



PEACH BOTTOM--THE POWER OF EXCELLENCE

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION
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(717) 456-7014

February 18, 1991

Docket No. 50-277

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

SUBJECT: Licensee Event Report
Peach Bottom Atomic Power Station - Unit 2

This LER concerns a shutdown cooling isolation during blocking due to poor drawing legibility.

Reference: Docket No. 50-277
Report Number: 2-91-002
Revision Number: 00
Event Date: 01/21/91
Report Date: 02/13/91
Facility: Peach Bottom Atomic Power Station
RD 1, Box 208, Delta, PA 17314

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

Sincerely,

cc: J. J. Lyash, USNRC Senior Resident Inspector
T. T. Martin, USNRC, Region I

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bcc: R. A. Burricelli, Public Service Electric & Gas
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Peach Bottom Atomic Power Station - Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 2 7 7	PAGE (3) 1 OF 03
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TITLE (4)
Shutdown Cooling Isolation During Blocking Due to Poor Drawing Legibility

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)
0	1	21	91	91		00	2				0 5 0 0 0
0	1	21	91	91		00	02	18	91		0 5 0 0 0

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 (Check one or more of the following) (11)									
POWER LEVEL (10) 0 0 0 0	20.402(b)		20.405(e)	X	90.73(a)(2)(iv)		73.71(b)			
	20.407(a)(1)(i)		90.73(a)(2)(v)		90.73(a)(2)(vi)		73.71(c)			
	20.408(a)(1)(i)		90.73(a)(2)(ii)		90.73(a)(2)(vii)		OTHER (Specify in Abstract below and in Text, NRC Form 365A)			
	20.405(a)(1)(iii)		90.73(a)(2)(iii)		90.73(a)(2)(viii)					
	20.405(a)(1)(iv)		90.73(a)(2)(iv)		90.73(a)(2)(ix)					
20.408(a)(1)(iv)		90.73(a)(2)(v)		90.73(a)(2)(x)						

LICENSEE CONTACT FOR THIS LER (12)

NAME A. A. Fulvio, Regulatory Engineer	TELEPHONE NUMBER AREA CODE: 7 1 7 7 1 7 4 5 6 - 7 0 1 4
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS

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:
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ABSTRACT (Limit to 1400 spaces; -x approximately fifteen single-space typewritten lines) (16)

On January 21, 1991, at 0822 hours, a Residual Heat Removal System (RHR) shutdown cooling isolation occurred on Peach Bottom Unit 2 when a system blocking permit for the Automatic Depressurization System (ADS) was being applied during a refueling outage. The permit was then restored to normal and the isolation reset. Shutdown cooling was returned to service within 22 minutes after the isolation, and reactor water temperature increased only 2 degrees F.

The isolation occurred because the permit writer, when preparing the permit, did not recognize that opening the circuit breaker specified would remove power from both the ADS and RHR logics. This occurred because the drawing did not show that the circuit breaker supplied power to both RHR and ADS logics. The drawing will be enhanced to correct this problem.

The blocking permit was rewritten to isolate ADS logic using fuses and applied without incident. There were no actual safety consequences as a result of this event. Thirteen previous similar LERs were identified.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 2	DOCKET NUMBER (2) 0600027791	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
			002	00	02	OF

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

Requirements for the Report

This report is required per 10 CFR 50.73(a)(2)(iv) due to an automatic actuation of an engineered safety feature (ESF).

Unit Status at Time of Discovery

Unit 2 was in the Refuel mode with the reactor cavity filled to the refueling level and reactor water temperature at 91.5 degrees F. The Residual Heat Removal (RHR) system (EIIS:BO) was in the Shutdown Cooling mode using the 'C' RHR pump.

Description of Event

On January 21, 1991, at 0822 hours, while a system blocking permit for the Automatic Depressurization System (ADS)(EIIS:RV) was being applied, an isolation of the shutdown cooling mode of the RHR system occurred when power was removed from the 'B' RHR logic. The power for the 'B' RHR logic was removed when a breaker (EIIS:BRK) in the 125 volt distribution panel was opened as specified by the ADS system blocking permit. The same breaker supplied power to both ADS logic and RHR logic. The Unit 2 reactor operator (Utility, Licensed) immediately directed the plant operator (Utility, Non-Licensed) to restore logic power by reclosing the breaker. The shutdown cooling isolation was reset, and shutdown cooling was restored to service using the 'C' RHR pump by 0844 hours. At this time, the reactor water temperature was determined to have increased to 93.5 degrees F.

Cause of the Event

The cause of the event was a poor quality drawing in that some of the information needed was not visible. The shutdown cooling isolation occurred when power was removed from the 'B' RHR logic, resulting in the relays being de-energized and the subsequent isolation. This power was removed unknowingly because the person who wrote the blocking permit did not recognize, due to poor quality of the drawing, that opening the circuit breaker in the 125 volt distribution panel would de-energize RHR logic in addition to ADS logic.

Analysis of the Event

No actual safety consequences occurred as a result of this event.

Shutdown cooling was out of service for approximately 22 minutes. During this time period, reactor water temperature increased 2 degrees F. This temperature increase did not affect any activities in progress involved with the refueling outage.

Corrective Actions

The blocking permit, as originally written, was restored to normal, and the permit was rewritten to remove multiple fuses (EIIS:FU) in the ADS system to provide appropriate isolation of the equipment for maintenance work.

The drawing which shows the power distribution for the 125 volt DC panel will be enhanced so that it is complete.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 1	- 0 0 2	- 0 0	0 3	OF	0 3

TEXT (If more space is required, use additional NRC Form 386A's) (17)

A review will be conducted to determine the cost/benefit of developing a controlled load list document which would tabulate information from design drawings.

Previous Similar Events

Thirteen previous similar LERs were identified involving isolations due to blocking errors. None of the identified LER's involved drawing legibility and therefore previous corrective actions would not have prevented this event.