



Carolina Power & Light Company

Brunswick Nuclear Plant
P.O. Box 10429
Southport, NC 28461-0429
MAY 13 1994

SERIAL: BSEP-94-0182
10CFR50.73

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

BRUNSWICK NUCLEAR PLANT UNIT 1
DOCKET NO. 50-325/LICENSE NO. DRP-71
LICENSEE EVENT REPORT 1-94-007

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. M. A. Turkal at (910) 457-3066.

Very truly yours,

J. Cowan, Director-Site Operations
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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EXPIRES: 5/31/95

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 20585-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

Brunswick Steam Electric Plant, Unit 1

DOCKET NUMBER (2)

05000325

PAGE (3)

1 of 3

TITLE (4) Reactor Core Isolation Cooling System Isolations Occur During Surveillances Test Equipment Connection

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
04	18	94	94	- 07 -	00	05	18	94	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)	X	50.73(a)(2)(iv)		73.71(b)	
		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 (16)

On March 18, 1994, Unit 1 was at 100% power and a series of Reactor Core Isolation Cooling (RCIC) System surveillances were being performed.

At 1111, during RCIC Turbine Exhaust High Pressure Instrument Channel Calibration, a meter lead inadvertently touched an adjacent terminal resulting in the RCIC Inboard Steam Supply Isolation Valve closure. It should be noted that the meter leads had already been correctly landed, but were intentionally lifted from the terminal as a common practice which called for the meter to be disconnected prior to changing the meter function (to Ohms). Provisions allowing the common practice had not been incorporated into the surveillance and therefore its use was not consistent with the verbatim procedural compliance required for surveillances. The RCIC System was returned to standby at 1258.

At 1718, the RCIC Steam Line Low Pressure Instrument Channel Calibration, resulted in the inadvertent closure of the RCIC Outboard Steam Supply Isolation Valve. A technician became entangled in the meter leads and inadvertently pulled the leads loose at the meter. He mistakenly assumed the panel lead end had come loose and went on to connect the loose end in the panel per the next step of the procedure. This configuration provided a circuit which activated the isolation logic. The investigation linked this event to a procedural compliance concern as the surveillance required using two meters. The RCIC system was returned to standby at 2151.

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

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Brunswick Steam Electric Plant Unit 1	05000325	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 of 3
		94	- 07 -	00	

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

TITLE

Reactor Core Isolation Cooling System Isolations Occur During Surveillances Test Equipment Connection

INITIAL CONDITIONS

On March 18, 1994, Unit 1 was at 100% power and a series of Technical Specification required surveillances were scheduled for the Reactor Core Isolation Cooling (RCIC) System. Both High Pressure Coolant Injection and Automatic Depressurization Systems were operable.

EVENT NARRATIVE

At 1111 on March 18, 1994, the routine surveillance for RCIC Turbine Exhaust High Pressure Instrument Channel Calibration, resulted in the closure of the RCIC Inboard Steam Supply Isolation Valve. During the surveillance the technician was using a meter to check the state of a contact when he touched the adjacent terminal with the meter lead. It should be noted that the meter leads had already been correctly landed, but were intentionally lifted from the terminal as a common practice which called for the meter to be disconnected prior to changing the meter function to Ohms (Note that a meters Ohms functions provide a current path through the meter and effectively acts as a jumper). Provisions allowing the common practice had not been incorporated into the surveillance and therefore its use was not consistent with the verbatim procedural compliance required for surveillances. The configuration established by the meter set to Ohms and the inadvertent terminal contact completed a circuit which energized the isolation logic of the RCIC Inboard Steam Supply Isolation Valve. After the cause of the event was determined the RCIC System was returned to standby with the LCO being canceled at 1258.

At 1718 on March 18, 1994, the routine surveillance for RCIC Steam Line Low Pressure Instrument Channel Calibration, resulted in the closure of the RCIC Outboard Steam Supply Isolation Valve. During this event a technician became entangled in the meter leads and pulled the leads loose at the meter. He mistakenly assumed the panel lead end had come loose and went on to connect the loose end per the next step of the procedure. This configuration provided a pathway which activated the isolation logic of the RCIC Outboard Steam Supply Isolation Valve. The investigation linked this event to a procedural compliance concern as the surveillance required using two meters. The RCIC system restoration was delayed when it was observed that leakage by the isolation valve was sufficient to maintain the system pressurized. Previous experience had determined that this condition can occur when there is no differential pressure across the valve at closure. To verify the ability of the valve to isolate, the downstream side of the valve was depressurized by rolling the RCIC turbine and then cycling the outboard isolation valve. Steam line pressure dropped as expected and the RCIC system was declared Operable when returned to standby at 2151.

CAUSE OF EVENT

These events are the result of personal error and the failure to follow verbatim procedural compliance requirements.

EXPIRES: 5/31/95

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

CORRECTIVE ACTIONS

The Root Cause investigation determined procedural compliance weaknesses and the following actions were needed:

- 1) Meetings were held with the Unit 1 Instrumentation and Control (I&C)/Electricians communicating the expectations for: procedural compliance, use of the proper tools or equipment for the job, and STAR techniques (Stop, Think, Act, Review).
- 2) A self-assessment is in progress for Unit 1 maintenance surveillance performance. The team is to solicit input from top performing utilities, industry practice, Operational Experience Feedback, and INPO Good Practices. This is expected to be completed in July of 1994. The results of the assessment will then be compared with Unit 2 maintenance surveillance performance.
- 3) The effectiveness of the corrective actions will be evaluated by February of 1995.

Additionally actions were taken to enhance existing processes and plant conditions:

- 1) An Engineering Work Request (EWR # 13529) was initiated to investigate improving access to test points. Also wires have already been wrapped to ease access in the panel where contact was made with the adjacent terminal (WR/JO 94-VKO009).
- 2) The use of extended test clips have been employed to enhance visibility.
- 3) A memo to Unit 1 Instrumentation and Control (I&C)/Electrical supervisors was issued on pre-job brief expectations and expectations for performing surveillances.
- 4) To increase supervisory oversight through July 1, 1994, other supervisors in the Unit 1 I&C/Electrical Sub-Unit will be given partial responsibility for surveillance performance on a week to week basis.

SAFETY ASSESSMENT

These events while unnecessarily challenging a safety system have minimal safety significance, as the equipment operated as designed.

PREVIOUS SIMILAR EVENTS

LER 2-93-002 reports an event involving test equipment.

EIIS COMPONENT IDENTIFICATIONSystem/ComponentEIIS 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. A self-assessment is in progress for Unit 1 maintenance surveillance performance. The team is to solicit input from top performing utilities, industry practice, Operational Experience Feedback, and INPO Good Practices. This is expected to be completed in July of 1994. The results of the assessment will then be compared with Unit 2 maintenance surveillance performance.	7/31/94
2. The effectiveness of the corrective actions will be evaluated.	2/28/95
3.	