

**LICENSEE EVENT REPORT (LER)**

APPROVED OMA NO. 2160-0104  
EXPIRES - 9/3/93

FACILITY NAME (1) <b>Peach Bottom Atomic Power Station - Unit</b>										DOCKET NUMBER (2) <b>0 5 0 0 0 2 7 1 7</b>				PAGE (3) <b>1 OF 0 3</b>		
TITLE (4) <b>Unit No. 2 "A" Loop RHR Injection Valve Failure</b>																
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)						
MONTH	DAY	YEAR	YEAR	DOCK	SEQUENT	NUMBER	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER(S)		
06	03	85	85	-	003	-	06	03	85					0 5 0 0 0		
OPERATING MODE (9) <b>N</b>			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § 1.70 (Check one or more of the following) (11)													
POWER LEVEL (10) <b>0100</b>			20.402(a)				20.406(a)				80.73(a)(2)(iv)				73.71(a)	
			20.406(a)(1)(ii)				80.34(a)(1)				X 80.73(a)(2)(v)				73.71(a)	
			20.406(a)(1)(iii)				80.34(a)(2)				80.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Test. NRC Form 306A)	
			20.406(a)(1)(iii)				80.73(a)(2)(iv)				80.73(a)(2)(vii)(A)					
			20.406(a)(1)(iv)				80.73(a)(2)(v)				80.73(a)(2)(viii)(B)					
			20.406(a)(1)(v)				80.73(a)(2)(vi)				80.73(a)(2)(v)					
LICENSEE CONTACT FOR THIS LER (12)																
NAME <b>J. C. Nagle, Engineer - Special Projects</b>										TELEPHONE NUMBER AREA CODE <b>215</b> <b>841-1518</b> EXT <b>14</b>						
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	810	11INIV	L1210 M	Y												
SUPPLEMENTAL REPORT EXPECTED (14)																
YES (If yes, complete EXPECTED SUBMISSION DATE)										X NO		EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
ABSTRACT (Limit to 1000 words, i.e., approximately fifteen single-space typewritten lines) (16)																
<b>Abstract: 2-85-03</b>  On June 3, 1985 at approximately 8:50 p.m., with Unit No. 2 in the refuel mode, the "A" loop Residual Heat Removal (RHR) system injection valve, MO-2-10-154A, was declared inoperable. The valve would not stroke properly from the control room during surveillance testing. When investigated, the valve was found to be failed in the CLOSED position and could not be moved. This rendered two subsystems of the Low Pressure Coolant Injection (LPCI) system unavailable for injection into the reactor vessel through the normal system flow path. These LPCI subsystems were operable and available for injection into the reactor via an alternate flow path through a cross-tie valve into the discharge of the remaining two operable LPCI subsystems. The cause of the event was mechanical binding of the valve stem in the valve operator. The reactor was placed in the shutdown mode at 8:50 p.m. The valve operator was rebuilt, the valve was verified as operable, and returned to service. The reactor mode switch was placed in the "Refuel" position at 10:00 p.m. on June 6, 1985.																

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1) Peach Bottom Atomic Power Station - Unit	DOCKET NUMBER (2)  0 5 0 0 0 2 7 7	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		8 5	- 0 0 3	- 0 0	0 2	OF	0 3

TEXT (if more space is required, use additional NRC Form 368a) (17)

Description of the Event:

On June 3, 1985 at approximately 8:50 p.m., with Unit No. 2 in the refuel mode, the "A" loop Residual Heat Removal (RHR) system injection valve, MO-2-10-154A was declared inoperable. The valve would not stroke properly from the control room during surveillance testing. When investigated, the valve was discovered to be failed in the CLOSED position and could not be moved, manually or otherwise, due to a failure of the valve operator (Limitorque, Model No. SMB5T-350). This failure rendered two subsystems of the Low Pressure Coolant Injection (LPCI) system unavailable through normal system flow paths. The reactor mode switch was placed in the shutdown position at 8:50 p.m., the valve operator was rebuilt, and returned to service. The reactor mode switch was returned to the "Refuel" position at 10:00 p.m. on June 6, 1985.

The EIIS code for the affected system is BO and for the affected component is INV.

Consequences of the Event:

Two subsystems of the LPCI system were unavailable for injection into the reactor vessel via the normal system flow paths. However, these two LPCI subsystems in themselves were operable and available for injection into the reactor vessel via an alternate system flow path through a cross-tie valve into the discharge of the remaining two operable and available LPCI subsystems. Since all four LPCI subsystems were operable, full LPCI injection capacity was available and could have been maintained utilizing the cross-tie valve during a loss-of-coolant accident. Additionally, both Core Spray systems were operable and available. The reactor had been shutdown for thirteen months and decay heat was minimal.

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		8 5	- 0 0 3	- 0 0	0 3	OF	0 3

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

Cause of the Event:

The cause of the MO-2-10-154A valve failure was a drive sleeve locknut which had come loose and backed off of the threaded drive sleeve. This locknut establishes the tightness of the thrust bearings. The loose locknut allowed the thrust bearings to come out of their race and further use of the valve damaged the bearings. The load that is normally taken by the thrust bearings was transferred to the drive sleeve. This action destroyed the drive sleeve threads and the locknut and eventually resulted in the mechanical binding of the valve stem.

Corrective Actions:

The reactor mode switch was changed from "Refuel" to the "Shutdown" position at 8:50 p.m. The valve operator was rebuilt which included a new drive sleeve, new thrust bearings, and a new locknut. The locknut was torqued to specifications to provide the proper tension on the thrust bearings and was set screwed to the drive sleeve to prevent movement. The valve was verified as operable and returned to service. The reactor mode switch was returned to the "Refuel" position at 10:00 p.m. on June 6, 1985.

Previous Similar Occurrences

None.

PHILADELPHIA ELECTRIC COMPANY

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July 3, 1985

Docket No. 50-277

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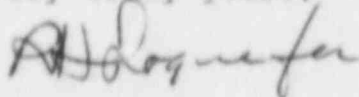
SUBJECT: Licensee Event Report  
Peach Bottom Atomic Power Station - Unit 2

This LER deals with the failure of the "A" loop Residual Heat Removal system injection valve MO-2-10-154A.

Reference:	Docket No. 50-277
Report Number:	2-85-03
Revision Number:	00
Event Date:	June 3, 1985
Report Date:	July 3, 1985
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)(vii).

Very truly yours,



W. T. Ullrich  
Superintendent  
Nuclear Generation Division

cc: Dr. Thomas E. Murley, Administrator  
Region I, USNRC

Mr. T. P. Johnson, Resident Inspector

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