

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1): Palo Verde Unit 1

DOCKET NUMBER (2)

0 5 0 0 0 5 2 3 1 OF 0 2

TITLE (4)

Unanalyzed Safety Condition - Auxiliary Feedwater System

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)
02	04	85	85	008	01	09	27	85		0 5 0 0 0
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)							
5										
POWER LEVEL (10)			20.402(b)							
0.00			20.405(a)(1)(i)							
			20.405(a)(1)(ii)							
			20.405(a)(1)(iii)							
			20.405(a)(1)(iv)							
			20.405(a)(1)(v)							
			20.405(c)							
			50.38(c)(1)							
			50.38(c)(2)							
			50.73(a)(2)(i)							
			50.73(a)(2)(ii)							
			50.73(a)(2)(iii)							
			50.73(a)(2)(iv)							
			50.73(a)(2)(v)							
			50.73(a)(2)(vi)							
			50.73(a)(2)(vii)(A)							
			50.73(a)(2)(vii)(B)							
			50.73(a)(2)(viii)							
			73.71(b)							
			73.71(c)							
			OTHER (Specify in Abstract below and in Text, NRC Form 386A)							

LICENSEE CONTACT FOR THIS LER (12)

NAME: W. F. Quinn, Manager - Nuclear Licensing (extension 4087)

TELEPHONE NUMBER

AREA CODE

6 0 2 9 4 3 - 7 2 0 0

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)		NO		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/>		<input checked="" type="checkbox"/>					

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

This Supplemental Report is provided to include additional information obtained since the original report was made.

The assumption in the CESSAR-F Chapter 15 Safety Analyses regarding the delivery of auxiliary feedwater flow states that the maximum flow delivery to the steam generators following automatic actuation is 1750 GPM. Recent analysis and close examination of pump head-flow curves indicate that auxiliary feedwater flow rates may exceed 1750 GPM for some accidents. It was then assumed that operator action would prevent this from occurring.

However, after meeting with the Architect - Engineer and the NSSS vendor on 2/04/85, it was determined that operator action could not be guaranteed to prevent the occurrence since it occurs very soon after actuation of the automatic feedwater signal. At this time it was realized that the plant, as built, may not meet the criteria established in the Chapter 15 Safety Analysis assumptions.

Preliminary results from subsequent analyses had shown that even though the feedwater flow rate may be exceeded, there is no decrease in the safety margin of the analysis.

Combustion Engineering (NSSS Vendor) has since provided the results of a final analysis which confirms that the as-built plant performance has been demonstrated to produce a safety analysis result that is conservative with respect to the results in the current FSAR analysis. Based on this, the event is no longer determined to be reportable.

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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	0500052885	0	08	01	0	2	OF 02

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

This Supplemental Report is provided to include additional information obtained since the original report was made.

The CESSAR-F Chapter 15 Safety Analyses, which is the referenced safety analysis for the Palo Verde Nuclear Generating Station (PVNGS), assumes that the maximum auxiliary feedwater flow rate to the steam generators following an automatic actuation is 1750 GPM. Contrary to this assumption, recent analysis coupled with close examination of actual pump head flow curves indicates that actual flow could exceed the assumed maximum.

The PVNGS design has two class 1E Auxiliary Feedwater Pumps (BA), each having a motor operated discharge isolation valve and a motor operated flow control valve. Both of the valves receive a signal to open fully on an Auxiliary Feedwater Actuation Signal (AFAS) when a steam generator water level decreases below a preset level. Since there are no other flow restrictions in the pump discharge lines, a decreased pressure in the steam generators with an AFAS could cause the flow rate to exceed 1750 GPM. An assumption was made that operator action would prevent exceeding the maximum assumed flow.

On February 4, 1985, a meeting was held with the NSSS vendor, the Architect-Engineer, and ANPP. Discussions led to the conclusion that for certain types of accidents, i.e., Main Steam Line Break (MSLB), the pressure decrease in the steam generator is rapid enough to cause the maximum flow rate to be exceeded in less than one minute. During this kind of occurrence, exceeding the flow rate in the Safety Analysis should not be assumed to be mitigated by operator action for up to several minutes into the accident. Since crediting operator action is not proper in this case, it appeared that the as-built plant was not adequately covered by the existing safety analyses.

Subsequent analysis have been performed using increased auxiliary feedwater flow rates. Preliminary results had indicated that although flow rates are higher than assumed previously, DNBR increases at flow rates beyond 1750 GPM, resulting in an increase in safety margin.

Combustion Engineering (CE) conducted a new analysis. This has confirmed that the larger AFW flow rate does not result in a DNBR less than that calculated in the limiting analysis presented in Amendment 14 of the PVNGS FSAR. Therefore, this event is no longer considered reportable.



Arizona Nuclear Power Project

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

September 27, 1985
ANPP-33585-EEVB/GEC

Subject: Palo Verde Nuclear Generating Station (PVNGS)
Unit 1
Docket No. STN 50-528, License No. NPF-41
Licensee Event Report - Unanalyzed Safety Condition -
Auxiliary Feedwater System
File: 85-056-026; G.1.01.10

Dear Sirs:

Attached please find Licensee Event Report (LER) No. 85-008-01 prepared and submitted pursuant to 10 CFR 50.73. This LER supplements LER 85-008-00 submitted on March 6, 1985 and addresses an unanalyzed safety condition related to the Auxiliary Feedwater System. Further evaluation and analysis has confirmed that this event is not reportable within the requirements of 10 CFR 50.73; therefore, this report is being submitted as a voluntary report. 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/GEC/slh
Attachment

cc: J. B. Martin (all w/a)
R. P. Zimmerman
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