CP&L

Carolina Power & Light Company

March 13, 1981

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Office of Nuclear Reactor Regulation
ATTENTION: Mr. T. A. Ippolito, Chief
Operating Reactors Branch No. 2
United States Nuclear Regulatory Commission
Washington, D. C. 20555

BRUNSWICK STEAM ELECTRIC PLANT UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324
LICENSE NOS. DPR-71 AND DPR-62
REQUEST FOR LICENSE AMENDMENT
SERVICE WATER OPERABILITY REQUIREMENTS

Dear Mr. Ippolito:

SUMMARY

In accordance with the Code of Federal Regulations, Title 10, Part 50.90 and Part 2.101, Carolina Power & Light Company (CP&L) hereby requests revisions to the Technical Specifications for its Brunswick Steam Electric Plant (BSEP) Unit Nos. 1 and 2. These changes specify the conditions under which the nuclear service water header may be shut down to perform necessary maintenance and modification of these systems.

BACKGROUND

At present, there is no plant condition under which the nuclear service water header can be shut down for maintenance work without violating Technical Specifications. The proposed changes to Technical Specification 3.7.1.2 and the addition of a Special Test Exception for each unit would allow maintenance work to be performed on the nuclear service water header in Condition 4 or 5, and at the same time meet the necessary ECCS and diesel generator operability requirements.

The nuclear service water header supplies the normal source of cooling water to the diesel generators and loads in the Reactor Building. Loads of importance are: RHR service water heat exchangers and pump coolers, RHR pump seal coolers, ECCS Room coolers, and RBCCW heat exchangers. Presently, as defined by Technical Specifications in Conditions 4 and 5, the RHR pump seal coolers, ECCS Room coolers, and the diesel generators are required to be operable as necessary to support the individual ECCS subsystem operability requirements.

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SAFETY ANALYSES

Removal of the Nuclear Service Water System from service causes a loss of one of two cooling water supply sources to the diesel generators and the Reactor Building loads. The other unit's Nuclear Service Water System is the other source of cooling water for the diesel generators. The Reactor Building cooling requirements, including those necessary to support ECCS operability requirements, can be supplied as required by the conventional service water header, which is the alternate supply. Since these systems are designed to the same standards and have sufficient capacity, there is no loss of redundancy of active components or impairment of the ability of the ECCS systems or diesel generators to perform their intended safety function. In addition, the passive components are seismically analyzed so a catastrophic failure is unlikely to occur. Precedent has been established in Technical Specifications to permit continued operations with a loss of redundancy of active components in ECCS systems by initiating a Limiting Condition for Operation (LCO). In keeping with this precedent, it is permissible to apply the same logic to the Nuclear Service Water System and initiate a 14 day LCO when the Nuclear Service Water System is inoperable.

The relief addressed in the attached Special Test Exceptions is absolutely necessary to permit the nuclear service water header to be drained and completely isolated by a flange from the rest of the system to eliminate any leakage which may be coming through the isolation valves. The conventional pumps will remain OPERABLE although not operating, and the dedicated, qualified individual will ensure that adequate service water can be provided quickly if necessary. The conventional system can be brought into service reliably and quickly because even with some isolation valve leakage into the nuclear header, the capacity of the conventional system is so large that adequate service water can be assured.

Implementation of the proposed Technical Specifications changes on the Service Water system will not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR since sufficient cooling water will be available as required from alternate sources with the same design standards and the same level of reliability. Following the guidelines of the proposed ACTION statements will allow the removal of the nuclear service water header from service and still provide for appropriate diesel generator and ECCS System operability as defined by Technical Specifications in Conditions 4 and 5. In addition, because of the loss of a redundant cooling water supply, an LCO will be instituted for the diesel generators and ECCS systems as is done with other ECCS System ACTION requirements in the case of lost redundancy.

The possibility for an accident or malfunction of a different type than any evaluated previously in the FSAR is not created because the proposed ACTION statements require imposing an LCO on the diesel generators and the ECCS systems. The probability of failure during this period of time is small and consistent with the level associated with other ECCS System LCO's. The impact of a failure during the time period is less due to the reduced reactor heat generation rates and radioactivity levels. While removal of the nuclear service water header from service causes a loss of redundant cooling water

supply to the diesel generators and ECCS, a single active failure will not cause the total loss of diesel generators or ECCS systems.

The margin of safety as defined by Technical Specifications is not reduced since an equivalent source of cooling water will be available as required to support diesel generator and ECCS System operability requirements in Conditions 4 and 5.

SCHEDULE REQUEST AND CLOSING

It is our desire to perform maintenance activities on the Brunswick Unit 1 nuclear service water header during the upcoming maintenance outage which is currently scheduled to begin on March 21, 1981. In order to complete the necessary maintenance prior to scheduled startup, we request that you provide an expedited review of this request and grant approval for the changes by April 3, 1981. You cooperation in this matter is greatly appreciated.

Attached you will find the revised Technical Specifications pages with the changes indicated by vertical lines in the right-hand margins. We believe that these requests involve a single technical issue and thus constitute one Class I amendment and one Class III amendment in accordance with 10CFR170.22. Accordingly, our check for $4,400 is enclosed.

Should you have any questions regarding this matter, please contact my staff.

Yours very truly,

E. E. Utley
Executive Vice President
Power Supply and
Engineering & Construction

CSB/dk (N#44)
Attachments

Sworn to and subscribed before me this 13th day of March 1981

Franklin Murray
Notary Public

My Commission expires: October 4, 1981

FRANKLIN MURRAY
NOTARY PUBLIC
WAKE COUNTY, N. C.