94-006-00**  
**File: 94-020-404**

Attached please find Licensee Event Report (LER) 94-006-00 prepared and submitted pursuant to 10 CFR 50.73. This LER reports a violation of Technical Specification 3.9.8.2. APS took credit for the manual operator action of racking in a 4.16 kV Low Pressure Safety Injection pump supply breaker, in a decision to consider a "standby" shutdown cooling loop operable. On August 23, 1994, APS revised its operability determination position in the response to Notice of Violation 50-530/94-12-03. In revising the operability determination position, the "standby" shutdown cooling loop, in retrospect, was inoperable. In accordance with 10 CFR 50.73(d), a copy of this LER is being forwarded to the Regional Administrator, USNRC Region IV.

Should you have any questions, please contact Burton A. Grabo, Section Leader, Compliance, at (602) 393-6492.

Sincerely,



JML/BAG/DLK/pv

Attachment

cc: L. J. Callan  
K. E. Perkins  
K. E. Johnston  
INPO Records Center

9410040104 940922  
PDR ADDCK 05000530  
S PDR

*JE22*



# LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <b>Palo Verde Unit 3</b>	DOCKET NUMBER (2) <b>0 5 0 0 0 5 3 0</b>	PAGE (3) <b>1</b> OF <b>0 6</b>
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TITLE (4)  
**Shutdown Cooling Loop Inoperable Due to Pump Breaker Racked Down and in the Test Position**

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 NUMBERS	
									N/A	0 5 0 0 0 0	
0 8	2 3	9 4	9 4	- 0 0 6	- 0 0 0	0 9	2 2	9 4	N/A	0 5 0 0 0 0	

OPERATING MODE (9) <b>1</b>		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) <b>1 0 0</b>		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)	<input checked="" type="checkbox"/>	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 <b>Burton A. Grabo, Section Leader, Nuclear Regulatory Affairs</b>	TELEPHONE NUMBER <b>6 0 2 3 9 3 - 6 4 9 2</b>

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
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO										

ABSTRACT (Limit to 1400 spaces, i.e., approximately 4 lines using 10-space typewriting lines) (16)

At approximately 1530 MST on August 23, 1994, Arizona Public Service Company (APS) formalized its response to Notice of Violation (NOV) 50-530/94-12-03. In the response, APS revised Palo Verde's operability determination position on crediting manual operator action for maintaining 4.16 kV pumps OPERABLE with their associated 4.16 kV breakers racked down and in the test position. Based on the revision, racking a "standby" Low Pressure Safety Injection (LPSI) pump supply breaker down and in the test position during shutdown cooling operations renders the "standby" shutdown cooling loop inoperable. In retrospect, Palo Verde Unit 3, while operating in MODE 6 (REFUELING) with less than 23 feet above the reactor pressure vessel flange, performed Integrated Safeguards testing in a plant configuration prohibited by Technical Specification Limiting Condition for Operation (TS LCO) 3.9.8.2. The "standby" LPSI pump supply breaker was racked down and in the test position which rendered the "standby" shutdown cooling loop inoperable. TS LCO 3.9.8.2 requires two loops of shutdown cooling be maintained OPERABLE with one loop in operation.

Palo Verde's operability determination procedure has been revised to incorporate APS' current position.

There have been no previous similar events reported pursuant to 10 CFR 50.73.



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TEXT

I. DESCRIPTION OF WHAT OCCURRED:

A. Initial Conditions:

On August 23, 1994 (the date Arizona Public Service Company responded to Notice of Violation 50-530/94-12-03 informing the NRC of the revised operability determination position), Palo Verde Unit 3 was in MODE 1 (POWER OPERATIONS) operating at approximately 100 percent power. On May 12, 1994 (the date a "standby" shutdown cooling loop (BP/BQ) was considered OPERABLE with its 4.16 kV Low Pressure Safety Injection (BP) pump supply breaker (EB) (BKR) racked down and in the test position), Palo Verde Unit 3 was in MODE 6 (REFUELING) with less than 23 feet of water above the reactor pressure vessel (AB) flange.

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

Event Classification: Condition prohibited by the plant's Technical Specifications.

On August 23, 1994, at approximately 1530 MST, Arizona Public Service Company (APS) formalized its response to a Notice of Violation (NOV), issued in NRC inspection report 50-528/529/530/94-12, for operating the shutdown cooling system in a configuration prohibited by Technical Specification Limiting Condition for Operation (TS LCO) 3.9.8.2. In May 1994, Unit 3 was conducting Integrated Safeguards testing in MODE 6 with less than 23 feet of water above the reactor pressure vessel flange. TS LCO 3.9.8.2 ACTION "a" states, "With less than the required shutdown cooling loops OPERABLE, immediately initiate corrective action to return the required loops to OPERABLE status, or to establish greater than or equal to 23 feet of water above the reactor pressure vessel flange, as soon as possible."

