

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Brunswick Steam Electric Plant Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 2 1 5	PAGE (3) 1 OF 0 3
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TITLE (4)
Inoperability of the A Reactor Core Spray Subsystem on Both Units 1 and 2

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		
0 9	0 6	8 4	8 4	0 2 3	0 2 0	0 2	0 1	2 8 5	Brunswick Unit 2		
									DOCKET NUMBER(S)		
									0 5 0 0 0 3 2 1 4		
									0 5 0 0 0		

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) 1 0 0	<input type="checkbox"/>	20.402(b)	<input type="checkbox"/>	20.406(e)	<input type="checkbox"/>	80.73(a)(2)(iv)	<input type="checkbox"/>	73.71(b)			
	<input type="checkbox"/>	20.406(a)(1)(i)	<input type="checkbox"/>	80.38(a)(1)	<input checked="" type="checkbox"/>	80.73(a)(2)(v)	<input type="checkbox"/>	73.71(e)			
	<input type="checkbox"/>	20.406(a)(1)(ii)	<input type="checkbox"/>	80.38(a)(2)	<input checked="" type="checkbox"/>	80.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 386A)				
	<input type="checkbox"/>	20.406(a)(1)(iii)	<input type="checkbox"/>	80.73(a)(2)(i)	<input type="checkbox"/>	80.73(a)(2)(viii)(A)					
	<input type="checkbox"/>	20.406(a)(1)(iv)	<input type="checkbox"/>	80.73(a)(2)(ii)	<input type="checkbox"/>	80.73(a)(2)(viii)(B)					
	<input type="checkbox"/>	20.406(a)(1)(v)	<input type="checkbox"/>	80.73(a)(2)(iii)	<input type="checkbox"/>	80.73(a)(2)(ix)					

LICENSEE CONTACT FOR THIS LER (12)

NAME M. J. Pastva, Jr., Regulatory Technician	TELEPHONE NUMBER
	AREA CODE: 9 1 1 9 4 1 5 7 1 - 2 3 1 1 5

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS
X	B M	S P T B	4 5 1 0	Yes					

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 September 6, 1984, it was discovered that the common support imbed plate of Unit 2 A Core Spray subsystem hydraulic snubbers 2-E21-2SS31 and 2SS32 was loose and the plate concrete base was cracked and broken. Subsequent inspections revealed the condition existed on the same corresponding piping support imbed plate of the Unit 1 A Core Spray subsystem. At the time of this event, Unit 1 was at 100 percent power and Unit 2 was in a refuel/maintenance outage. In addition, the B Core Spray subsystem on both units and the Low Pressure Coolant Injection subsystems, the High Pressure Coolant Injection System, and the Reactor Core Isolation Cooling System on Unit 1 were operable.

After preliminary plant Engineering investigation and evaluation of this event, the A Core Spray subsystem on each unit was respectively declared inoperable. The subject hydraulic snubber imbed plate on both units was strengthened with wing plates and wedge anchors.

A walkdown of the loop piping of both Core Spray subsystems on each unit was conducted to determine if other subsystems' piping supports were affected. No other problems were found that affect system operability.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 386A's) (17)

On September 6, 1984, following the performance of an inspection of electrical conduit fastening clamps in the Unit 2 Reactor Building, it was determined that the common support imbed plate of the unit's A Core Spray subsystem hydraulic snubbers 2-E21-2SS31 and 2SS32 was loose and the plate concrete base was broken and cracked to approximately 1/8" in depth. Subsequent inspections of the Unit 2 B Core Spray subsystem and the Unit 1 A and B Core Spray subsystems revealed that similar conditions also existed on the same corresponding piping support imbed plate of the Unit 1 A Core Spray subsystem. The B Core Spray subsystem on each unit has a different piping configuration. The involved Unit 1 A Core Spray hydraulic snubbers are 1-E21-2SS31 and 2SS32. The hydraulic snubbers of each unit are located on the subsystem piping upstream of the subsystem primary containment outboard isolation valve, 1(2)-E21-F004A. Each pair of snubbers serves to restrain the subsystem lines, 2-12-300 and 41-10-604, on each unit. At the time of these discoveries, Unit 1 was operating at 100 percent power and Unit 2 was in a refueling/maintenance outage.

Following a preliminary plant Engineering investigation and analysis of these discoveries, a determination was made that operability of the involved hydraulic snubbers during an encountered design seismic event could not be verified. As a result, the A Core Spray subsystem on each unit was declared inoperable. At the time, both Low Pressure Coolant Injection (LPCI) Residual Heat Removal (RHR) subsystems and the B Core Spray subsystem on Unit 1 were operable. In addition, the unit High Pressure Coolant Injection (HPCI) System and Reactor Core Isolation Cooling (RCIC) System were operable. On Unit 2, the B Core Spray subsystem was operable.

The subject hydraulic snubber imbed plate on both units was strengthened by the addition of wing plates and wedge anchors. The piping of both Core Spray subsystems on each unit was walked down to determine if other subsystems' supports are affected. No other problems were found that affect system operability.

Further investigation and evaluation concerning this event has concluded the incurred damage to the subject common support imbed plate on each unit's Core Spray A subsystem resulted from water hammer of the respective subsystem's piping. The period of time during which this damage occurred could not be determined. These plates are located away from the immediate visual vicinity of their respective hydraulic snubbers. As a result, the physical condition of the imbed plates went unnoticed during prior hydraulic snubber inspections and/or repairs. The electrical conduct fastening clamp inspections necessitated personnel access into the immediate vicinity of the imbed plates which then allowed the damage to be detected.

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

The Units 1 and 2 Core Spray subsystems' operating procedure and operability test procedures were reviewed for adequacy in preventing water hammer of the subsystems' piping. During operability testing of the Core Spray subsystems on both units, water hammer was not observed during starting of the subsystems' pumps. Based on the results of the operability testing and the subject procedural review, it is felt the procedures contain adequate measures for prevention of water hammer. In addition, the subsystems' operability test procedures contain instructions for stationing a plant auxiliary operator to monitor for any subsystem excessive motion and/or water hammer.

During the Unit 2 1984 refueling/maintenance outage, an Inservice Inspection (ISI) Support Inspection program was implemented on Unit 2. This program will also be implemented during the scheduled Unit 1 spring of 1985 refueling outage. This program inspects a percentage of Class 1, 2, and 3 supports during each unit's respective refueling outages. It is felt this will help in the detection of incurred water hammer in plant piping systems if it occurs.



Carolina Power & Light Company

Brunswick Steam Electric Plant
P. O. Box 10429
Southport, NC 28461-0429
February 12, 1985

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SERIAL: BSEP/85-0180

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

BRUNSWICK STEAM ELECTRIC PLANT UNIT 1
DOCKET NO. 50-325
LICENSE NO. DPR-71
SUPPLEMENT TO LICENSEE EVENT REPORT 1-84-23

Gentlemen:

In accordance with Title 10 to the Code of Federal Regulations, the enclosed Supplemental Licensee Event Report is submitted. The original report fulfilled the requirement for a written report within thirty (30) days of a reportable occurrence and was submitted in accordance with the format set forth in NUREG-1022, September 1983.

Very truly yours,

C. R. Dietz, General Manager
Brunswick Steam Electric Plant

MJP/sdl/LETSDL

Enclosure

cc: Mr. J. N. Grace

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