



PEACH BOTTOM—THE POWER OF EXCELLENCE

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION
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Delta, Pennsylvania 17314
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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 the potential for the inoperability of the High Pressure Coolant Injection System due to the use of two non-environmentally qualified relays in the system.

Reference: Docket No. 50-277
Report Number: 2-91-001
Revision Number: 00
Event Date: 01/18/91
Report Date: 02/18/91
Facility: Peach Bottom Atomic Power Station
RD 1, Box 208, Delta, PA 17314

This LER is being submitted as a voluntary report.

Sincerely,

cc: J. J. Lyash, USNRC Senior Resident Inspector
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IFRR
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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)
850002777

PAGE (3)
1 OF 03

TITLE (4)
Voluntary LER Concerning the Potential for the Inoperability of the High Pressure Coolant Injection System Due to the Use of Two Non-Environmentally Qualified Relays

EVENT DATE (5)				LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISED NUMBER	MONTH	DAY	YEAR	FACILITY NUMBER			DOCKET NUMBER
01	18	91	91	001	0	00	21	89				05000
												05000

OPERATING MODE (9) N

POWER LEVEL (10) 000

THIS REPORT IS SUBMITTED PURV. INT TO THE REQUIREMENTS OF 10 CFR 2. (Check one or more of the following) (11)

<input type="checkbox"/> 20.402(a)	<input type="checkbox"/> 20.405(a)	<input type="checkbox"/> 30.73(a)(2)(iv)	<input type="checkbox"/> 39.71(b)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 30.36(a)(1)	<input type="checkbox"/> 30.73(a)(2)(v)	<input type="checkbox"/> 39.71(c)
<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 30.36(a)(2)	<input type="checkbox"/> 30.73(a)(2)(vi)	<input checked="" type="checkbox"/> OTHER (Specify in Abstract Below and in Text NRC Form 366)
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 30.73(a)(2)(ii)	<input type="checkbox"/> 30.73(a)(2)(vii)(A)	Voluntary
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 30.73(a)(2)(iii)	<input type="checkbox"/> 30.73(a)(2)(vii)(B)	
<input type="checkbox"/> 20.405(a)(1)(vi)	<input type="checkbox"/> 30.73(a)(2)(iv)	<input type="checkbox"/> 30.73(a)(2)(viii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME: A. A. Fulvio, Regulatory Engineer

TELEPHONE NUMBER: 717-456-7014

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)

YES (If yes, specify EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

ABSTRACT (Limit to 1000 spaces, or approximately fifteen single spaced typewritten lines) (16)

On 1/18/91, at 2130 hours, it was determined as a result of review of procurement engineering documents that the Unit 3 High Pressure Coolant Injection (HPCI) system was potentially inoperable due to the use of two non-environmentally qualified (EQ) relays in the control circuitry for the HPCI Auxiliary Oil Pump (AOP). The equivalent Unit 2 relays were similarly deficient. The cause of the condition was an inadequate EQ review of the components in the HPCI room performed in March, 1990. The Unit 3 relays were replaced with qualified relays on 1/20/91. The Unit 2 relays will be replaced with qualified relays prior to restart from the current refuel outage. A walkdown of both the Unit 2 and 3 HPCI rooms will be performed to ensure that equipment in the rooms which is required to be EQ has been appropriately evaluated. There was one previous similar event.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		91	001	00	02	OF	03

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

Unit Status at time of Discovery

Unit 2 was shutdown for a planned refueling outage.

Unit 3 was shutdown due to a main transformer problem.

Description of Condition

On 1/18/91, at 2130 hours, it was determined as a result of review of procurement engineering documents that the Unit 3 High Pressure Coolant Injection (HPCI) (EiIS:BJ) system was potentially inoperable due to the use of two non-environmentally qualified (EQ) relays (EiIS:RLY) in the control circuitry for the HPCI Auxiliary Oil Pump (AOP) (EiIS:P). The equivalent Unit 2 relays were evaluated and determined to be similarly deficient.

The AOP, and its associated control circuitry, was upgraded to be EQ in March of 1990 in order to address a postulated failure of the HPCI gland seal condenser (GSC) (EiIS:COND) subsystem during a seismic event. It was determined that such a failure could create a harsh environment in the HPCI room. It appears that these relays, which are located in a panel separate from other control circuitry for the AOP, were overlooked during this EQ evaluation.

Requirements for the Report

This report is voluntarily submitted to report the potential for inoperability of the HPCI system. As reported in Peach Bottom LER 2-90-007, a potential exists for creating a harsh environment in the HPCI room due to a failure of the GSC subsystem during a seismic event.

This potential exists because the GSC condensate and vacuum pump motors are not seismically qualified although the HPCI GSC supports and associated piping were seismically designed. It is indeterminate as to whether the GSC condensate and vacuum pump motors and associated electric controls could be seismically qualified. Assuming a harsh environment in the HPCI room, the AOP control circuitry relays could fail. The potential loss of the AOP would result in the inoperability of HPCI.

Cause of the Condition

The cause of the condition was an inadequate EQ review of the components in the HPCI room performed in March 1990. During this review, schematic prints were used to identify the components potentially requiring EQ and their location. Once the panel indicated on the schematic print was located, the equipment inside was reviewed and qualified as appropriate. A check of components qualified in the field versus the components shown on the schematic print was not performed to verify that each component was accounted for in the field. The relays described in this event were located in a field panel other than the one listed on the schematic print. Although field wiring prints

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		0 0 1	0 0	0 0	0 3	OF	0 3

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

indicated the correct location of these relays, they were not referenced during the EQ reviews.

Analysis of the Condition

There were no actual safety consequences that resulted from this condition.

If HPCI became inoperable when required to perform its intended function, the Automatic Depressurization System (EIIIS:RV) would be available to depressurize the Reactor Vessel (EIIIS:RPV) until the low pressure coolant systems Core Spray (EIIIS:8M) and Low Pressure Coolant Injection (EIIIS:80) would be available to inject coolant into the Reactor vessel (EIIIS:RPV) to provide core cooling.

Corrective Actions

The Unit 3 relays were replaced on 1/20/91 with qualified relays and the appropriate EQ Preventive Maintenance (PM) tasks were created to maintain these relays EQ.

The Unit 2 relays will be replaced with qualified relays prior to startup from the current refueling outage.

The schematic prints for the Unit 2 and Unit 3 AGP motor starters will be revised to indicate the correct location of the relays.

A walkdown will be performed for both the Unit 2 and Unit 3 HPCI rooms to ensure that equipment in the rooms which is required to be EQ has been evaluated.

Previous Similar Conditions

As discussed above, LER 2-90-007 described the potential inoperability of the HPCI system due to a postulated failure of the GSC subsystem. Because of the reasons discussed in the Cause of the Condition section above, the corrective actions taken as a result of LER 2-90-007 did not prevent the condition described in this report.