

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3160-0104
EXPIRES - 9/31/95

FACILITY NAME (1) Peach Bottom Atomic Power Station - Unit 3										DOCKET NUMBER (3) 0 6 0 0 0 2 7 8 1										PAGE (3) 1 OF 03									
TITLE (4) Loss of 3B Core Spray Logic Due To Shorted Light Socket																													
EVENT DATE (8)				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 (2)												
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OPERATING MODE (9)				THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																									
N				20.402(b)				20.406(a)				60.73(a)(2)(iv)				73.71(b)													
POWER LEVEL (10)				20.406(a)(1)(ii)				60.36(a)(1)				60.73(a)(2)(v)				73.71(a)													
11 01 0				20.406(a)(1)(ii)				60.36(a)(2)				60.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Test, NRC Form 366A)													
				20.406(a)(1)(iii)				60.73(a)(2)(i)				60.73(a)(2)(vii)(A)																	
				20.406(a)(1)(iv)				60.73(a)(2)(ii)				60.73(a)(2)(viii)(B)																	
				20.406(a)(1)(v)				60.73(a)(2)(iii)				60.73(a)(2)(ix)																	
LICENSEE CONTACT FOR THIS LER (12)																													
NAME												TELEPHONE NUMBER																	
B. L. Clark, Senior Engineer - Special Projects												AREA CODE																	
												2 1 5 8 4 1 1 - 5 0 1 1 7																	
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																				
B	E	K	L	F	G	0	8	0	N																				
SUPPLEMENTAL REPORT EXPECTED (14)										EXPECTED SUBMISSION DATE (16)																			
YES (If yes, complete EXPECTED SUBMISSION DATE)										MONTH DAY YEAR																			
X NO																													

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

Abstract: 3-84-03

On March 29, 1984, the B core spray logic fuse 14A-F2B on Unit 3 was blown during instrument surveillance testing due to a shorted socket on indicating light 14A-DS36B. This disabled the 3B core spray logic and parts of the redundant initiating logic circuits in two of the emergency diesels, RHR, HPCI, and the A core spray systems. The shorted socket was removed from the logic circuit and the fuse was replaced. The Electrical Engineering Division has been requested to review the ECCS logic design and initiate modifications, if appropriate.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)

Peach Bottom Atomic Power Station
Unit 3

DOCKET NUMBER (2)

0 5 0 0 0 2 7 8 8 4 - 0 0 3 - 0 0 0 2 OF 0 13

LER NUMBER (6)

PAGE (2)

YEAR

SEQUENTIAL

DIVISION

NUMBER

NUMBER

TEXT (if more space is required, use additional NRC Form 366A (1))

Description of the Event:

On March 29, 1984, while performing instrument surveillance testing, the B core spray system fuse on Unit 3 was blown due to a shorted socket on indicating light 14A-DS36B. This disabled the 3B core spray system which is one of the two 100% redundant core spray systems. Certain additional ECCS functions, which are interlocked with the core spray logic affecting emergency diesels, RHR, HPCI and tripping of drywell cooling fans, were also lost. The additional functions lost were as follows:

- a) The channel B and D inputs into the 3A core spray initiation logic; the channel B and D high drywell pressure inputs into the HPCI initiation logic; and the channel B and D low reactor water level and low reactor pressure inputs into the 3A LPCI initiation logic. (These inputs are part of a one-out-of-two twice logic; their loss would not have prevented their logic from operating if required.)
- b) One of the two redundant drywell cooling fan trip signals. Its loss would not have prevented fan trip if required.
- c) The 3B LPCI initiation logic with the exception of the LPCI pump start on low reactor water level. This logic is one part of a redundant logic; its loss would not have prevented LPCI initiation if required.
- d) The Unit 3 anticipatory auto start (LOCA signal) and the blocking of the diesel protective trip functions of the E-2 and E-4 diesels. (However, the diverse diesel auto start signal on bus undervoltage was not affected, and the trip function circuitry is designed with a reliable two-out-of-three logic which is not susceptible to spurious trippings by a single failed sensor.)

The light socket was isolated and the fuse was replaced within 4 hours. The NRC was notified via the phone dedicated for the Emergency Notification System within 4 hours of the event.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 3	DOCKET NUMBER (2) 0 5 0 0 3 2 7 8 8 4 - 0 1 0 3 - 0 1 0 0 3 OF 0 3	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	DIVISION NUMBER			

TEXT (if more space is required, use additional NRC Form 366A (17))

Consequences of the Event:

The Independent Safety Evaluation Group (ISEG) and the Electrical Engineering Division have reviewed the event and it was concluded that, under LOCA conditions with the core spray logic fuse failed, the FSAR requirements for the core standby cooling systems and standby AC power supply would have been met.

Cause of the Event:

The cause of the event was a shorted light socket in the B core spray logic. The shorted light socket was caused by the rotation of the socket in its control panel. This probably occurred during a light bulb check/replacement sometime after the last instrument surveillance test. The last surveillance test was performed approximately 30 days prior to the event.

Corrective Actions:

The light socket was isolated and the fuse was replaced. The light socket will be replaced or removed from its panel on the next refueling outage.

In addition, as a follow-up to the review performed by the Independent Safety Evaluation Group, the Electrical Engineering Division has been requested to review the ECCS logic design and initiate modifications, if appropriate.

PHILADELPHIA ELECTRIC COMPANY

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April 27, 1984

Docket No. 50-278

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Washington, DC 20555

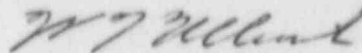
SUBJECT: Licensee Event Report

This LER is a follow-up report to the prompt notification given to the NRC on March 29, 1984, dealing with the loss of the 3B core spray logic caused by a shorted light socket.

Reference:	Docket No. 50-278
Report Number:	3-84-03
Revision Number:	00
Event Date:	March 29, 1984
Report Date:	April 27, 1984
Facility:	Peach Bottom Atomic Power Station RD #1, Box 208, Delta, PA 17314

This LER is submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(i).

Very truly yours,



W. T. Ullrich
Superintendent
Nuclear Generation Division

cc: Dr. Thomas E. Murley, Administrator
Region I, USNRC

Mr. A. R. Blough
Site Inspector

IE22
11