



Carolina Power & Light Company

MAR 5 1986

SERIAL: NLS-86-015

Director of Nuclear Reactor Regulation  
Attention: Mr. Dan Muller, Director  
BWR Project Directorate #2  
Division of BWR Licensing  
United States Nuclear Regulatory Commission  
Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-325 & 50-324/LICENSE NOS. DPR-71 & DPR-62  
REQUEST FOR LICENSE AMENDMENT  
CHLORINE DETECTION SYSTEM

Dear Mr. Muller:

**SUMMARY**

In accordance with the Code of Federal Regulations, Title 10, Parts 50.90 and 2.101, Carolina Power & Light Company hereby requests a revision to the Technical Specifications (TS) for the Brunswick Steam Electric Plant, Unit Nos. 1 and 2. The proposed amendment revises TS Section 3/4.3.5.5 to reflect modifications made to the chlorine detection system so that the installed configuration is consistent with the description in our NUREG-0737, Item III.D.3.4 responses. In addition, this section has been revised to reflect guidance provided in the GE BWR/4 Standard Technical Specifications.

**DISCUSSION**

The proposed amendment revises TS Section 3/4.3.5.5 to reflect modifications made to the chlorine detection system that provide for control room alarm and isolation in the event of high chlorine concentration either at the control room air intake or at the tank car siding.

Brunswick's chlorine detection system design for control room alarm and isolation has two independent subsystems each containing two redundant detectors. These detectors for the subsystems are located at the control room air intake and at the chlorine tank car siding. The current Action Statement 3.3.5.5.a does not adequately address the Brunswick system design. As such, loss of a single chlorine detector causes the entire system to be defined as inoperable with only eight hours to restore the inoperable detector prior to commencing shutdown. This is more restrictive than the GE BWR/4

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Standard Technical Specifications and the industry norm. Therefore, we have adopted modified GE BWR/4 Standard Technical Specification Action Statements pertaining to chlorine detection system operability. Adoption of the STS action statements decreases the possibility of having to either subject the plant to an unnecessary shutdown or perform the potentially hazardous removal of the chlorine tank car from the Exclusion Area due to the loss of a single chlorine detector, thereby increasing the margin of safety.

### **SIGNIFICANT HAZARDS ANALYSIS**

The Commission has provided standards for determining whether a significant hazards consideration exists (10 CFR 50.92(c)). A proposed amendment to an operating license for a facility involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. Carolina Power & Light Company has reviewed this request and determined that:

1. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated because the plant modifications do not result in changes to any accident analyses previously performed. The final design of the chlorine detection system is consistent with the descriptions provided in our Control Room Habitability Study. The NRC issued a Safety Evaluation Report finding this design acceptable on October 18, 1983. Changes to the shutdown requirements of Action Statement 3.3.5.5.a and the addition of Action Statement 3.3.5.5.b are consistent with guidance provided in the GE BWR/4 Standard Technical Specifications and the industry norm.
2. The proposed amendment does not create the possibility of a new or different kind of accident than previously evaluated for the same reasons as stated in Item 1.
3. The proposed amendment does not involve a significant reduction in a margin of safety because the modifications to the plant provide for better chlorine protection capabilities. The clarification of the system design in the revised TS will help to avoid possible operator confusion. In addition, the revisions to the Action Statements of TS Section 3/4.3.5.5 decrease the possibility of placing the plant in an unnecessary operating transient due to the loss of a single chlorine detector.

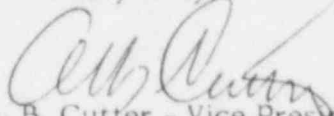
Based on the above reasoning, Carolina Power & Light Company has determined that the proposed amendment does not involve a significant hazards consideration.

### **ADMINISTRATIVE INFORMATION**

The revised Brunswick-1 and Brunswick-2 TS pages are provided in Enclosures 1 and 2. The Company has evaluated this request in accordance with the provisions of 10 CFR 170.12 and determined that a license amendment application fee is required. A check for \$150.00 is enclosed in payment of this fee.

Please refer any questions regarding this submittal to Mr. Sherwood R. Zimmerman at  
(919) 836-6242.

Yours very truly,



A. B. Cutter - Vice President  
Nuclear Engineering & Licensing

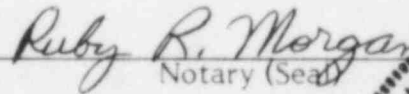
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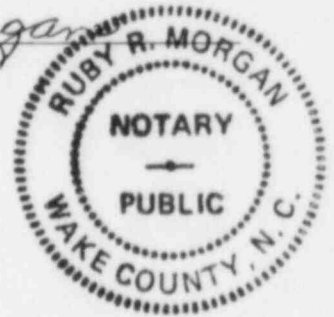
Enclosure

cc: Mr. W. H. Ruland (NRC-BNP)  
Dr. J. Nelson Grace (NRC-RII)  
Mr. E. Sylvester (NRC)  
Mr. Dayne H. Brown

A. B. Cutter, having been first duly sworn, did depose and say that the information contained herein is true and correct to the best of his information, knowledge and belief; and the sources of his information are officers, employees, contractors, and agents of Carolina Power & Light Company.

My commission expires: 11/27/89

  
Notary (Seal)



Enclosure 1  
to NLS-86-015

Proposed Technical Specification Pages  
Brunswick-1

Chlorine Detection System  
(85TSB24)

Summary List of Revisions

Brunswick-1

<u>Page No.</u>	<u>Description</u>
3/4 3-54	Section 3/4.3.5.5 revised to reflect system design and GE BWR/4 STS guidance.
B 3/4 3-3	Revised the wording of Basis 3/4.3.5.5