

EXPIRES: 5/31/95

## 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 INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

Brunswick Steam Electric Plant, Unit 2

DOCKET NUMBER (2)

05000324

PAGE (3)

1 of 3

TITLE (4)

The High Pressure Cooling Injection System (HPCI) Failed to Operate as Required During the Performance of the HPCI Periodic Test.

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 NAME	DOCKET NUMBER
05	10	95	95	- 02 -	00	06	02	95	FACILITY NAME	DOCKET NUMBER
										05000
										05000

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following)(11)							
POWER LEVEL (10)	100	20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)	
		20.405(a)(1)(i)		50.36(c)(1)	X	50.73(a)(2)(v)		73.71(c)	
		20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER	
		20.405(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		(Specify in Abstract and Text)	
		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)(x)			

## LICENSEE CONTACT FOR THIS LER (12)

NAME

Jeanne F. McGowan, Regulatory Affairs Specialist

TELEPHONE NUMBER

(910) 457-2136

## COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

## SUPPLEMENTAL REPORT EXPECTED (14)

YES	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
(If yes, complete EXPECTED SUBMISSION DATE)						

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

On May 10, 1995 Unit 2 was in Operational Mode 1 at 100% power. The High Pressure Cooling Injection System was operable. At 2125 hours, during the performance of PT 9.2, HPCI System Operability Test, the HPCI turbine did not respond as expected. The Reactor Operator (RO) started the Auxiliary Oil Pump per procedure and the oil operated steam supply valves, E41-V8 and V9 stroked open. The V9 then unexpectedly went closed. The PT was secured and investigations were initiated to determine the cause of the V9 malfunction. At approximately 2200 hours, the power supply to the governor speed control circuit was tested. Voltage readings across the wiring points of the resistor were obtained. The normal 125 VDC was available into the board but no voltage was measured on the output terminals. A failed resistor was replaced at approximately 2300 hours. PT 9.2 was resumed on May 11, 1995 at 0130 hours and was completed satisfactorily and HPCI was declared operable. The cause of the event was the failed resistor in the power supply circuit supplying the governor speed control circuit. The failure was caused by end of life burnout. Corrective actions include verifying the adequacy of similar resistors in the Unit 1 and 2 HPCI and RCIC systems. The safety significance was minimal. The Automatic Depressurization System and the Low Pressure Cooling Injection Systems were operable at the time of the event.

The cause classification for this event per the criteria of NUREG-1022 is Other.

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**LICENSEE EVENT REPORT (LER)**  
**TEXT CONTINUATION**

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Brunswick Steam Electric Plant Unit 2	05000324	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 of 3
		95	- 02 -	00	

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

TITLE

The High Pressure Cooling Injection System Failed to Operate as Required During the Performance of the HPCI Periodic Test

INITIAL CONDITIONS

On May 10, 1995 Unit 2 was in Operational Mode 1 at 100% power. The High Pressure Cooling Injection System was operable.

EVENT NARRATIVE

On May 10, 1995, Periodic Test (PT) 9.2, HPCI System Operability Test was scheduled to be performed. At 2125 hours, during the performance of PT 9.2, the HPCI turbine did not respond as expected. The Reactor Operator (RO) started the Auxiliary Oil Pump per procedure and the oil operated steam supply valves, E41-V8 and V9 stroked open. The V9 then unexpectedly went closed. The PT was secured and investigations were initiated to determine the cause of the V9 malfunction. The HPCI turbine started during troubleshooting activities when the V9 remote servo was pressed to see if it was sticking. There was no problems with the remote servo as evidenced by the start of the HPCI turbine.

At approximately 2200 hours, the power supply to the governor speed control circuit was tested. Voltage readings across the wiring points of the resistor were obtained. 125 VDC was available into the board with no voltage observed on the output terminals. The resistor was replaced at approximately 2300 hours.

PT 9.2 was resumed on May 11, 1995 at 0130 hours and was completed satisfactorily and HPCI was declared operable.

CAUSE OF EVENT

This event was due to the failed resistor in the power supply circuit supplying the governor speed control circuit. The failure was caused by end of life burnout. There are three other installations of this resistor at Brunswick Nuclear Plant. The Unit 1 HPCI system, and the Unit 1 and 2 Reactor Core Isolation Cooling Systems.

CORRECTIVE ACTIONS

1. The remaining three resistors were inspected and were found to be in operation at the expected temperatures. The vendor which supplies the resistors does not recommend a preventive maintenance program for these resistors. A preventive maintenance schedule to replace the resistor on a short term schedule is not warranted.
2. An Engineering Service Request has been issued to review the use of dropping resistors in these applications. This will be completed by July 15, 1995.

**LICENSEE EVENT REPORT (LER)**  
**TEXT CONTINUATION**

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

SAFETY ASSESSMENT

The safety significance was minimal. The Automatic Depressurization System and the Low Pressure Cooling Injection Systems were operable at the time of the event.

PREVIOUS SIMILAR EVENTS

A previous similar event was described in LER 1-84-003.

EIIS COMPONENT IDENTIFICATION

System/Component

High Pressure Cooling Injection System

EIIS Code

BJ