

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3180-0104
EXPIRES: 8/31/85FACILITY NAME (1)
Peach Bottom Atomic Power Station - Unit 3

DOCKET NUMBER (2)

0 6 0 0 0 2 7 8

PAGE (3)

1 OF 03

TITLE (4)

HPCI Turbine Exhaust Line Inner Rupture Disc (PSD3-23-6) Failure

EVENT DATE (6)			LER NUMBER (8)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (9)																			
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)																	
0	1	0	6	8	4	8	4	-	0	0	1	-	0	1	0	3	3	0	8	4		0	6	0	0	0		
OPERATING MODE (5)		N		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																								
POWER LEVEL (10)		1		0		0		20.402(b)		20.406(c)		80.73(a)(2)(iv)		73.71(b)														
								20.406(a)(1)(i)		80.36(a)(1)		X 80.73(a)(2)(v)		73.71(a)														
								20.406(a)(1)(ii)		80.36(a)(2)		80.73(a)(2)(vi)		OTHER (Specify in Abstract below and in Text, NRC Form 366A)														
								20.406(a)(1)(iii)		80.73(a)(2)(iii)		80.73(a)(2)(vii)(A)																
								20.406(a)(1)(iv)		80.73(a)(2)(iv)		80.73(a)(2)(viii)(B)																
								20.406(a)(1)(v)		80.73(a)(2)(iii)		80.73(a)(2)(ix)																

LICENSEE CONTACT FOR THIS LER (12)

NAME
B. L. Clark, Senior Engineer - Special Projects

TELEPHONE NUMBER

AREA CODE

2 1 5 8 4 1 - 5 0 1 1 7

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 P D	C 5 8 5	Y							

SUPPLEMENTAL REPORT EXPECTED (14)

X YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR
0 6 0 1 8 4

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

Abstract

While at power during surveillance testing, the HPCI turbine exhaust rupture diaphragm alarm annunciated following startup of the Unit 3 HPCI Turbine. Investigation revealed that the inner rupture disc, PSD3-23-6, had ruptured. Since the outer disc had not ruptured, the HPCI turbine remained operable until it was intentionally removed from service to replace the inner rupture disc. Prior to removing the turbine from service, the systems required by Technical Specification 4.5.C.2 (RCIC, ADS, LPCI, and Core Spray) were verified to be operable. Cause of the event is under investigation. The rupture disc was replaced and HPCI was declared operable following surveillance test verification.

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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 3	DOCKET NUMBER (2) 0 5 0 0 0 2 7 8 8 4 - 0 0 1 - 0 1 0 2 OF 0 3	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

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

Description of the Event:

On January 6, 1984, Peach Bottom Atomic Power Station was operating under normal conditions with both Units 2 and 3 at 100% power. At approximately 10:30 a.m., while conducting a surveillance test (ST-1.1 'HPCI Logic System Functional Test') on the Unit 3 HPCI system, the turbine exhaust rupture diaphragm alarm annunciated following startup of the HPCI turbine. This alarm senses a pressure of greater than 10 psig between the inner and outer rupture discs located in series in a 16" line which taps off the turbine exhaust line and itself exhausts to the torus room. Investigation revealed that the inner rupture disc, PSD3-23-6 (manufactured by Continental Disc Corporation), had ruptured. The setpoint of the rupture disc is 175 psig. The outer rupture disc, PSD3-23-7, had not ruptured, and therefore the HPCI turbine was not declared inoperable at that time.

At 4:44 p.m. on January 6, 1984, the HPCI turbine was intentionally removed from service and declared inoperable in order to replace the inner rupture disc. At 8:31 p.m. on January 6, 1984, the HPCI turbine, which was out of service for three hours and forty-seven minutes, was declared operable and returned to service following surveillance test (ST-6.5) verification.

As of January 1, 1984, the newly imposed 10CFR50.72(b)(2)(iii) requires reporting an inoperable HPCI system within four hours on the Emergency Notification System (ENS). Administrative Procedure A-31, Rev. 8 "Procedure for Notification of NRC", addresses this new reporting requirement; however, the four hour report was not made. The notification error was due to an administrative oversight as a result of an unfamiliarity with the new reporting requirements. The NRC Site Inspector was notified of the reporting error. Senior station personnel were informed on January 9, 1984 of the importance of being familiar with the new reporting requirements.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 366a (17))

Consequences of the Event:

The outer rupture disc, PSD3-23-7, did not rupture therefore the HPCI system remained in service at the time of the occurrence. Prior to blocking the HPCI system out of service, the Reactor Core Isolation Cooling System, Automatic Depressurization System, Low Pressure Coolant Injection System, and Core Spray systems were verified as operable as required by Technical Specification 4.5.C.2. The HPCI system was returned to service within four hours after being declared inoperable.

Cause of the Event:

Determination of the cause of the event is under investigation. The scope of the investigation includes: 1) verifying the proper material of the rupture disc, 2) a review of the piping configuration of the turbine exhaust line, 3) investigating the performance of the vacuum breakers between the torus air space and turbine exhaust line, 4) investigating the turbine exhaust stop/check valve performance, and 5) obtaining dynamic pressure test data of the turbine exhaust system. A supplemental report will be submitted following completion of the investigation.

Corrective Actions:

ST 6.5 HPCI Pump, Valve, Flow, Cooler Test verified the operability of the HPCI system after the inner rupture disc was replaced. Turbine exhaust pressure indicated normally during the test and the system was returned to service. A subsequent ST-6.5 was successfully completed on January 30, 1984 with all functions indicating normally.

Previous Similar Occurrences

LER's: 3-83-15/3L-0, 3-82-23/3L-0.

PHILADELPHIA ELECTRIC COMPANY

2301 MARKET STREET

P.O. BOX 8699

PHILADELPHIA, PA. 19101

(215) 841-4000

March 30, 1984

Docket No. 50-278

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

SUBJECT: Licensee Event Report

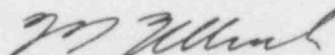
Dear Dr. Murley:

This LER deals with the failure of the Unit No. 3 HPCI turbine exhaust inner rupture disc, PSD3-23-6, while performing surveillance testing on the HPCI system.

Reference:	Docket No. 50-278
Report Number:	3-84-01
Revision Number:	01
Event Date:	January 6, 1984
Report Date:	March 30, 1984
Facility:	Peach Bottom Atomic Power Station RD #1, Delta, PA 17314

This LER is submitted pursuant to the requirements of 10 CFR 50.73(a)(2)(v). The revised portion of this LER is identified by a vertical bar in the margin.

Very truly yours,



W. T. Ullrich
Superintendent
Nuclear Generation Division

cc: Mr. A. R. Blough
Site Inspector

Dr. Thomas E. Murley, USNRC

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