

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Palo Verde Unit 2										DOCKET NUMBER (2) 0 5 0 0 0 5 2 9 1										PAGE (3) 1 OF 03																															
TITLE (4) Engineer Safety Feature Actuation Due to Personnel Error																																																			
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)																								
0 9			0 3			8 6			8 6			-		0 3		9		-			0 0			0 9			2 9			8 6			N/A			0 5 0 0 0															
0 9			0 3			8 6			8 6			-		0 3		9		-			0 0			0 9			2 9			8 6			N/A			0 5 0 0 0															
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)																																																	
1		20.402(b)										20.405(c)										<input checked="" type="checkbox"/> 50.73(a)(2)(iv)										73.71(b)																			
POWER LEVEL (10)		0 9 1 0										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)										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)(ix)																			
LICENSEE CONTACT FOR THIS LER (12)																																																			
NAME																TELEPHONE NUMBER																																			
Thomas R. Bradish, Compliance Supervisor (Ext. 6936)																AREA CODE						6 1 0 2 9 1 3 1 2 - 1 5 1 3 1 0 1 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)																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 fifteen single space typewritten lines) (16)

At approximately 1823 MST on September 3, 1986, Palo Verde Unit 2 was in Mode 1 (POWER OPERATION) at 90 percent power when a Control Room Essential Filtration Actuation Signal (CREFAS) was generated on Train "B" of the Balance of Plant Engineered Safety Features Actuation System (BOP ESFAS). The designed crosstrip to Train "A" CREFAS of the BOP ESFAS also occurred.

The root cause of the event was a cognitive personnel error by the utility-licensed operator in that he removed the CREFAS module from bypass before all trip inputs had been cleared. This action was contrary to an approved procedure. The operator will receive appropriate disciplinary action.

Similar events involving utility-licensed operators have been reported in Unit 1 (Docket No. 50-528) LER 86-022-00 and Unit 2 (Docket No. 50-529) LER 85-006-00.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES: 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Palo Verde Unit 2	0 5 0 0 0 5 2 9 8 6 -	0 3 9 -	0 0	0 2	OF	0 3	

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

At approximately 1823 MST on September 3, 1986, Palo Verde Unit 2 was in Mode 1 (POWER OPERATION) at 90 percent power when a Control Room Essential Filtration Actuation Signal (CREFAS)(VI) was initiated on Train "B" of the Balance of Plant Engineered Safety Features System (BOP ESFAS)(JE). The designed crosstrip to Train "A" CREFAS of the BOP ESFAS was also initiated.

Prior to the event, the CREFAS module had been placed in bypass to allow functional testing on the Train "B" control room ventilation intake radiation monitor (RU-30)(IL)(MON). RU-30 was then tripped in accordance with the approved test procedure. As designed, the CREFAS module did not actuate since it was in bypass, however, the trip inputs from the monitor were still present. These inputs are required to be reset prior to taking the CREFAS module out of bypass.

To reset the BOP ESFAS module, the tripped radiation monitor and CREFAS module must be reset. If the radiation monitor and/or CREFAS module are not reset, a trip input is sensed and the CREFAS module will actuate when removed from bypass. A trip input is indicated by a lighted Trip/Reset button on the CREFAS module. When the trip portion of the button is lit, the radiation monitor has reached its trip setpoint. When the radiation monitor has been reset, the reset portion of the button lights up. At this time, the trip inputs can be cleared by pressing the trip/reset button. Once all trip inputs have been cleared, the control room operator can remove the CREFAS module from bypass without initiating an actuation. This is accomplished at the CREFAS module in the BOP ESFAS module.

In accordance with an approved procedure, the Radiation Protection technicians notified the control room that RU-30 had been reset. At this time a utility-licensed operator removed the CREFAS module from bypass without verifying that all trip inputs had been cleared. This resulted in the CREFAS "B" initiation and the designed crosstrip to CREFAS "A".

The root cause of this event was a cognitive personnel error by the utility-licensed operator in that he removed the CREFAS module from bypass before clearing all trip inputs. This action was contrary to an approved procedure.

After taking the CREFAS module out of bypass, the operator recognized the error and immediately pressed the trip/reset button in an attempt to prevent the actuation of the attendant equipment. This action reset the CREFAS module before the load sequencer began to actuate equipment. When a CREFAS is initiated, the load sequencer does not begin to actuate the attendant equipment until five seconds after the signal is generated. Because of this designed delay, the operator's actions prevented the actual equipment actuations.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO 3150-0104

EXPIRES: 8/31/86

FACILITY NAME (1)  Palo Verde Unit 2	DOCKET NUMBER (2)  0 5 0 0 0 5 2 9 8 6 -	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
			0 3 9 -	0 0	0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 365A's) (17)

The utility-licensed operator had been properly trained, had demonstrated that he was knowledgeable about the BOP ESFAS system, and was following an approved procedure that is considered adequate. In addition, the operator had successfully performed the evolution several times previously on other channels during this shift.

As described above all aspects of this evolution apparently were well controlled including a briefing of the operator by a utility licensed assistant shift supervisor prior to the evolution. However, when the operator began the sequence to reset the module he inadvertently removed the module from bypass.

Since the operator terminated the initiation prior to the actuation of the equipment the decision was made to perform a manual actuation to demonstrate operability of the equipment. This was successfully completed at approximately 1853. Operators (utility-licensed) restored all actuated equipment in accordance with the appropriate alarm response procedures at approximately 1900. The duration of this event was approximately 36 minutes.

This event did not affect the safe operation of the plant or the health and safety of the public. However, had an emergency condition existed, all equipment would have actuated as discussed above.

There were no inoperable systems, structures, or components prior to this event that contributed to this event. There were no unusual characteristics of the work location that contributed to this event.

Similar events involving a utility-licensed operator have been reported in Unit 1 (Docket No. 50-528) LER 86-022-00 and Unit 2 (Docket No. 50-529) LER 85-006-00. The corrective actions taken in response to these events would not have prevented or mitigated the events described above. As described above, this event was caused solely by an inadvertent operator action with no other apparent contributory causes. This specific event is considered an isolated occurrence and the operator will receive appropriate disciplinary action.



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Licensee Event Report  
ANPP-00084-JGH/TDS/MJC/96.03  
Page 2

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## Arizona Nuclear Power Project

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ANPP-00084-JGH/TDS/MJC/96.03

September 29, 1986

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

Subject: Palo Verde Nuclear Generating Station (PVNGS)  
Unit 2  
Docket No. STN 50-529  
Licensee Event Report-86-039-00  
File: 86-020-404

Dear Sirs:

Attached please find Licensee Event Report (LER) No.86-039-00 prepared and submitted pursuant to 10 CFR 50.73. 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, please contact T. R. Bradish, Compliance Supervisor at (602)932-5300 Ext.6936.

Very truly yours,

J. G. Haynes  
Vice President  
Nuclear Production

JGH/MJC/dh

Attachment

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