

April 10, 1987

Docket No. 50-325

Mr. E. E. Utley  
Senior Executive Vice President  
Power Supply and Engineering & Construction  
Carolina Power & Light Company  
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Raleigh, North Carolina 27602

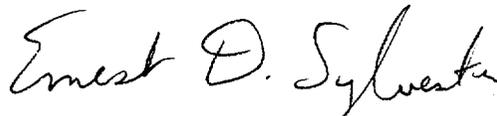
Dear Mr. Utley:

The Commission has issued the enclosed Amendment No. 106 to Facility Operating License No. DPR-71 for the Brunswick Steam Electric Plant, Unit 1. The amendment consists of changes to the Technical Specifications in response to your submittal of December 2, 1986.

The amendment changes Section 3/4.1.5 of the Technical Specifications by revising the standby liquid control system (SLCS) pump relief valve setpoint and the sodium pentaborate solution concentration curve to satisfy the ATWS rule requirements specified in 10 CFR 50.62. In addition, the SLCS pump flow surveillance requirements are clarified.

A copy of the Safety Evaluation is also enclosed. Notice of issuance will be included in the Commission's Bi-Weekly Federal Register Notice.

Sincerely,



Ernest D. Sylvester, Project Manager  
BWR Project Directorate #2  
Division of BWR Licensing

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Enclosures:

1. Amendment No. 106 to License No. DPR-71
2. Safety Evaluation

cc w/enclosures:  
See next page

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OFFICIAL RECORD COPY

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Carolina Power & Light Company

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Units 1 and 2

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 106  
License No. DPR-71

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Carolina Power & Light Company (the licensee) dated December 2, 1986, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-71 is hereby amended to read as follows:

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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 106, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Daniel R. Muller, Director  
BWR Project Directorate #2  
Division of BWR Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 10, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 106

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Pages

3/4 1-19

3/4 1-20

REACTIVITY CONTROL SYSTEMSSURVEILLANCE REQUIREMENTS

4.1.5 The standby liquid control system shall be demonstrated OPERABLE:

- a. At least once per 24 hours by verifying that:
  1. The volume and temperature of the sodium pentaborate solution are within the limits of Figures 3.1.5-1 and 3.1.5-2, and
  2. The heat tracing circuit is OPERABLE.
- b. At least once per 31 days by:
  1. Starting each pump and recirculating demineralized water to the test tank,
  2. Verifying the continuity of the explosive charge, and
  3. Determining the concentration of boron in solution by chemical analysis. This test shall also be performed anytime water or boron is added to the solution or when the solution temperature drops below the limit established in Figure 3.1.5-2.
- c. At least once per 18 months during shutdown by:
  1. Initiating one of the standby liquid control system loops, including an explosive valve, and verifying that a flow path from the pumps to the reactor pressure vessel is available by pumping demineralized water into the reactor vessel. The replacement charge for the explosive valve shall be from the same manufactured batch as the one fired or from another batch which has been certified by having one of that batch successfully fired. Both injection test loops shall be tested in 36 months.
  2. Demonstrating that the minimum flow requirement of 41.2 gpm per pump at a pressure of greater than or equal to 1190 psig is met.
  3. Demonstrating that the pump relief valve setpoint is  $1450 \pm 50$  psig.

