NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Brunswick Steam Electric Plant Unit 1	0 5 0 0 0 3 2 5	1 OF 0 6

TITLE (4)
Failure to Establish a Fire Watch as per Technical Specification Action Statement 3.7.8a

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	DOCKET NUMBER(S)
										0 5 0 0 0
0 3	2 1	8 9	8 9	— 0 0 9	— 0 0	0 4	2 0	8 9		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
4		20.402(b)	20.406(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.406(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
0 1 0		20.406(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
		20.406(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
		20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
		20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
	AREA CODE
T. M. Jones, Specialist - Regulatory Compliance	9 1 9 4 5 7 - 2 0 3 9

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 March 21, 1989, at approximately 1000 hours, it was discovered that a Fire Protection (FP) Limiting Condition for Operation (LCO) had been initiated on March 15, 1989, at 1000 hours, without establishing the fire watch required by the LCO ACTION statement. A fire watch was established and the LCO was canceled at 1615 hours.

The cause of the event was personnel error on the part of the Fire Protection Auxiliary Operator (FPAO) when he failed to identify and initiate required ACTIONS when establishing the LCO. A contributing cause is the shared responsibility for FP LCOs between plant operations and radwaste (RW) operations and inadequate training for personnel responsible for FP LCOs.

A new procedure is being developed to place the responsibility for FP LCOs with RW operations. Training for personnel will be initiated. The involved FPAO has been counseled. RW operators and Shift Foreman will receive training on this event. Operating Instruction (OI) - 04.1 will include the distinction between roving or continuous fire watch.

The safety significance of this event is minimal as the fire exposures present in the AOG Building are not severe and the building does not contain components necessary for the safe shutdown of the units.

IE22 1/1

Event

Failure to establish a continuous fire watch on at least one side of a nonfunctional fire barrier penetration as per Technical Specification (TS) 3.7.8 ACTION "a".

Initial Conditions

Unit 2 was at 100% power and Unit 1 was shutdown in the 1988/1989 refuel and maintenance outage. The fire protection panel for the Augmented Off Gas (AOG) Building was in "silence" due to spurious alarms in zone four (4), thus, Limiting Condition for Operation (LCO) A2-89-F0114 was active on zone four of the AOG fire detection system.

Event Description

On March 15, 1989, at 1000 hours, LCO A2-89-F0131 was initiated by the Fire Protection Auxiliary Operator (FPAO) to allow door number 201 of the AOG Building to be left open to support work required by Plant Modification 88-003, Nitrogen Line Replacement. While initiating the LCO, the FPAO noted that a roving fire watch was in place for the AOG Building, as required by LCO A2-89-F0114. The FPAO then proceeded to note the already established fire watch log book number, 32B, in block 14 of the LCO "Event Evaluation Check Sheet" (see Attachment A) with the intention of adding a LCO A2-89-F0131 fire watch log sheet to the referenced log book. The FPAO then walked the LCO to the Operations Shift Foreman (SF) and Shift Operating Supervisor (SOS) for the reviews required by Operating Instruction (OI) 04, LCO Evaluation and Follow-up. The FPAO also wrote the required fire barrier penetration seal permit for door No. 201 (seal No. AO-2-030) and posted the permit on the door as required.

On March 17, 1989, at 0130 hours, the LCO on Zone 4 fire detection, A2-89-F0114, was canceled. At that time the roving fire watch was removed from the building.

On March 21, 1989, at approximately 1000 hours, a Fire Protection Technical Aide (FP Tech), reviewing the LCO's, noted that LCO A2-89-F0131 would expire the following day and went to the AOG Building to determine the status of the work. While there, the FP Tech, who reviews the previous day's fire watch log sheets, could not recall seeing a log sheet for the AOG Building. Upon returning to her work station the FP Tech confirmed that there were no log sheets for the building. Further investigation by the FP Tech determined that the Fire Watch Foreman had not been informed of the LCO and, therefore, had not established a fire watch. The FP Tech notified her supervisor, the Fire Protection Specialist (FP Specialist).

The FP Specialist established a fire watch, informed the FPAO and the Radwaste Shift Foreman (RW SF) of the failure to establish a continuous fire watch, determined that the work was completed and initiated actions to cancel the LCO. The LCO was canceled at 1615 hours on March 21, 1989.

