CP&L

Carolina Power & Light Company

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April 30, 1990

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

BRUNSWICK STEAM ELECTRIC PLANT UNIT 2
DOCKET NO. 50-324
LICENSE NO. DPR-62
SUPPLEMENT TO LICENSEE EVENT REPORT 2-90-001

Gentlemen:

In accordance with Title 10 of 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,

J. L. Harness, General Manager
Brunswick Nuclear Project

TMJ/

Enclosure

cc: Mr. S. D. Ebneter
Mr. N. B. Le
BSEP NRC Resident Office

IE22
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NRC FORM 366 (6-89) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Brunswick Steam Electric Plant Unit 2	0 5 0 0 0 3 2 4	1 OF 0 5

TITLE (4): Outside Technical Specification Due to Missed Surveillance; CS Subsystems Inoperable

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 2	1 0	9 0	9 0	—	0 0 1	— 0 2	0 4	3 0	9 0		0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10)	0 0 0		20.402(b)		20.405(c)		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 (Specify in Abstract below and in Text, NRC Form 366A)		
			20.405(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)				
			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
T. M. Jones, Regulatory Compliance Specialist	AREA CODE 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 February 10, 1990, it was determined that the Unit 2 Core Spray (CS) loops A and B were inoperable because of a missed surveillance. A maintenance surveillance test (MST), Residual Heat Removal (RHR)/CS Lo Reactor Pressure Permissive Trip Unit Channel Calibration, 2MST-RHR26M, had been excepted from performance on September 25, 1989, due to the RHR system being out of service during a refuel outage. The MST was added to the supplement sheet of the RHR LCOs, but not on a CS LCO. On February 6, 1990, both CS loops were declared operable after the work items listed on the LCO supplement sheets were completed; the RHR subsystems continued to be under LCO. At 1305 on February 7, the spent fuel pool gates were installed, requiring two low pressure core cooling sub-systems to be operable (T/S 3.5.3.1). The missed MST was discovered at 1300 on February 10, and CS A and B were declared inoperable. At 1454, the MST was completed and CS operability was declared. The event was caused by the lack of formal guidelines for determining LCOs applicable to excepted MSTs and a lack of readily available information to the SRO about the surveillances associated with the MST. Interim measures will be initiated to require personnel requesting SRO concurrence to provide surveillance information associated with the exception. Procedural guidance will be incorporated by September 1, 1990. This is an isolated event and had minimal safety significance.

EVENT

Failure to meet Technical Specification (T/S) 3.5.3.1 as a result of a missed surveillance.

INITIAL CONDITIONS

On February 10, 1990, Unit 2 reactor was shutdown, in refuel mode (i.e., Mode 5), during a scheduled outage. Vessel reload was completed and the fuel pool gates were installed. The Residual Heat Removal/Low Pressure Coolant Injection (RHR/LPCI) loops A and B were inoperable under Limiting Condition For Operation (LCO), A-2-89-1705 and A-2-89-1716, for outage related work. Loops A and B of the Core Spray (CS) System were considered operable. Preparations were in progress to enter cold shutdown (i.e., Mode 4) from refuel in accordance with General Plant Operating Procedure (GP) 08, Refueling to Cold Shutdown.

EVENT DESCRIPTION

In accordance with GP-08, step 5.1.12, a Mode Change System Report (Mode 5 to 4) print out was obtained from the Surveillance Tracking and Scheduling System (STSS) to identify the surveillances required to enter Mode 4. At 1300 on February 10, 1990, while verifying that the identified surveillances were current or listed on an appropriate LCO, per step 5.1.15, a Senior Reactor Operator (SRO) determined that a Maintenance Surveillance Test (MST) required for Core Spray to be operable had been missed. LCO A-2-89-0197 was initiated on CS loops A and B at 1300. At 1454, the MST was completed and operability was declared.

EVENT INVESTIGATION/CAUSE

2MST-RHR26M, RHR CS Low Reactor Pressure Permissive Trip Unit Channel Calibration, had last been performed on August 28, 1989. The frequency of the MST is at least once per 31 days when the RHR and/or CS systems are required to be operable. The next scheduled date for the MST was September 23, 1989, with an overdue date of September 30, 1989.

On September 9, 1989, the Unit 2 reactor began a shutdown for a scheduled refuel and maintenance outage. The unit entered cold shutdown on September 10, 1989. On September 11 and 12, 1989, RHR Low Pressure Coolant Injection (LPCI) system loops A and B were removed from service and placed under LCOs A-2-89-1705 and 1716, respectively. In accordance with T/S 3.5.3.2 (i.e., LPCI LCO) both loops of CS were operable at the time. On September 13, 1989, Unit 2 entered Refuel at 2230. At 0155 on September 16, 1989, the fuel pool gates were removed. The CS LCO, 3.5.3.1,

states that:

The core spray system is not required to be OPERABLE provided that the reactor vessel head is removed and the cavity is flooded, the spent fuel pool gates are removed, and the water level is maintained within the limits of Specifications 3.9.8 and 3.9.9.

