

Carolina Power & Light Company

Brunswick Nuclear Project P. O. Box 10429 Southport, NC 28461-0429 June 11, 1990

FILE: B09-13510C SERIAL: BSEP/90-0428

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 1-90-08

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,

alamin

JU L. Harness, General Manager Brunswick Nuclear Project

WDL/mcg.LTR2

Enclosure

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

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NURDER (0) PAGE (3)			
		YEAR SEQUENTIAL REVISION NUMBER NUMBER			
Brunswick Steam Electric Plant	0 6 0 0 3 2 5	910-01018-010012 0 F0	1		

EVENT

Unit 1 High Pressure Coolant Injection (HPCI) system was rendered inoperable when control power was lost to the minimum flow bypass valve to the suppression pool, E41-F012, while installing a replacement indicator light bulb at the Motor Control Center (MCC) breaker compartment.

INITIAL CONDITIONS

Unit 1 was operating at 100% power. The Automatic Depressurization system (ADS), the Residual Heat Removal/Low Pressure Coolant Injection (RHR/LPCI) system, the Core Spray (CS) system, the High Pressure Coolant Injection system, and the Reactor Core Isolation Cooling system were operable.

EVENT DESCRIPTION

At 1057 on 5-14-90, an annunciator, A-1 5-4, HPCI Valves Motor Overload, was received in the Control Room. The annunciator was caused by a loss of control power to E41-F012. A loss of control power will prevent automatic or electrical opening of the minimum flow valve. The vendor had previously indicated that operation of the HPCI pump and turbine without a flow path for greater than 30 seconds could possibly damage the HPCI equipment. HPCI, therefore, was determined to be inoperable until control power was restored to E41-F012.

The Senior Auxiliary Operator (SAO) noticed, while conducting rounds, that the green (closed) indicator light for E41-F012, located on MCC 1XDA, Compartment B24, was out. The bulb was removed and a new one installed. Before completely inserting the replacement bulb (approximately two turns inserted), it flashed. This bulb was removed and another one was installed. After doing this, the SAO noticed that the closed indicator light was still extinguished and suspected that control power had ber ost.

Work Request/Job Order (WR/JO) 90-AITJ1 was written, Limiting Condition of Operation (LCO) A1-90-0818 was established, and Clearance (Clr) 1-90-0162 was placed on the breaker compartment. Instrumentation and Control (I&C) technicians found one of the two control power fuses blown and replaced it. The socket was inspected for defects and found not to be a contributing factor. The breaker was energized at 1358. A 4-hour Red Phone Report was made to the Nuclear Regulatory Commission at 1443. The valve was

LICENSEE EVENT REPOR TEXT CONTINUATION	APPROVED DMB NC. 3160-0104 EXPIRES 4/30/82 ESTIMATED BURDEN PER RESPONSE TO COMPLY WTH THIS INFORMATION COLLECTION REQUEST 600 MRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-330). U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20565. AND TO THE PAPERWORK REDUCTION PROJECT (3160-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.				
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returned to service at 1518 after electrical stroking of the valve was completed satisfactorily.

EVENT INVESTIGATION/CAUSE

A similar loss of control power, reported in Licensee Event Report (LER) 1-89-020, identified a potential design problem with General Electric Model CR2940 sockets that allowed the negative socket coil to come into contact with the positive socket tab during bulb removal due to coil distortion. At that time (Oct. 1989), Technical Support investigated the feasibility of replacing the GE sockets with a Westinghouse bayonet type socket. The decision was made to replace the sockets with the same GE design socket since the suspect sockets had been in service approximately 15 years. An inspection plan was developed and implemented to identify those breakers which could result in a system failure due to a socket failure. Since then, the sockets have been replaced on Unit 2 and identified, but not replaced, on Unit 1.

Due to past problems with the MCC electrical sockets, electrical engineering became involved in the investigation. In this case, the socket was determined not to be a factor. The failure of the light bulb is being attributed to the manufacturing process.

CORRECTIVE ACTIONS TAKEN

The light bulb and fuse were replaced. E41-F012 was electrically stroked satisfactorily and HPCI was restored to service. No further corrective actions are planned.

EVENT ASSESSMENT

The safety significance of this event is considered to be low. The plant is analyzed for a HPCI failure and the Automatic Depressurization and Low Pressure Coolant Injection systems were available to serve as a backup to HPCI. The failure mode of the light bulb is considered to be an isolated case.

LICENSEE EVENT REPORT (TEXT CONTINUATION	APPROVED ONE NO. 3180-0104 EXPIRES 4/30/92 ESTIMATED BURDEN PER RESPONSE TO COMPLY WTH THIS INFORMATION COLLECTION REQUEST, 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-30). U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20656, AND TO THE PAPERWORK REDUCTION ROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.					
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