

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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LER ATTACHMENT - RO #2-83-80

Facility: Unit No. 2

Event Date: August 31, 1983

These events resulted from a failure of the HPCI pump minimum flow valve, 2-E41-F012, in the open position, which allowed portions of the CST and makeup demineralized water (MUD) storage tank inventories to be transferred to the suppression pool on August 31, 1983, and September 1, 1983, respectively.

Following the reactor scram on August 31, 1983, the HPCI System was utilized as a heat sink for the reactor by aligning the HPCI System pump suction and discharge such that a CST-to-CST flow path was established.

Following a determination that the suppression pool level was increasing from an unknown in-leakage source and had exceeded specifications, an investigation was conducted to locate the source of the in-leakage. This investigation revealed that the HPCI F012 valve had failed in the open position. The valve anti-rotation device had become disengaged when the device setscrew had loosened and backed out, allowing the device to move from its proper position. This had rendered the valve inoperable in both the manual and motor-operated modes of operation. Due to the nature of the valve failure, the valve indicated closed at the RTGB; however, the actual valve position was approximately 75 percent of full open travel. The partially open F012 had allowed a sufficient portion of the CST inventory to be transferred into the suppression pool, which caused the pool level specifications to be exceeded. Also, the suppression pool temperature change (90°-111°F), caused by running both HPCI and RCIC, may have contributed to this out-of-specification level.

This event was ended by returning the suppression pool level to within specifications at 2328 on August 31, 1983. At that time, a Work Request and Authorization was written to close and repair the F012 valve.

At 0800 on September 1, 1983, while the HPCI F012 valve was still undergoing maintenance, suppression pool level instruments 2-CAC-LT-2601 and LT-3342 were removed from service to allow the performance of work involving the installation of a TMI-related suppression pool level instrumentation modification. The removal from service of the LT-2601 instrument rendered the suppression pool level Hi/Lo annunciator in alarm, thus removing an alarm indication in the Control Room of a change in pool level. The method for monitoring suppression pool level during the involved modification work was utilization of RTGB level indicator 2-CAC-LR-2602, with a visual check of the instrument once every eight hours. As per a previously completed TMI modification, the instrument had been changed such that a 16-foot level span is indicated on a four-inch wide instrument chart paper. This results in a two-inch change in level corresponding to 1/32-inch change on the chart paper made by the instrument.

At 1800 on September 1, 1983, during performance of the operability test of the suppression pool level indicators (PT-08.1.6), it was discovered that the suppression pool level had exceeded specifications with a measured level of -26.5 inches. At this time the HPCI System was shutdown; however, HPCI System keepfull supply from the makeup demineralized water storage tank (MUD), had been transferring to the suppression pool via the previously open HPCI F012 valve, thereby causing the pool level to continually increase. This event was ended by returning the suppression pool level to within specifications at 1822 on September 1, 1983. At 2057 on September 1, 1983, the F012 valve was manually closed and placed under clearance.

As a result of this event, the Control Operator on duty at the time of the event was counseled concerning the importance of close monitoring of plant parameters while redundant instrumentation is not in service.

Following the completion of appropriate repairs to the F012 valve it will be returned to service.



Carolina Power & Light Company

Brunswick Steam Electric Plant
P. O. Box 10429
Southport, NC 28461-0429

September 29, 1983

FILE: B09-13510C
SERIAL: BSEP/83-3238

Mr. James P. O'Reilly, Administrator
U. S. Nuclear Regulatory Commission
Region II, Suite 3100
101 Marietta Street N.W.
Atlanta, GA 30303

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-324
LICENSE NO. DPR-62
LICENSEE EVENT REPORT 2-83-80

Dear Mr. O'Reilly:

In accordance with Section 6.9.1.9b of the Technical Specifications for Brunswick Steam Electric Plant, Unit No. 2, 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-0161, July 1977.

Very truly yours,

C. R. Dietz, General Manager
Brunswick Steam Electric Plant

RMP/pms/LETPS1

Enclosure

cc: Mr. R. C. DeYoung
NRC Document Control Desk

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