

PHILADELPHIA ELECTRIC COMPANY

PEACH BOTTOM ATOMIC POWER STATION

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DELTA, PA 17314

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KEN POWERS  
PLANT MANAGER

February 23, 1993

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 High Pressure Coolant Injection system being inoperable due to a flange leak on the Gland Seal Condenser.

Reference:	Docket No. 50-277
Report Number:	2-93-003
Revision Number:	00
Event Date:	01/31/93
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,

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

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TITLE (4) High Pressure Coolant Injection System being Inoperable due to a Flange Leak on the Gland Seal Condenser

EVENT DATE (5)			EVENT 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)
0 1	3 1	9 3	9 3	0 0 3	0 0	0 2	2 3	9 3			0 5 0 0 0 0
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)											

OPERATING MODE (9)	N	20.402(b)	20.405(c)	50.73(e)(2)(iv)	73.71(b)
POWER LEVEL (10)	1 0 0	20.405(a)(1)(ii)	50.36(c)(1)	X 50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(iii)	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)(viii)(A)	
		20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
Anthony J. Wasong, Regulatory Supervisor	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	H/X	G 2 1 0	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)

NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On 01/31/93, the High Pressure Coolant Injection (HPCI) system was declared inoperable following the performance of a Surveillance Test (ST), when the HPCI Gland Seal Condenser upper head flange gasket failed. This allowed the HPCI Gland Seal Condenser tube side cooling water to be sprayed into the HPCI room onto the control relay panels for the HPCI Auxiliary Oil Pump, HPCI Condensate Pump, and the HPCI Vacuum Pump. Therefore, the applicable Technical Specification Limiting Condition for Operation was entered. The cause of this event has been determined to be a failure of the HPCI Gland Seal Condenser upper head flange gasket. Following the event, the HPCI control relay panels were opened to allow drying. In addition, the Unit 3 HPCI Gland Seal Condenser gasket was visually inspected, from the outside for signs of deterioration. The Unit 3 HPCI system was considered satisfactory. After Unit 2 Gland Seal Condenser gasket replacement and control relay panel component testing, the HPCI system was tested satisfactorily per the ST. The Unit 3 HPCI Gland Seal Condenser gasket will be inspected and replaced as necessary during an upcoming HPCI system outage. An evaluation will be performed to identify what additional corrective actions are required. No actual safety consequences occurred as a result of this event. There were no previous similar events 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-930), 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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TEXT (If more space is required, use additional NRC Form 366A'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 2 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 01/31/93 at 0940 hours, the High Pressure Coolant Injection (HPCI) system (EIS:BJ) was declared inoperable following the performance of a monthly Surveillance Test (ST)-O-023-300-2 "HPCI Pump Valve Flow", when the HPCI Gland Seal Condenser (20E033) (EIS:HX) upper head flange gasket failed. This allowed the HPCI Gland Seal Condenser tube side cooling water to be sprayed into the HPCI room onto the control relay panels for the HPCI Auxiliary Oil Pump, HPCI Condensate Pump, and the HPCI Vacuum Pump. Subsequently, a ground occurred on the Station Batteries. The HPCI Gland Seal Condenser was isolated which stopped the leak and the power feeds to the HPCI Auxiliary Oil Pump, HPCI Condensate Pump, and the HPCI Vacuum Pump were opened thus clearing the battery grounds. This condition could have impacted HPCI's operating duration. If a design basis accident or transient would have occurred prior to the Gland Seal Condenser leak, the HPCI system would have performed its intended function until either room flooding or water spray would have failed support systems. Therefore, the applicable Technical Specification (Tech Spec) Limiting Condition for Operation (LCO) was entered and the NRC was notified via ENS at 1118 hours. Following the event, the Unit 2 HPCI room was cleaned and the HPCI control relay panels were opened to allow drying. In addition, the Unit 3 HPCI Gland Seal Condenser gasket was visually inspected, from the outside for signs of deterioration. The Unit 3 HPCI system was considered satisfactory. After Unit 2 Gland Seal Condenser gasket replacement and control relay panel component testing, the HPCI system was tested satisfactorily per ST-O-023-300-2 and the associated Tech Spec LCO was exited on 2/02/93 at 0400 hours.

Cause of the Event

The cause of this event has been determined to be a failure of the HPCI Gland Seal Condenser upper head flange gasket. This Gland Seal Condenser is located in the HPCI room and the Gland Seal Condenser is manufactured by Graham. An investigation has determined that the wrong type gasket material was used. In 1990, an evaluation was performed for the HPCI Gland Seal Condenser Lower Head Flange gasket which

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

determined that the gasket material should be changed from Garloc type to Neoprene type. The use of Neoprene for the HPCI Gland Seal Condenser Upper Head Flange had not been evaluated or implemented at that time. The exact cause of why the recommendation to switch to Neoprene was not implemented on the HPCI Gland Seal Condenser Upper Head Flange gasket is still under investigation. In addition, the Upper Head Flange gasket had been inspected and considered acceptable during the last Refueling Outage under a Preventive Maintenance 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 the Gland Seal Condenser leak, the HPCI system would have performed its intended function until either room flooding or water spray would have failed support systems. However, if a design basis accident or transient would have occurred and HPCI failed to start or continue operating due to the leak, 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.

Corrective Actions

Following the event, the Unit 2 HPCI room was cleaned and the HPCI control relay panels were opened to allow drying. In addition, the Unit 3 HPCI Gland Seal Condenser gasket was visually inspected, from the outside for signs of deterioration. The Unit 3 HPCI system was considered satisfactory. After Unit 2 Gland Seal Condenser gasket replacement with Neoprene type gasket and control relay panel component testing, the HPCI system was tested satisfactorily per the ST and the associated Tech Spec LCO was exited.

The Unit 3 HPCI Gland Seal Condenser gasket will be inspected and replaced as necessary during an upcoming HPCI system outage.

An evaluation will be performed on the material selection process used for these gaskets to identify what additional corrective actions are required. Any significant additional causes and associated corrective actions will be submitted in a revision to this report as necessary.

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Previous Similar Events

There were no previous similar events identified which involved HPCI Gland Seal Condenser flange gasket failure due to wrong gasket material.