

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Palo Verde Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 5 1 2 8	PAGE (3) 1 OF 0 2
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TITLE (4)

Spurious CPIAS and CREFAS Initiated by Failure of a Radiation Monitor CPU Card

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)						
1	2	2	9	8	5	8	5	0	9	7	0	5	0	0	0	0	0

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

LICENSEE CONTACT FOR THIS LER (12)

NAME William F. Quinn, Manager - Nuclear Licensing (Extension 4087)	TELEPHONE NUMBER	
	AREA CODE 6 0 2	NUMBER 9 4 3 1 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
X	I L	C P U	K 0 2 0	N					

SUPPLEMENTAL REPORT EXPECTED (14)

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

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

At 0650 MST on December 29, 1985, Palo Verde Unit 1 was operating in Mode 1, POWER OPERATION, at 95% reactor power, when a component failure on a computer card installed in a radiation monitor resulted in the spurious initiation of several automatic Engineered Safety Feature (ESF) actuations.

Immediately prior to initiation of the ESF actuation signals, as a result of the computer card failure, the Radiation Monitoring System (RMS) provided a control room alarm indicating that the Train "A" containment purge exhaust radiation monitor, RU-37, was experiencing problems communicating with the RMS central computer, as well as the balance of the RMS. Ultimately, the computer card failure resulted in a spurious Train "A" Containment Purge Isolation Actuation Signal (CPIAS), the cross-trip initiation of a Train "B" CPIAS, and a cross-trip initiation of both a Train "A" and a Train "B" Control Room Essential Filtration Actuation Signal (CREFAS).

The cause of this event has been determined to be a computer (CPU) card within the radiation monitor that experienced failure of an electronic component. As a corrective action, the defective CPU card was replaced. The CPU card was supplied by Kaman Sciences Corporation; Model No. 450358-004.

No previous events involving component failure in a radiation monitor computer card have been reported for Unit 1.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3150-0104

EXPIRES 8/31/98

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 5	0 9 7	0 0 0	2	OF	0 2

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

At 0650 MST on December 29, 1985, Palo Verde Unit 1 was operating in Mode 1, POWER OPERATION, at 95% reactor power, when a component failure on a computer (CPU) card installed in a radiation monitor (IL) resulted in the spurious initiation of several automatic Engineered Safety Feature (ESF)(JE) actuations.

Immediately prior to initiation of the ESF actuation signals, as a result of the CPU card failure, the Radiation Monitoring System (RMS) provided a control room alarm indicating that the communication port corresponding to the Train "A" containment purge exhaust radiation monitor, RU-37, was experiencing problems communicating with the RMS central computer, as well as the balance of the RMS. Initiation of the ESF actuation signals occurred before operators (licensed) could respond to the control room alarms and place the monitor in a "bypass" condition.

As a result of the CPU card failure, the radiation monitor initiated a spurious Train "A" Containment Purge Isolation Actuation Signal (CPIAS)(JE), and resulted in the cross-trip initiation of a Train "B" CPIAS, as well as a cross-trip initiation of both a Train "A" and Train "B" Control Room Essential Filtration Actuation Signal (CREFAS) (JE). Following the ESF actuations, the Train "A" CPIAS was placed in a "bypass" condition, and all affected equipment was restored to a normal operating condition.

Investigation into the cause of this event determined that a CPU card within the radiation monitor had experienced failure of an electronic component. As a corrective action, the defective CPU card was replaced. The CPU card was supplied by Kaman Sciences Corporation; Model No. 450358-004.

Since the containment purge system was isolated, and not in operation at the time that the CPIAS occurred, this event did not result in any threat to the health and safety of the general public. However, had a high containment purge exhaust activity level existed concurrent with operation of the containment purge system and the failure of Train "A" radiation monitor RU-37, the Train "B" purge exhaust radiation monitor would have initiated all ESF actuations necessary for maintaining plant safety, and protection of the public.

With the exception of the failed CPU card in radiation monitor RU-37, which initiated the spurious ESF actuation of CPIAS and CREFAS, all safety-related equipment performed its ESF function, as required, during this event.

No previous events involving component failure on a radiation monitor computer card have been reported for Unit 1.



Arizona Nuclear Power Project

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

January 28, 1986
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U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Subject: Palo Verde Nuclear Generating Station (FVNGS)
Unit 1
Docket No. STN 50-528, License No. NPF-41
Licensee Event Report - 85-097-00
File: 86-020-404

Dear Sirs:

Attached please find Licensee Event Report (LER) No. 85-097-00 prepared and submitted pursuant to 10 CFR 50.73. In accordance with 10 CFR 50.73(d), we are here-with forwarding a copy of the LER to the Regional Administrator of the Region V Office.

If you have any questions, please contact me.

Very truly yours,

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

EEVB/KLM/rw
Attachment

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

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