



PEACH BOTTOM—THE POWER OF EXCELLENCE

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PEACH BOTTOM ATOMIC POWER STATION

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January 8, 1990

Docket No. 50-278

Document Control Desk  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555SUBJECT: Licensee Event Report  
Peach Bottom Atomic Power Station - Unit 3

This LER concerns the operability of the High Pressure Coolant Injection System as a result of an oil system relief valve setpoint drift.

Reference:	Docket No. 50-278
Report Number:	3-89-009
Revision Number:	00
Event Date:	12/07/89
Report Date:	1/8/90
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)(v).

Sincerely,

cc: J. J. Lyash, USNRC Senior Resident Inspector  
W. T. Russell, USNRC, Region I9001180264 900108  
PDR ADOCK 05000278  
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## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Peach Bottom Atomic Power Station - Unit 3										DOCKET NUMBER (2) 0 5 0 0 0 2 7 8 1				PAGE (3) 1 OF 0 3											
TITLE (4) High Pressure Coolant Injection Rendered Inoperable Due To An Oil System Relief Valve Setpoint Drift																									
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)												
1	2	0	7	8	9	8	9	0	0	9	0	0	1	0	8	9	0	0	5	0	0	0	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)		0 0 3				20.405(a)(1)(i)				50.36(a)(1)				X 50.73(a)(2)(v)				73.71(c)							
		20.405(a)(1)(ii)				50.36(a)(2)				50.73(a)(2)(vii)				OTHER (Specify in Abstract below and in Text, NRC Form 366A)											
		20.405(a)(1)(iii)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(A)															
		20.405(a)(1)(iv)				50.73(a)(2)(iii)				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 T. E. Cribbe, Regulatory Engineer										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															
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR									
YES (If yes, complete EXPECTED SUBMISSION DATE)												X NO													

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

On December 7, 1989, at 1715 hours the Unit 3 High Pressure Coolant Injection System (HPCI) was declared inoperable when it failed to start during a pump, valve and flow surveillance test. The HPCI turbine steam supply hydraulic stop valve had failed to open during the manual start attempt. The cause of this event was a loose lock nut on the HPCI oil system relief valve RV-9214 which allowed the oil pressure setpoint to drift low. Therefore, the hydraulic stop valve was not supplied with sufficient oil pressure to allow it to lift open to admit steam to the HPCI turbine. The cause of the RV-9214 lock nut being loose is unknown. No actual safety consequences occurred as a result of this event. HPCI and Reactor Core Isolation Cooling system (RCIC) relief valves in Unit 2 and Unit 3 were inspected to ensure this is an isolated occurrence. Surveillance Test ST 21.3 has been revised to verify proper HPCI auxiliary oil pump discharge pressure prior to plant startup. A lead seal wire will be placed on the HPCI oil system relief valve caps to prevent any maintenance activities from inadvertently dislodging the lock nut. No previous similar LERs were identified.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/86

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			
		8 9	— 0 0 9	— 0 0	0 2	OF	0 3

TEXT (If more space is required, use additional NRC Form 306A's) (17)

Requirements for the Report

This report is required per 10 CFR50.73(a)(2)(v) due to a condition which could have prevented the Unit 3 High Pressure Coolant Injection system (HPCI) (EIIS:BJ) from performing its intended function.

Unit Status at Time of Event

Unit 3 was in the Startup Mode at 3 percent power.

Description of Event

On December 7, 1989, at 1715 hours the Unit 3 HPCI system was declared inoperable when it failed to start during a pump, valve and flow surveillance test ST 6.5F-3. The HPCI turbine (EIIS:TRB) steam supply hydraulic stop valve (EIIS:SHV) had failed to open during the system manual start attempt. This was the first time this test was run at 1000 psig main steam pressure during this reactor startup. By 1900 hours it was determined that the HPCI auxiliary oil pump relief valve (EIIS:RV) RV-9214 was not maintaining adequate oil supply pressure to the hydraulic stop valve. By 2200 hours relief valve RV-9214 pressure setting was reset to the correct value. By 2300 hours the HPCI system was verified to start satisfactorily. Minor maintenance unassociated with this event was performed and the surveillance test was completed satisfactorily. By 2200 hours on December 8, the HPCI system was declared operable.

Cause of the Event

The cause of this event was improper setting of the HPCI auxiliary oil pump relief valve RV-9214 at 40 psig instead of the required 85 psig. Therefore the HPCI hydraulic stop valve was not supplied with sufficient oil pressure to allow it to lift open. The cause of the improper oil pressure setting was an unsecured lock nut on RV-9214 which allowed the pressure setpoint to drift low. The cause of the RV-9214 lock nut being loose is unknown. However, during the past outage relief valve RV-9214 was removed from the system during the 5 year HPCI turbine overhaul and oil system flush in accordance with maintenance procedure M23.4. This activity may have resulted in inadvertent dislodging of the lock nut.

Analysis of the Event

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

The incorrect oil pressure setting would have prevented the HPCI system from starting if an initiation signal (high drywell pressure or low reactor water level) was present. Insufficient oil pressure would not allow the HPCI hydraulic stop valve to lift open to admit steam to the HPCI turbine. However, if HPCI were unavailable during analyzed accident conditions the Automatic Depressurization system is designed to depressurize the reactor to the point where the Core Spray and Low Pressure Coolant Injection (EIIS:BM) systems would automatically actuate to cool the core.



## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/21/86

FACILITY NAME (1) Peach Bottom Atomic Power Station Unit 3	DOCKET NUMBER (2) 0500027889	LER NUMBER (5)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Corrective Actions

HPCI and Reactor Core Isolation Cooling (EIIS:BN) system oil system relief valves in Unit 2 and Unit 3 have been inspected to ensure this is not a generic problem. HPCI shaft driven oil pump (EIIS:P) discharge pressure is currently monitored monthly during power operations by ST 6.5-3 and quarterly by ST 6.5F-3. Surveillance Test ST 21.3, which is performed prior to startup from extended outages and monthly during power operations, has been revised to verify proper HPCI auxiliary oil pump discharge pressure. A lead seal wire will be placed on the HPCI oil system relief valve caps to prevent any maintenance activities from inadvertently dislodging the lock nut.

Previous Similar Event

No previous similar Licensee Event Reports were identified.