Event Investigation

A discussion with the involved FPAO determined that he had intended to add a log sheet to the roving fire watch log book within the hour but failed to do so. OI-04, revision 29, Section 6.3, establishes the procedure for the initiation of LCOs by the Fire Protection Supervisor (FPS) or designated alternate (i.e., FPAO). As per the procedure, blocks 1-19a of the Evant Evaluation Check Sheet are to be completed by the SF or FPS (or designated alternate) upon initiation of the LCO. In addition, a note indicates that block 19 and 19a are to be completed by the SF and SOS when the LCO is initiated. The latter requirement ensures that red phone reportability is properly evaluated.

In addition to the procedure for initiating a FP LCO, Section 3 of OI-04 establishes the responsibilities of the SOS, SF, and FPS (or designated alternate). The FPS has the responsibility to initiate the FP LCOs, route them to the SF, and to establish and maintain the TS required fire watches.

The SF has the responsibility for completing the initiation of an LCO by the FPS (or designated alternate), reviewing the status of active LCOs at the beginning of each shift, and ensuring that proper reporting of applicable events, as per OI-51, is carried out.

The responsibilities of the SOS include reviewing the LCOs to verify compliance with TS and ensuring that applicable events are reported as per OI-51.

Root Cause Analysis

The FPAO is the designated alternate for the FPS on each shift. Past training for FPAOs on TS interpretation and implementation consisted of a one time training effort carried out in the fourth quarter of 1987. At that time, the RW auxiliary operators (AO), Control Operators (CO) and Shift Foreman received training on OI-04 and Fire Protection TS. This training has not been repeated for RW personnel.

As previously stated, the FPAO intended to place a log sheet in the roving fire watch's log book 32B, to meet the requirements of the TS required actions, but failed to do so. In fact, even if this action had been taken, it would not have met the required TS actions. The action statement reads:

2.0 Initial training and retraining for FPAOs will be developed.

3.0 The FPAO has been counseled as to the need to carry out proper reviews of other active and tracking LCOs.

4.0 RW operators and the RW SF will receive training on this event.

5.0 OI-04.1 will include the need to designate the type of fire watch (i.e., roving or continuous) being established in block 14 of the Event Evaluation Check Sheet.

6.0 Until OI-04.1 is approved a RW standing instruction has been issued requiring that the type of fire watch being established is noted along with the fire watch log book number in block 14 of the Event Evaluation Check Sheet.

Event Assessment

The safety significance of this event is minimal as the fire exposures present in the AOG Building are not severe and the building does not contain components necessary for the safe shutdown of the units. Additional mitigating factors include the fact that an hourly fire watch was present until the canceling of LCO A2-89-F0114 at which time fire detection was operable in the area.

Past similar events include LER 1-88-027 and 1-89-006 which referenced the failure of the SF to notify the FPAO when leaving a fire door open.

... within one hour establish a continuous fire watch on at least one side of the affected penetration, or verify the OPERABILITY of the fire detectors on at least one side of the nonfunctional fire barrier and establish an hourly fire watch patrol.

Thus, since the fire detection in the area associated with door No. 201 was inoperable under LCO A2-89-F0114, a continuous fire watch was required as opposed to the roving fire watch which the FPAO intended to establish. The intention to establish a roving fire watch resulted from conditioning of the FPAO that a FP LCO requires a roving fire watch, which is true in the majority of FP LCOs. As a result of this conditioning, the FPAO did not properly review the existing LCOs.

When the FPAO walked the LCO through the SF and SOS reviews his indication that required actions had been completed (in block 14 of the Event Evaluation Check Sheet) did not annotate whether or not the established fire watch was continuous or roving. The reviewers were confident that the FPAO had properly implemented TS, as he had in the past.

The review by each FPAO at the beginning of their shift did not reveal the failure to establish a continuous fire watch as it is standard practice to note the fire watch log book number but not to annotate whether or not the fire watch is "roving" or "continuous."

Root Cause

The root cause of the event is personnel error on the part of the FPAO, who failed to adequately identify and initiate required actions. Contributing to the root cause is the shared responsibility for Fire Protection LCOs between Radwaste Operations and Plant Operations and, also, inadequate training for personnel who stand watch as the FPAO in relation to properly interpreting, researching, evaluating, and carrying out TS's.

