CP&L

Carolina Power & Light Company

Brunswick Nuclear Plant
P.O. Box 10429
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MAR 17 1994

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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 2-94-0003

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. R. E. Lopriore at (910) 457-2404.

Very truly yours,

J. Cowan, Director-Site Operations (acting)
Brunswick Nuclear Plant

JFM/jfm

Enclosures
1. Licensee Event Report

cc: Mr. S. D. Ebneter, 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

IE22

NRC FORM 366 (5/92) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 5/31/95

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Brunswick Steam Electric Plant, Unit 2	05000324	1 of 3

TITLE (4)
Personnel Contamination Monitor Panel Cover Fell Against Relay Causing a Primary Containment Isolation System (PCIS) Group 10 Isolation

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
										05000
02	21	94	94	- 003 -	00	03	17	94	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	1
POWER LEVEL (10)	100

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)
	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	TELEPHONE NUMBER
Jeanne F. McGowan, Regulatory Affairs Specialist	(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)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO				

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

On February 21, 1994, Unit 2 was operating at approximately 100% power. A maintenance evolution was in progress on a personnel contamination monitor located in the Unit 2 Control Room backpanel area. Maintenance and Health Physics personnel were investigating a possible electrical malfunction in the monitor. In order to access the electronic equipment, a cover was removed and placed against the monitor. During the investigation, the Health Physics technician bumped the cover causing it to fall against a relay on the Division II Core Spray logic panel. The technician notified the Operations Shift Supervisor who was responding to the noise. Inspection of the panel revealed that the relay window was cracked but the relay remained in it's normal state (de-energized). Operations was not aware that the relay had been jarred enough to open two normally closed contacts causing a PCIS Group 10 isolation (Pneumatic Nitrogen System). Approximately 15 minutes later, the isolation of the Pneumatic Nitrogen System resulted in a low seal staging flow alarm on the 2B Reactor Recirculating pump. It was determined that the seal staging valves had closed due to a loss of the Pneumatic Nitrogen System. The isolation was reset and the system was returned to service. Corrective actions included putting hinges on the personnel contamination monitor equipment cabinet cover and reviewing the event with appropriate personnel. The safety significance was minimal. Closure of the normally open contacts in the logic resulted in the Group 10 isolation per design.

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

TITLE

Personnel Contamination Monitor Panel Cover Fell Against Relay Causing a Primary Containment Isolation System (PCIS) Group 10 Isolation

INITIAL CONDITIONS

On February 21, 1994, Unit 2 was operating at approximately 100% power. Maintenance and Health Physics technicians were investigating an electrical malfunction on a personnel contamination monitor located in the Unit 2 Control Room backpanel area. The electronic access cover was removed and placed against the side of the monitor.

EVENT NARRATIVE

At 0850, the Health Physics technician involved in the investigation bumped the cover causing it to fall against the Division II Core Spray logic panel (H12-P627). This cracked the window of relay 2-E21-K10D. This relay is part of the logic for a PCIS Group 10 isolation, Pneumatic Nitrogen System (PNS), which switches limited drywell loads to the Backup Nitrogen System during a Loss of Coolant Accident (LOCA). The Shift Supervisor (SS) was in the area and responded when he heard the noise. An examination of the relay revealed that there was no internal damage and that the relay remained in it's normal de-energized position. The relay window was taped and a Work Order/Job Request was to be initiated. The SS became involved in other activities and did not immediately notify the Control Room of the situation.

At 0910, annunciation was received in the Control Room for low seal staging flow on 2B Reactor Recirculation pump and both Reactor Recirculation pumps were observed with rising pressure on the upper seals. Operations recognized the symptoms as a loss of air to the drywell, confirmed no actual isolation signal was present, and reset the isolation returning PNS to service. The investigation revealed that the isolation of PNS to the drywell had occurred when the 2-E21-K10D had been jarred. The jarring had been sufficient to momentarily open two normally closed contacts in the isolation logic causing the Group 10 isolation.

PNS supplies the Main Steam Isolation Valves (MSIVs), the Safety Relief Valves (SRVs), the Reactor Recirculating pump seal staging valves, various Reactor Building Closed Cooling Water (RBCCW) valves, and Heating and Ventilation (HVAC) valves in the drywell. The Backup Nitrogen System supplies the Safety Relief Valves only. When the Group 10 isolation occurred, the Reactor Recirculating pump seal staging valves closed, causing the alarm in the Control Room.

CAUSE OF EVENT

The cause of the event was personnel error. The personnel contamination monitor was located in a sensitive area and the cabinet cover had not been properly secured.

CORRECTIVE ACTIONS

1. The personnel contamination monitors were repositioned so that opening the electronic cabinet covers would not jeopardize the Control Room backpanels.

Hinges were placed on the electronic cabinet covers alleviating the need to remove the covers for access.

2. The event was reviewed with Instrument and Control personnel responsible for maintenance on personnel contamination monitors.

All corrective actions have been completed.

SAFETY ASSESSMENT

The safety significance was minimal. The safety related loads had alternate sources available. The Backup Nitrogen System was in service to supply the SRVs. The Group 10 isolation valves responded to the Group 10 isolation signal per design. The Reactor Recirculating pump seals were not damaged by the closure of the seal staging valves. The Reactor Recirculating pump seals are self lubricating even when the seal staging valves are closed. No temperature alarms were received on any loads normally supplied by the RBCCW or the HVAC systems.

PREVIOUS SIMILAR EVENTS

Previous similar events regarding isolations caused by broken or damaged equipment due to personnel error include LER 1-88-020, a Reactor Core Isolation Cooling (RCIC) system isolation due to a damaged turbine governor speed controller.

EIIS COMPONENT IDENTIFICATION

System/Component	EIIS Code
Primary Containment Isolation System	JM
Reactor Recirculating System	AD
Reactor Building Closed Cooling Water System	CC
Instrument Air Supply System	LD