



Carolina Power & Light Company

Brunswick Nuclear Plant  
P.O. Box 10429  
Southport, NC 28461-0429

February 4, 1994

SERIAL: BSEP-94-0047  
10CFR50.73

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D. C. 20555

BRUNSWICK NUCLEAR PLANT UNIT 2  
DOCKET NO. 50-324/LICENSE NO. DRP-62  
LICENSEE EVENT REPORT 2-94-002

Gentlemen:

In accordance with the Code of Federal Regulations, Title 10, Part 50.73, Carolina Power & Light Company submits the enclosed Licensee Event Report. This report fulfills the requirement for a written report within thirty (30) days of a reportable occurrence and is submitted in accordance with the format set forth in NUREG-1022, September 1983.

Please refer any questions regarding this submittal to Mr. G. M. Thearling at (910) 457-2038.

Very truly yours,

C. C. Warren, Director-Plant Operations (Acting)  
Brunswick Nuclear Plant

gmt/

Enclosures

1. Licensee Event Report
2. Summary of Commitments

cc: Mr. S. D. Ebnetter, Regional Administrator, Region II  
Mr. P. D. Milano, NRR Project Manager - Brunswick Units 1 and 2  
Mr. R. L. Prevatte, Brunswick NRC Senior Resident Inspector

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## 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)

Spurious Isolation of the Reactor Core Isolation Cooling System

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
01	17	94	94	- 02 -	00	02	04	94	FACILITY NAME	DOCKET NUMBER
										05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following)(11)							
		20.402(b)		20.405(c)		X	50.73(a)(2)(iv)		73.71(b)
POWER LEVEL (10)	100	20.405(a)(1)(i)		50.36(c)(1)			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

Glen M. Thearling, Regulatory Affairs Specialist

TELEPHONE NUMBER

(910) 457-2038

## 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)

At 2051 on January 17, 1994, Unit 2 was at 100% power. A spurious Division 1 Reactor Core Isolation Cooling (RCIC) isolation signal was received, which closed the inboard steamline isolation valve, 2-E51-F007. No Riley steam leak detection modules were found in alarm, and inspections found no evidence of a steam leak that would have resulted in the isolation signal. The investigation into the source of the inadvertent isolation signal included inspection and calibration of the Riley Scam Module (2-E51-TDS-N601A), but no specific cause has been identified for the isolation signal. The RCIC system was returned to service at 1120 on January 18, 1994. Due to the history of spurious isolations associated with the steam leak detection system the Unit 2 system is scheduled to be replaced during the upcoming refueling outage (P-11R1) with digital NUMAC equipment. The Unit 1 system has already been replaced.

This event is of minimal safety significance as the system responded as designed.

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

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

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)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Brunswick Steam Electric Plant Unit 2	05000324	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 of 3
		94	- 02 -	00	

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

TITLE

Spurious Isolation of the Reactor Core Isolation Cooling System

INITIAL CONDITIONS

On January 17, 1994, Unit 2 was at 100% power after 245 days of continuous operation. All Engineered Safety Features were operable at the time of the event.

EVENT NARRATIVE

At 2051 on January 17, 1994, a Division 1 Reactor Core Isolation Cooling (RCIC) isolation signal was received, which closed the inboard steamline isolation valve, 2-E51-F007. An annunciator was received for the Steam Leak Detection Differential Temperature High but immediately cleared. The outboard steamline isolation valve, 2-E51-F008 was closed per the annunciator procedure. No Riley steam leak detection modules were found in alarm, and inspections found no evidence of a steam leak that would have resulted the isolation signal. The investigation into the source of the inadvertent isolation signal included inspection and calibration of the Riley Scam Module (2-E51-TDS-N601A), but no activity or specific cause has been linked to the isolation signal. The RCIC system was returned to service at 1120 on January 18, 1994.

CAUSE OF EVENT

While the Riley steam leak detection system has a history of spurious isolations, no specific cause has been identified for this event.

CORRECTIVE ACTIONS

Due to the history of spurious isolations associated with the steam leak detection system the Unit 2 system is scheduled to be replaced during the upcoming refueling outage (B211R1). The Unit 1 system has already been replaced with digital NUMAC equipment.

SAFETY ASSESSMENT

This event is of minimal safety significance as the system responded as designed.

PREVIOUS SIMILAR EVENTS

Related LERs 1-88-01, 1-88-02, 1-92-013, 2-93-011

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**TEXT CONTINUATION**

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (8)			PAGE (3)
Brunswick Steam Electric Plant Unit 2	05000324	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 of 3
		94	- 02 -	00	

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

IIIS COMPONENT IDENTIFICATION

System/Component

IIIS Code

Reactor Core Isolation Cooling System

BN

Primary Containment Isolation System

JM

Enclosure  
List of Regulatory Commitments

The following table identifies those actions committed to by Carolina Power & Light Company in this document. Any other actions discussed in the submittal represent intended or planned actions by Carolina Power & Light Company. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Manager-Regulatory Affairs at the Brunswick Nuclear Plant of any questions regarding this document or any associated regulatory commitments.

Commitment	Committed date or outage
1. Replacement of the Unit 2 Steam Leak Detection system in the upcoming refueling outage	B211R1
2.	
3.	