

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

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KEN POWERS
PLANT MANAGER

February 23, 1993

Docket No. 50-278

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

SUBJECT: Licensee Event Report
Peach Bottom Atomic Power Station - Unit 3

This LER concerns the High Pressure Coolant Injection system being inoperable when the discharge valve would not open due to a misaligned relay.

Reference:	Docket No. 50-278
Report Number:	3-93-001
Revision Number:	00
Event Date:	01/25/93
Report Date:	02/23/93
Facility:	Peach Bottom Atomic Power Station RD1, Box 208, Delta, PA 17314

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

Sincerely,

Thomas J. Blawie
Ken Powers

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

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

Peach Bottom Atomic Power Station - Unit 3

DOCKET NUMBER (2)

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PAGE (3)

TITLE (4) High Pressure Coolant Injection System Being Inoperable When the Discharge Valve would not Open due to a Mis-Aligned Relay

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)
01	25	93	93	001	00	02	23	93			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)									
N		20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)			
POWER LEVEL (10)		1 0 0		20.405(a)(1)(i)		50.36(c)(1)		X 50.73(a)(2)(v)		73.71(c)	
		20.405(a)(1)(ii)		50.36(c)(2)		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)		50.73(a)(2)(vii)(A)					
		20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(vii)(B)					
		20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(ix)					

LICENSEE CONTACT FOR THIS LER (12)

NAME

Anthony J. Wasong, Regulatory Supervisor

TELEPHONE NUMBER

AREA CODE

7 1 7 4 5 6 - 7 0 1 4

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	B	J	R	L	Y	C	7	7	0	Y

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)		NO		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
		X					

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

On 01/25/93, the High Pressure Coolant Injection (HPCI) system was declared inoperable when the HPCI pump discharge valve (MO-3-23-20) failed to open during valve stroke time testing. This condition would have prevented the HPCI system from injecting per its intended design. An investigation has revealed that a misaligned relay contact in the MO-3-23-20 control logic prevented the valve from opening. A minor adjustment was made to the relay contact which allowed the system to be available for system operation. Following relay adjustment, MO-3-23-20 was tested satisfactorily. The cause of this event has been determined to be a misaligned relay contact. This occurred when the movable relay contact arm became dislodged from the stationary alignment pin. This allowed the relay contact alignment to slowly change with each relay operation. This condition was reproduced, however, it has not been determined yet how the movable relay contact became dislodged from the stationary alignment pin. All other DC Motor Control Centers were immediately inspected which ensured that other similar type relay contacts were aligned and the alignment pins were properly inserted. An evaluation will be performed for this and other similar type relays to identify what additional corrective actions are required. No previous similar events have been identified.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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Peach Bottom Atomic Power Station
Unit 3

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

Requirements for the Report

This report is submitted to satisfy the requirements of 10CFR50.73(a)(2)(v) describing conditions that alone could have prevented the fulfillment of a safety function.

Unit Conditions at Time of Discovery

Unit 3 was in the "RUN" mode at approximately 100% of rated thermal reactor (EIS:EA) power. There were no systems, structures, or components that were inoperable that contributed to the event.

Description of the Event

On 01/25/93 at 2020 hours, the High Pressure Coolant Injection (HPCI) system (EIS:BJ) was declared inoperable following the performance of a quarterly Surveillance Test (ST)-O-023-301-3 "HPCI Pump Valve Flow", when the HPCI pump discharge valve (MO-3-23-20) (EIS:V) failed to open during valve stroke time testing. The purpose of this ST is to confirm that the HPCI system and associated valves are operable as specified in the Technical Specifications (Tech Spec) and the Updated Final Safety Analysis Report. During valve stroke testing, HPCI MO-3-23-20 failed to stroke open. This condition would have prevented the HPCI system from injecting per its intended design. Therefore, the applicable Tech Spec Limiting Condition for Operation (LCO) was entered. An investigation has revealed that a misaligned relay (TA) (EIS:RLY) contact in the MO-3-23-20 control logic prevented the valve from opening. This relay is located in the valve's Motor Control Center (MCC). At 2135 hours, a minor adjustment was made to the relay contact which allowed the system to be available for system operation. The NRC was notified via ENS at 2156 hours. Following relay adjustment, MO-3-23-20 was tested satisfactorily and the associated Tech Spec LCO was exited on 1/26/93 at 1745 hours.

Cause of the Event

The cause of this event has been determined to be a misaligned relay contact in the MO-3-23-20 control logic. This condition prevented MO-3-23-20 from opening. This occurred when the movable relay contact arm became dislodged from the stationary alignment pin. This allowed the relay contact alignment to slowly change with each relay operation. This condition was reproduced, however, it has not been determined yet how the movable relay contact became dislodged from the stationary alignment pin. This relay is located in the valve's MCC and these relays are Cutler Hammer model number 673. These and other similar HPCI and Reactor Core Isolation Cooling (RCIC) system (EIS:BN) relays are periodically inspected under a Preventive Maintenance task to clean the relay contacts. This relay was previously inspected in 1989 and a dislodged alignment pin would have been identified as part of this inspection. Therefore, the moveable relay contact became

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FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 3	DOCKET NUMBER (2) 0 5 0 0 0 2 7 8	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT (If more space is required, use additional NRC Form 306A's) (17)

dislodged from the stationary alignment pin sometime after that task.

Analysis of Event

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

If a design basis accident or transient would have occurred prior to MO-3-23-20 stroking, the HPCI system would have performed its intended function since the valve is normally maintained in the open position. However, if a design basis accident or transient would have occurred while the valve was failed closed, the Automatic Depressurization System (EIS:RV) was operable, if required, to reduce reactor (EIS:RPV) pressure to allow the Low Pressure Coolant Injection (EIS:BO) Systems to inject. The RCIC system was also operable to provide core cooling. In addition, the valve was last tested satisfactorily on 01/02/93 during the performance of an ST.

Corrective Actions

Following relay adjustment, MO-3-23-20 was tested satisfactorily and the associated Tech Spec LCO was exited.

All other DC MCCs were immediately inspected which ensured that other similar type relay contacts were aligned and the alignment pins were properly inserted.

An evaluation will be performed for this and other similar type relays to identify what additional corrective actions are required to assure continued proper operation of the HPCI and other systems which utilize these type relays.

Previous Similar Events

There were no previous similar events identified which involved alignment pin concerns on these type relays.