

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Palo Verde Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 5 2 8 1 OF 0 3										PAGE (3) 1 OF 0 3																																																	
TITLE (4) Lack of Verification of Adequate Boration Injection Flowpath																																																																					
EVENT DATE (5) MONTH DAY YEAR 0 3 1 4 8 5 8 5										LER NUMBER (6) YEAR SEQUENTIAL NUMBER REVISION NUMBER 0 2 5 0 0										REPORT DATE (7) MONTH DAY YEAR 0 7 0 1 8 5										OTHER FACILITIES INVOLVED (8) FACILITY NAMES DOCKET NUMBER(S) 0 5 0 0 0 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)																													
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										20.405(a)(1)(iii)										50.73(a)(2)(i)										50.73(a)(2)(viii)(A)																																							
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LICENSEE CONTACT FOR THIS LER (12)																																																																					
NAME William F. Quinn, Manager - Nuclear Licensing (extension 4087)																				TELEPHONE NUMBER AREA CODE 6 0 2 9 4 3 - 1 7 2 0 0																																																	
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																																																					
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On March 14, 1985, Technical Specification (TS) 3.1.2.3 was deviated from by using the Train "A" High Pressure Safety Injection (HPSI) system to provide the required Boron Injection Flowpath when the ASME Section XI Surveillance Test was not current on the Train "A" HPSI pump. During this time, portions of the Control Element Assembly (CEA) patch verification testing were performed resulting in small increments of positive reactivity addition. As soon as the lack of a current surveillance test was realized, the patch verification testing was stopped, the ASME Section XI test for Train "A" HPSI was performed, and the pump and associated boron injection flowpath was declared operable. The operator performing the boration flowpath surveillance test (41ST-1CH02) believed that the required ASME Section XI tests on the HPSI pump had been successfully completed.

The Emergency Boration procedure has been reviewed and modified as necessary to provide improved guidance to the operations staff on emergency boration while in Mode 5. In addition, Unit 1 personnel have been instructed to ensure that they must verify steps in the procedure and not rely on memory of completed surveillance testing.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Palo Verde Unit 1	05000528885	—	025	—	00	02	OF 03

TEXT (If more space is required, use additional NRC Form 366A's) (17)

On March 14, 1985, between 0600 and 1640, Tech. Spec. 3.1.2.3 was deviated from by using the Train "A" HPSI system to provide the required Boron Injection flow path when the Section XI ST was not current on the A-HPSI pump. During this time, portions of CEA patch verification testing, as per plant procedures, were performed resulting in small increments of positive reactivity addition. At 1640, the patch verification testing was stopped, the ASME Section XI test for Train "A" HPSI was performed, and the pump with associated boron injection flow path declared operable.

At the time of the event, the plant was in Mode 5, Reactor Coolant System (RCS) at 115 degrees and 100 psig, boron concentration of 2251 ppm, and a N<sub>2</sub> bubble in the pressurizer. The Train "A" LPSI was in operation to provide shutdown cooling; this is one of several boration injection flow paths available to the operators. It had not been noted that the ASME Section XI required surveillance test had not been performed on Train "A" HPSI pump. This test was necessary in order to declare Train "A" HPSI operable per T.S. 3.1.2.3.

At 1640 on the event date, it was noted that the required test was not current and therefore the pump and associated boron injection flowpath were not operable as required.

During this time that the boric acid injection flow path was not operable, portions of CEA testing, per procedure, were performed which adds some small increments of positive reactivity as each rod is withdrawn.

T.S. 3.1.2.3 requires that all operations involving positive reactivity changes be suspended if the requirements for an operable boron injection flow path are not satisfied. This action statement was complied with immediately by suspending the rod testing.

The ASME Section XI test for Train "A" HPSI was performed satisfactorily and the system declared operable at 2235 on 3/14/85. This satisfied T.S. 3.1.2.3.

The operator performing the Boration flow path surveillance test believed that the required Section XI tests on the HPSI pump had been successfully completed.

CORRECTIVE ACTION

1. Personnel in Unit 1 have been instructed to ensure that they must verify steps in the procedure and not rely on memory.
2. Engineering will provide the Control Room with an updated status report of required Section XI testing.
3. A management directive was issued requiring Control Room shift personnel to discuss the available boron injection flow path during shift turnovers.
4. A management directive was issued requiring all site personnel to keep the SIMS (System Information Management System) up to date with the latest available testing results to ensure that this information is available to the Shift Supervisor.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

5. The Emergency Boration procedure 41A0-1ZZ01, has been reviewed and modified as necessary to provide improved guidance to the operations staff for emergency boration while in Mode 5.

CONCLUSION

1. During the time that T.S. 3.1.2.3 was not satisfied, the RCS boron concentration was  $\geq 2150$  ppm. The Train "A" and "B" HPSI boron injection flow paths were functional and capable of supplying boric acid to the RCS. The Train "A" & "B" LPSI boron injection flow paths were also functional and capable of supplying boric acid to the RCS. All surveillance tests for the LPSI injection flow paths were current but not specified per the ST as the operable boron injection flow path.
2. The operators are trained to respond to problems using a systematic approach. These problem solving skills plus the understanding of the many boron injections paths available ensured that if a need for boric acid to the RCS was required it would have been supplied.
3. Also, the positive reactivity additions due to rod withdrawal were extremely small and had no significant effect on the core shutdown margin even though exceeding the criteria of a positive reactivity addition per T.S. 3.1.2.3.
4. There was no affect to the public as a result of this event.



## Arizona Nuclear Power Project

P.O. BOX 52034 • PHOENIX, ARIZONA 85072-2034

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

July 1, 1985  
ANPP-32939-EEVB/GEC

Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Unit 1  
Docket No. STN 50-528, License No. NPF-34  
Licensee Event Report - Lack of Verification of Adequate  
Boration Flowpath  
File: 85-056-026; G.1.01.10

Dear Sirs:

Attached please find Licensee Event Report (LER) No. 85-025-00 prepared and submitted pursuant to 10 CFR 50.73. This report is being submitted as a voluntary LER and addresses the lack of verification of an adequate boration flowpath. In accordance with 10 CFR 50.73(d), we are herewith forwarding a copy of the LER to the Regional Administrator of the Region V Office.

If you have any questions or concerns, please contact me.

Very truly yours,

E. E. Van Brunt, Jr.  
Executive Vice President  
Project Director

EEVB Jr/GEC/bg  
Attachment

cc: J. B. Martin w/a  
R. P. Zimmerman w/a  
A. L. Hon w/a  
E. A. Licitra w/a  
A. C. Gehr w/a  
INPO Records Center w/a

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