PRB 79-217

Edwin I. Hatch Nuclear Plant

Georgia Power

August 29, 1979
PM-79-801

PLANT E. I. HATCH
Docket No. 50-321
Special Report on RHR Pump Suction
Torus Isolation Valve E11-F004B

Mr. James P. O'Reilly
Director of Inspection and Enforcement
Region II
Suite 3100
101 Marietta Street
Atlanta, Georgia 30302

Dear Sir:

On May 17, 1979, with the reactor in refueling, a Local Leak Rate Test (LLRT) of the RHR pump "B" suction torus isolation valve E11-F004B was performed per HNP-1-3952. This test showed the valve to be leaking in excess of specified criteria (refer to LER 50-321/1979-033). Following corrective action (lapped seat rings, lapped gate, and adjusted the valve's motor operator - see MR #1-79-2423), the valve was satisfactorily retested on July 26, 1979.

On August 12, 1979, the "B" loop of the RHR system was placed in service in the shutdown cooling mode of operation, and the reactor vessel level was observed to start dropping. Investigation showed that if the E11-F065B valve was closed, then the reactor vessel water level would stabilize. Thus, the E11-F004B and/or the E11-F030B valves were leaking. On August 13, 1979, the "B" RHR pump was run torus to torus in an attempt to flush the seat of the E11-F004B valve; however, this had no appreciable effect on the leakage. On August 14, 1979, the E11-F030B (relief valve) was removed and bench-tested satisfactorily. Thus, the E11-F004B valve was determined to be leaking.

The LLRT performed on the E11-F004B valve on July 26, 1979, was performed in the direction that it would have to prevent leakage post-LOCA, i.e., from the inside of primary containment outward; the leakage now exisiting for the E11-F004B valve is in the opposite direction, i.e., back towards containment. This leakage path from the reactor vessel to the suppression chamber (torus) only exists when the "B" RHR pump is in the shutdown cooling mode of operation. Thus, it was decided that the leakage of the valve represented no condition that would preclude normal operation.

The decision was then made to perform a new LLRT on the E11-F004B valve in order to ensure that the primary containment integrity of the valve still existed.

Thus, on August 14, 1979, a LLRT of the valve was performed. The results of this test showed the valve to be leaking less than the acceptance criteria specified by the Technical Specification and 10CFR50 appendix J (.60La overall leakage for all type B and type C LLRTs, and the leakage of the valve shall be low enough such that the seal water inventory of the valve is sufficient for 30 days - the seal water inventory for the E11-F004B valve is the torus). However, the valve leak rate was judged to be excessive by plant personnel and a deviation report (#1-79-126) was written saying that the E11-F004B valve had failed the LLRT. It was determined by the Plant Review Board that a Licensee Event Report was not required since the applicable Technical Specification and 10CFR50 appendix J acceptance criteria had been satisfied; however, it was decided that a special report be written due to the sequence of events.

Following maintenance on the valve (tightened four bolts on the valve's motor operator - MR #1-79-4741), a satisfactory LLRT was performed on August 15, 1979.

M. Manry
Plant Manager

TLE/peb

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File: M-58
File: E11