

December 4, 1986

Dockets Nos. 50-325/324

Mr. E. E. Utley  
Senior Executive Vice President  
Power Supply and Engineering & Construction  
Carolina Power & Light Company  
Post Office Box 1551  
Raleigh, North Carolina 27602

Dear Mr. Utley:

The Commission has issued the enclosed Amendments Nos. 101 and 130 to Facility Operating Licenses Nos. DPR-71 and DPR-62 for the Brunswick Steam Electric Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications in response to your submittal of September 12, 1986.

The amendments change the Technical Specifications (TS) to modify Table 3.6.3-1 of TS Section 3/4.6.3 to extend the allowable isolation time for the reactor core isolation cooling system steam isolation valves from 20 seconds to 30 seconds. A similar change was granted for Brunswick 2 on a temporary basis by Amendment No. 126 issued on June 10, 1986.

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

Sincerely,

*[Signature]*  
Ernest D. Sylvester, Project Manager  
BWR Project Directorate #2  
Division of BWR Licensing

Enclosures:

1. Amendment No. 101 to License No. DPR-71
2. Amendment No. 130 to License No. DPR-62
3. Safety Evaluation

cc w/enclosures:  
See next page

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SNorris:	ESylvester	<i>DB auth</i>	<i>DB auth</i>
11/26/86	u/24/86	12/3/86	12/14/86

Mr. E. E. Utley  
Carolina Power & Light Company

Brunswick Steam Electric Plant  
Units 1 and 2

cc:

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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. 101  
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 September 12, 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:

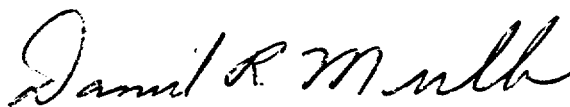
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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 101, 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 its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, reading "Daniel R. Muller".

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

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: December 4, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 101

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

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

Pages

3/4 6-15

TABLE 3.6.3-1 (Continued)PRIMARY CONTAINMENT ISOLATION VALVES

<u>VALVE FUNCTION</u>	<u>VALVE GROUP<sup>1/</sup></u>	<u>ISOLATION TIME (Seconds)</u>
HPCI steam line isolation valves E41-FOO2 E41-FOO3	4	50
HPCI torus suction isolation valves E41-FO42 E41-FO41	4	80
RCIC steam line isolation valves E51-FO07 E51-FO08	5	30
Drywell purge exhaust backup valve CAC-V10	6	15
Containment air purge isolation valve CAC-V15	6	15
Suppression chamber vent valve CAC-V22	6	15
Drywell purge exhaust valve CAC-V23	6	15
Nitrogen makeup and inerting inlet valve CAC-V4	6	15
Suppression chamber inerting inlet valve CAC-V5	6	15



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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 130  
License No. DPR-62

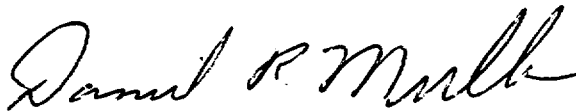
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Carolina Power & Light Company (the licensee) dated September 12, 1986 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's 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-62 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 130, 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 its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "Daniel R. Muller".

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

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: December 4, 1986



ATTACHMENT TO LICENSE AMENDMENT NO. 130

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

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

Pages

3/4 6-15

TABLE 3.6.3-1 (Continued)

PRIMARY CONTAINMENT ISOLATION VALVES

<u>VALVE FUNCTION</u>	<u>VALVE GROUP<sup>1/</sup></u>	<u>ISOLATION TIME (Seconds)</u>
HPCI steam line isolation valves E41-F002 E41-F003	4	50
HPCI torus suction isolation valves E41-F042 E41-F041	4	80
RCIC steam line isolation valves E51-F007 E51-F008	5	30
Drywell purge exhaust backup valve CAC-V10	6	15
Containment air purge isolation valve CAC-V15	6	15
Suppression chamber vent valve CAC-V22	6	15
Drywell purge exhaust valve CAC-V23	6	15

BRUNSWICK - UNIT 2

3/4 6-15

Amendment No. 118, 128,  
129, 130



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 101 TO FACILITY OPERATING LICENSE NO. DPR-71  
AND AMENDMENT NO. 130 TO FACILITY OPERATING LICENSE NO. DPR-62  
CAROLINA POWER & LIGHT COMPANY  
BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2  
DOCKETS NOS. 50-324 AND 50-325

1.0 INTRODUCTION

The licensee, Carolina Power & Light Company, in its submittal dated September 12, 1986, proposed to amend Appendix A, Technical Specification to Facility Operating Licenses DPR-71 and DPR-62. The proposed revision to Table 3.6.3-1 of Section 3/4.6.3 changes the allowable isolation time for the RCIC steam line isolation valves from 20 seconds to 30 seconds. Amendment No. 126 for Brunswick-2, issued on June 10, 1986, granted a similar change on a temporary basis.

2.0 EVALUATION

The licensee's submittal dated September 12, 1986, states that the limiting pipe break for equipment qualification purposes is a break in the 10 inch High Pressure Coolant Injection (HPCI) steam line. The maximum acceptable valve closure time, as specified in the plant technical specifications, is 50 seconds. The Reactor Core Isolation Cooling (RCIC) system steam line passes through the same areas as the HPCI steam line. The RCIC steam line is a three inch line and has a maximum acceptable valve closure time, as specified in the plant Technical Specifications of 20 seconds.

The RCIC steam line isolation valves historically have closed between 18 and 20 seconds at Brunswick Units 1 and 2. In order to provide some margin between the historical operating experience and the Technical Specification limit so as to reduce unnecessary maintenance, the licensee has proposed changing the maximum acceptable valve closure time for the RCIC steam line isolation valves. The change is from 20 seconds to 30 seconds in the Technical Specifications for Units 1 and 2.

The amount of steam lost through a three inch line in 30 seconds is significantly less than through a 10 inch HPCI line in 50 seconds, and the HPCI steamline break is the limiting line break for sub-compartment environmental conditions. The staff evaluated the radiological consequences of changing the RCIC isolation time. The design basis accident dose estimates at the site boundary are based on a 24-inch main steam line break for 10.5 seconds isolation time. The coolant loss in this accident is significantly larger than a ruptured 10-inch HPCI line for 50 seconds or a ruptured three inch RCIC line for 30 seconds.

The dose estimates for the main steam line break accident are within the 10 CFR part 100 guideline values. Therefore, from the radiological point of view, changing the of RCIC isolation time from 20 seconds to 30 seconds is acceptable.

Consideration also has been given to the effects this change would have on the consequences of a break on the water side of the RCIC system. The licensee has determined that the proposed change has no effect on this event because the RCIC containment isolation valves are not designed to isolate on a water line break.

There is no concern with regard to increased piping forces resulting from changing the maximum allowable RCIC isolation time from 20 to 30 seconds because maximum flow through the line is reached within seconds of a steam line rupture. In addition, these valves close slowly, gradually throttling back the steam flow. Therefore, forces analogous to those associated with a water hammer event cannot occur.

On the basis of the above evaluation regarding changing the maximum allowable RCIC isolation time from 20 to 30 seconds, the staff concludes that the proposed Technical Specification revision is acceptable.

### 3.0 ENVIRONMENTAL CONSIDERATIONS

The amendments change 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 amendments involve 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 published a proposed finding that the amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendments meet 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 amendments.

### 4.0 CONCLUSION

We have has 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: A. Chu  
J. Ridgely

Dated: December 4, 1986