Therefore, on September 16, 1989, with the vessel head removed, the vessel flooded and the level maintained within the appropriate limits, neither LPCI nor CS were required to be operable after the removal of the spent fuel pool gates was accomplished.

On September 21, 1989, the B loop of CS was placed under LCO A-2-89-1788 for outage related work. On September 25, 1990, 2MST-RHR26M was "excepted" from performance because the RHR system was removed from service. ("Excepted" is the term applied whenever a test is not performed or is unsatisfactory.) In order to except the MST, the group responsible for its completion has to fill out a Surveillance Test Completion/Exception Form and route it to the Regulatory Compliance group responsible for the Surveillance Tracking and Scheduling System (STSS). The referenced forms are printed out on a weekly basis and delivered to the groups responsible for the performance of the scheduled tests. In this case, an Instrumentation and Control (I&C) technician took the exception form to the Unit 2 control room to inform Operations that the test could not be performed and that the MST needed to be added to the appropriate LCOs. It is Operations responsibility to determine which LCOs are required. The SRO reviewing the exception sheet recalls that September 25, 1989, was a busy day and that the I&C technician brought a number of exception forms to the control room to be filled out. However, the exception form only lists the procedure number and does not specify which T/S surveillance requirements are satisfied by the scheduled test or what the actual title is. In addition, if the procedure involves more than one system, its associated procedure number only references the system most involved with the test. The surveillance in question is numbered 2MST-RHR26M. Since the majority of procedures only affect the system coded in the procedure number and the I&C technician did not provide him with a listing of the T/Ss associated with the MST, the SRO assumed that only the RHR system was involved and he added the MST to the RHR LCOs only. This ensured that the MST would be performed prior to cancellation of the RHR LCOs but did not tie the MST to CS operability. In fact, the MST should also have been added to

the existing LCO on B loop CS and a LCO should have been initiated on the A loop.

On October 19, 1989, the A loop of CS was placed under LCO, A-2-89-2016 for outage work.

On October 23, November 18, December 16, 1989 and on January 14, 1990, the MST was again excepted from performance because the RHR systems were still under LCOs A-2-89-1705 and 1716. During these exceptions, the I&C personnel verified that the referenced RHR LCOs were still active and then filled out the exception form based on the assumption that the MST had been properly excepted in September of 1989. This removed Operations from the exception loop and prevented the detection of the error.

On February 6, 1990, at 0533 and 1137, the CS B and A loop LCOs were cancelled, respectively. The CS loops were declared operable based on the fact that the work and testing associated with the LCOs had been completed. Since the MST had not been added to the LCO it was not known that it needed to be performed. At this time the fuel pool gates were still removed and the CS loops were not required by T/S to be operable.

On February 7, 1990, at 1257, the fuel pool gates were installed and CS A and B loops were now required to be operable because the LPCI loop A and B LCOs were still in affect.

On February 10, 1990, at 1300, during preparations to enter cold shutdown in accordance with GP-08, it was determined that CS A and B loops were inoperable because 2MST-RHR26M had not been performed. The A and B loops of CS were placed under LCO A-2-90-0197 at 1300. The test was performed and the T/S surveillance requirements were met. LCO A-2-90-0197 was cancelled at 1454. Three days, one hour and fifty seven minutes elapsed from the time CS was required to be operable till the time it was accurately declared operable.

This event was caused by the lack of formal guidelines for determining which LCOs need to be initiated when a test is excepted. Factors contributing to this event include the lack of readily available information to the SRO about the surveillances associated with the MST and the mindset that the system abbreviated in the procedure number is the only system which has surveillance requirements associated with the procedure.

CORRECTIVE ACTIONS

As an interim measure, instructions will be issued that require personnel obtaining concurrence from the SF/SRO on an exception to provide the SF/SRO with a copy of the purpose section of the test or a STSS Surveillance Test Cross Reference to T/S (i.e., RCI-02.5) printout. Either of these items will provide the SF/SRO with the information needed to determine what LCOs are applicable to the test being excepted. Procedural guidance will be incorporated by September 1, 1990 and the interim instructions will be deleted.

EVENT ASSESSMENT

This event had minimal safety significance as the Core Spray system would have injected, if required, as evidenced by the completion of the test with T/S surveillance requirements met. In addition, the condensate system was available as a backup injection source.
This is considered an isolated event.

EIIS Component Identifiers

SYSTEM	IDENTIFIER
RHR/LPCI	BO
CS	BM