



Carolina Power & Light Company

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SERIAL: BSEP 96-0121

United States Nuclear Regulatory Commission

ATTENTION: Document Control Desk

Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-325 & 50-324/LICENSE NOS. DPR-71 & DPR-62

NRC BULLETIN 95-02, UNEXPECTED CLOGGING OF RESIDUAL HEAT REMOVAL (RHR)
PUMP STRAINER WHILE OPERATING IN SUPPRESSION POOL COOLING MODE"

Gentlemen:

The purpose of this letter is to provide additional information regarding Carolina Power & Light Company's February 13, 1996 (Serial No. BSEP 95-0668) response to NRC Bulletin 95-02. Enclosure 1 provides the information discussed during a March 7, 1996 conference call with members of the NRC staff, and Enclosure 2 provides a list of commitments.

Please refer any questions regarding this letter to Mr. George Honma at (910) 457-2741.

Sincerely,

G. D. Hicks

Manager - Regulatory Affairs
Brunswick Nuclear Plant

GMT/

Enclosures:

1. Response
2. List of Regulatory Commitments

cc: Mr. S. D. Ebnetter, NRC Regional Administrator, Region II
Mr. C. A. Patterson, NRC Senior Resident Inspector - Brunswick Plant
Mr. D. C. Trimble, Jr., NRR Project Manager - Brunswick Plant
The Honorable H. Wells, Chairman - North Carolina Utilities Commission

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ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2
NRC DOCKET NOS. 50-325 & 50-324
OPERATING LICENSE NOS. DPR-71 & DPR-62
NRC BULLETIN 95-02, UNEXPECTED CLOGGING OF RESIDUAL HEAT REMOVAL (RHR)
PUMP STRAINER WHILE OPERATING IN SUPPRESSION POOL COOLING MODE

By letter dated February 13, 1996 (Serial No. BSEP 95-0668), Carolina Power & Light company provided the results of our confirmatory testing and inspections per NRC Bulletin 95-02. A conference call was held with members of the NRC staff on March 7, 1996, to discuss details related to the response. The four questions provided by the NRC were discussed and are recapped as follows:

NRC Question 1

Why was 6 hr test run only briefly with two pumps and continued for most of the test with only one?

CP&L Response

The intent of the test was to agitate any existing debris/fibrous material, and then collect this on a single RHR suction strainer. This was considered the best method for collecting torus debris. It should be noted that limited debris/fibrous material was considered available, as the torus had been drained and cleaned during the each unit's last refueling outage. Since the B RHR loops are equipped with the torus drain path, it is Operations' preferred loop and has the most run time. Most neutral buoyancy debris would have been expected to have already collected on or around this loop's strainer due to the large flow capacity combined with its run time. Debris collected prior to or during the test would act as a filter medium for the agitated sludge.

RHR loop B was started first with one pump running at 8000 gpm. Then RHR loop A was started with two pumps running at 15,000 gpm, in order to agitate torus sludge. After running both RHR loops for 10 minutes, the A RHR pumps were secured leaving a single B loop RHR pump running for at least 6 hours. A single RHR pump running for 6 hours passes the equivalent of 4.5 torus water volumes through the RHR B loop strainer. There was no additional value provided by running a second B loop RHR pump considering the length of the run, the turbulence one pump provides, and that both pumps on the B loop use a common suction strainer.

NRC Question 2

February 13, 1996 response to Bulletin 95-02 states that there was a decrease in suction pressure while performing the Unit 2 tests, but that only "trace amounts" of material were found on the RHR 2A suction strainer. Explain the apparent contradiction.

CP&L Response

While a specific reason for the slight decrease (0.57 psig) in suction pressure was not identified, the change was well within the calculated maximum allowable 2.41 psig pressure drop limit that had been established for the test. Divers performing the B loop RHR strainer inspection noted approximately 75 paint chips (approximately 1/8" X 1/8") on the top half of the strainer. The area covered was less than 1 % of the strainer surface. With only half of the Unit 2 torus repainted during the 1994 refueling outage, some paint chips were expected to be generated in limited amounts, and this could have contributed to a small pressure drop across the strainer. The Unit 2 torus strainers were cleaned (hydrolased), the torus desludged, and the remaining half of the torus immersion zone repainted during the 1996 refueling outage (B212R1).

NRC Question 3

Discussions in November 15, 1995 and February 13, 1996 responses to Bulletin 95-02 focus on debris on suction strainers. Were other debris found in the pool?

CP&L Response

Limited amounts of the same materials as found on the strainers (small paint chips and small fragments of duct tape) were found, along with ~ 1/16" of corrosion product sludge on the pool bottom. It is concluded that the paint chips came from the half of the liner that had not been recoated during the 1994 refueling outage. The two torus water samples, taken midway between the bottom of the torus and the top of the water, found no evidence of visible or microscopic fibers. Analysis of the two sludge samples found limited fibrous material. The samples contained two or three polyester fibers approximately twelve by forty micrometers, which would easily pass through the strainers, and a single polyester fiber one centimeter long with varying diameters of about thirty-five to sixty micrometers.

NRC Question 4

Although not requested in Bulletin 95-02, the staff would appreciate a discussion of long term plans, if they have been formulated yet?

CP&I Response

Long term plans have not yet been formulated. Development is waiting on the completion of the final reports associated with the Unit 2 torus inspections, and the data from the Fall 1996 Unit 1 refueling outage. Unit 1 will have completed a full cycle with the torus liner recoated, and the data collected will provide a baseline for any inspection/cleaning program that may be developed.

ENCLOSURE 2

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324/LICENSE NOS. DPR-71 AND DPR-62
NRC BULLETIN 95-02, UNEXPECTED CLOGGING OF RESIDUAL HEAT REMOVAL (RHR)
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LIST OF REGULATORY COMMITMENTS

The following table identifies those actions committed to by Carolina Power & Light Company in this document. Any other actions discussed in the submittal represent intended or planned actions by Carolina Power & Light Company. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Manager-Regulatory Affairs at the Brunswick Nuclear Plant of any questions regarding this document or any associated regulatory commitments.

Commitment	Committed date or outage
NONE	N/A