Corrective Actions

1.0 As a result of past problems with the shared responsibility between the SF and the FPS (or designated alternate) a new Operating Instruction is presently being drafted (i.e., OI-04.1 Radwaste - Fire Protection LCO Evaluation and Follow-up). This procedure will remove the responsibility for Fire Protection LCOs from the unit SF. This procedure is expected to be approved by May 1, 1989. By eliminating the shared responsibility the FPS will be more directly responsible for the implementation of FP TS and will thus become more cognizant of his/her responsibility.

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Brunswick Steam Electric Plant Unit 1	0 5 0 0 0 3 2 5	8 9	0 0 9	0 0	0 6 OF 0 6

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

ATTACHMENT A

EVENT EVALUATION CHECK SHEET

$ LCO # _____

1. DATE | 2. TIME | 3. MODE | 3a. PWR% | 4. THIS EVALUATION IS TRANSFERRED FROM LCO #_____ TRACK'G_____ | 5a EXPIRES DATE _____ TIME _____

6. SYSTEM | 6a SUBSYSTEM | 7 COMPONENT(S)

8. HOW DISCOVERED AND APPARENT CAUSE

9. TECH. SPEC. REF. & PAGE | 10. CONDITIONS REQ'D OPERABLE | 11. Does T.S. 3.0.3 apply? Yes ☐ No ☐ | 11a. Does T.S. 3.0.4. apply? Yes ☐ No ☐ | 12. TIME ALLOWED INOP PER TECH SPECS. _____ DAYS _____ HRS

12. TESTING (LIST ALL P.T.s OR ACTIONS REQ'D BY TECH. SPECS. DUE TO PRESENT EVENT

14. ACTIONS PER STEP 13 INITIATED AND SCHEDULED ON ACTIVE DSR AND CONTROL BOARD VISUAL CHECK OF REDUNDANT SYSTEMS COMPLETED. YES ☐ NO ☐ (IF "NO", STATE REASON)

15. ACTION REQUIRED IF CONDITIONS SPECIFIED IN STEPS "12" & "13" CANNOT BE MET.

16. DOES THIS EVENT/COMPONENT AFFECT OTHER COMPONENTS? YES ☐ NO ☐

16a. IF "YES" ARE OTHER LCOs INVOLVED? NO ☐ YES # _____

17. INITIATE OWP IF REQUIRED BY "DI 10" OWP # _____ DATE _____

18. WR/JCO/PLANT MOD #

18a. CLEARANCE #

19. EVALUATION	INITIALS	RED PHONE
SHIFT FOREMAN		
SHIFT SUPERVISOR		
REG. COMPLIANCE		

19a. PERSONNEL NOTIFIED (PRINT)
a. _____
b. _____
S.F INITIALS _____ DATE _____

20. SPECIAL REPORT NOTIFICATION
DATE REQUIRED _____
PERSON NOTIFIED _____
BY _____ SF/TPS INITIALS _____ DATE _____

21. SHIFT REVIEW

MONTH - DAY																
DAYSHIFT INITIAL																
NIGHT SHIFT INITIAL																
MONTH - DAY																
DAYSHIFT INITIAL																
NIGHT SHIFT INITIAL																

22. EQUIPMENT MADE OPERABLE OR NO LONGER REQ'D OPERABLE: DATE _____ TIME _____

23. TOTAL ACCUM. DOWN TIME SINCE FOUND INOPR'BL: DAYS _____ HOURS _____

24. ALL SPECIAL TEST'G CANCELLED: SF/TPS INITIALS _____ DATE _____

25. REVIEWED: SOS INITIALS _____ DATE _____

26. REMARKS

27. Page _____ of _____

CP&L
Carolina Power & Light Company

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

04-20-89

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SERIAL: BSEP/89-0390

10CFR50.73

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

BRUNSWICK STEAM ELECTRIC PLANT UNIT 1
DOCKET NO. 50-325
LICENSE NO. DPR-71
LICENSEE EVENT REPORT 1-89-009

Gentlemen:

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

Very truly yours,

J. L. Harness, General Manager
Brunswick Nuclear Project

TMJ/mcg

Enclosure

cc: Mr. S. D. Ebneter
Mr. E. G. Tourigny
BSEP NRC Resident Office

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