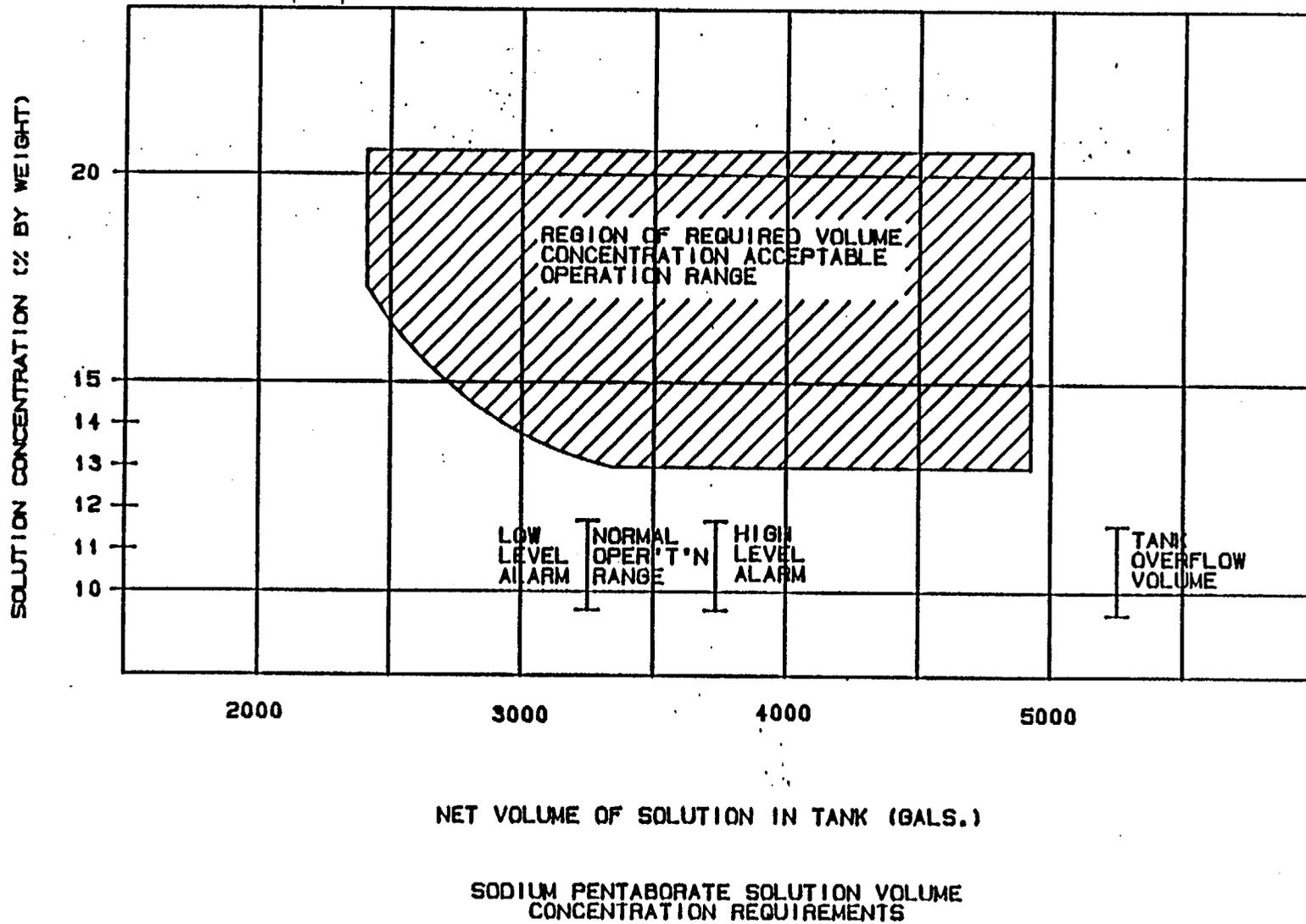


FIGURE 3.1.5-1



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 106 TO FACILITY OPERATING LICENSE NO. DPR-71  
CAROLINA POWER & LIGHT COMPANY  
BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1  
DOCKET NO. 50-325

1.0 INTRODUCTION

By letter dated December 2, 1986, Carolina Power & Light Company, the licensee for Brunswick Steam Electric Plant, Unit 1 (Brunswick 1) requested changes to the Technical Specifications with regard to the Standby Liquid Control System (SLCS). The proposed changes reflect the licensee's plan to increase the minimum required concentration of sodium pentaborate in the SLCS tank to 13 weight percent. This increase in concentration in conjunction with the capability to operate both SLCS pumps simultaneously at a total combined flow greater than 66 gpm is proposed to satisfy, in part, the requirements of 10 CFR 50.62.

2.0 EVALUATION

The changes proposed by the licensee have been reviewed by the staff against the requirements of the ATWS rule (10 CFR 50.62), and Generic Letter 85-03 "Clarification of Equivalent Control Capacity for Standby Liquid Control Systems" dated January 28, 1985. The licensee's proposed increase in sodium pentaborate concentration to 13 weight percent in conjunction with a flow rate of 66 gpm and a reactor pressure vessel inside diameter of 218 inches, will provide a boron content equivalent in control capacity to 86 gpm of 13 weight percent sodium pentaborate for a 251 inch inside diameter vessel. This is in compliance with 10 CFR 50.62 and is therefore acceptable.

The licensee's plan to periodically test only one SLCS system pump at a time instead of both pumps simultaneously is also acceptable. This is based upon the licensee's statement that tests were performed on Brunswick 2 (an identical unit) during 1986 which verified that the SLCS is capable of operating under the increased pressures associated with two pump operation. Furthermore, the test criterion of 41.2 gpm per pump for the positive displacement pumps provides reasonable assurance that 66 gpm will be achieved during two pump operation. The Technical Specification changes proposed by the licensee are therefore acceptable because they are consistent with the requirements of 10 CFR 50.62.

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### 3.0 ENVIRONMENTAL CONSIDERATIONS

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite; and that there should be no significant increase in individual or cumulative occupational radiation exposure. The commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR §51.22(c)(9). Pursuant to 10 CFR §51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

### 4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: T. Collins

Dated: April 10, 1987