To prevent an inadvertent Low Pressure Safety Injection (LPSI) pump start, in the "standby" shutdown cooling loop, the "standby" LPSI pump supply breaker was racked down and in the test position. APS took credit for the manual operator action of racking in the 4.16 kV LPSI pump supply breaker - a simple action, within the skill and training of the auxiliary operators - in the decision to consider the "standby" shutdown cooling loop OPERABLE. Credit for manual operator action was based on reasonable assurance that the LPSI pump supply breaker could be racked in within the time period required (approximately 3 hours) to manually line up, and place into operation, the "standby" shutdown cooling loop. This decision appeared consistent with existing regulatory guidance; however, the NRC inspectors, who were on site conducting a team





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TEXT

inspection (50-528/529/530/94-12) at the time, disagreed. APS' position differed from the NRC inspection team's position with respect to considering a large pump OPERABLE, in a manually operated system, with its 4.16 kV supply breaker racked down and in the test position. An investigation was conducted to evaluate APS' operability determination position, which included a survey of other utilities' operability determination positions. The results of the survey were mixed; however, it did indicate that APS' position was less conservative than most plants with regards to 4.16 kV supply breakers.

On July 27, 1994, APS received a NOV (50-530/94-12-03) for operating the Unit 3 shutdown cooling system in a configuration prohibited by TS LCO 3.9.8.2. Based on the NRC's interpretation of the existing regulatory guidance and APS' desire to be consistent with the industry, APS' operability determination position was revised. Under APS' revised position, discussed in the response to NOV 50-530/94-12-03, the plant configuration established for Integrated Safeguards testing (MODE 6, with less than 23 feet of water above the reactor pressure vessel flange and the "standby" LPSI pump supply breaker racked down and in the test position) would have been prohibited by TS LCO 3.9.8.2, because the "standby" LPSI pump would have been considered inoperable.

Previous operability determinations, crediting operator action for racking in 4.16 kV supply breakers, occurred prior to May 12, 1994. APS' desire to be more conservative and consistent with the industry does not necessarily invalidate previous operability determinations. Since there are no adverse safety consequences or implications as a result of the less conservative operability determinations, no additional historical operability assessments will be performed.

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

Based on the revised operability determination position, the "standby" shutdown cooling loop (with its LPSI pump supply breaker racked down and in the test position), in retrospect, was inoperable.

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

Not applicable - no component or system failures were involved.



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TEXT

- 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:

Not applicable - there have been no component or system failures or procedural errors identified. There were no procedural errors which contributed to this event.

- I. Cause of Event:

An independent investigation was initiated to evaluate APS' position on crediting manual operator action to support continued operability of manually operated systems and compare APS' position against the industry. The investigation was performed in accordance with the APS Incident Investigation Program. As part of the investigation, a survey was conducted to determine whether APS' operability determination position was consistent with other utilities. The results of the survey were mixed; however, it did indicate that APS' position was less conservative than most plants with regards to 4.16 kV supply breakers. As a result of the investigation findings, APS revised the operability determination position to be more conservative and consistent with the industry. By revising the operability determination position, APS had to consider the "standby" shutdown cooling loop, in retrospect, inoperable (SALP Cause Code X: Other).

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



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TEXT

**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:**

APS took credit for the auxiliary operator's ability to rack in the LPSI pump supply breaker within the time period required to manually line up and place into operation the "standby" shutdown cooling loop when determining the operability status of shutdown cooling. The event would not result in any challenges to the fission product barriers or result in any releases of radioactive materials. Therefore, there were no adverse safety consequences or implications as a result of this event. This event did not adversely affect the safe operation of the plant or the health and safety of the public.

**III. CORRECTIVE ACTION:**

**A. Immediate:**

A Palo Verde site position paper, titled "Guidance for Use of Manual Action to Maintain Operability," was developed and approved by the Plant Review Board. The position paper provides guidance on the minimum requirements to take credit for manual operator action(s) in maintaining operability of manually and automatically initiated systems and includes examples of situations where credit for manual operator action can and cannot be taken.

Guidance for the use of manual operator action to maintain operability has been incorporated into procedure 40DP-90P26, "Operability Determination."

Training has been provided to the licensed operators on procedure 40DP-90P26, "Operability Determination," with emphasis on APS' revised position.

**B. Action to Prevent Recurrence:**

The immediate actions taken are sufficient to prevent recurrence. Therefore, no further actions were determined to be necessary.



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TEXT

IV. PREVIOUS SIMILAR EVENTS:

No other previous events have been reported pursuant to 10 CFR 50.73 where revising APS' operability determination position, in retrospect, "created" a plant condition prohibited by Technical Specifications in the last 3 years.

