

March 22, 1978

Docket No. 50-261

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Carolina Power & Light Company  
 ATTN: Mr. J. A. Jones  
 Senior Vice President  
 336 Fayetteville Street  
 Raleigh, North Carolina 27602

Gentlemen:

The Commission has issued the enclosed Amendment No. 32 to Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant, Unit No. 2. The amendment consists of changes to the Technical Specifications in response to your application dated September 9, 1977.

This amendment reduces the allowable pressurizer heatup rate from 200°F per hour to 100°F per hour. We have found it necessary to make certain changes in the proposed revised Technical Specifications. These changes were discussed with and accepted by your staff.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

/s/

A. Schwencer, Chief  
 Operating Reactors Branch #1  
 Division of Operating Reactors

Enclosures:

1. Amendment No. 32 to DPR-23
2. Safety Evaluation
3. Notice

cc w/encl:  
 See next page

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

March 22, 1978

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Carolina Power & Light Company  
ATTN: Mr. J. A. Jones  
Senior Vice President  
336 Fayetteville Street  
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Sincerely,

A handwritten signature in cursive script, appearing to read "A. Schwencer".

A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

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2. Safety Evaluation
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cc w/encl:  
See next page

cc: G. F. Trowbridge, Esquire  
Shaw, Pittman, Potts & Trowbridge  
1800 M Street, NW  
Washington, D.C. 20036

Hartsville Memorial Library  
Home and Fifth Avenues  
Hartsville, South Carolina 29550

Mr. McCuen Morrell, Chairman  
Darlington County Board of Supervisors  
County Courthouse  
Darlington, South Carolina 29532

Office of Intergovernmental  
Relations  
116 West Jones Street  
Raleigh, North Carolina 27603

Chief, Energy Systems  
Analyses Branch (AW-459)  
Office of Radiation Programs  
U.S. Environmental Protection Agency  
Room 645, East Tower  
401 M Street, SW  
Washington, D.C. 20460

U.S. Environmental Protection Agency  
Region IV Office  
ATTN: EIS COORDINATOR  
345 Courtland Street, NE  
Atlanta, Georgia 30308



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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-261

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 32  
License No. DPR-23

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Carolina Power & Light Company (the licensee) dated September 9, 1977, 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 3.B of Facility License No. DPR-23 is hereby amended to read as follows:

"(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.32 , 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.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 22, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 32

FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

Revise Appendix A as follows:

Remove page 3.1-4 and insert identically numbered revised page 3.1-4.

3.1.2 HEATUP AND COOLDOWN

- 3.1.2.1. The reactor coolant pressure and the system heatup and cooldown rates (with the exception of the pressurizer) shall be limited in accordance with Figure 3.1-1 and Figure 3.1-2, and are as follows:
- a. Over the temperature range from cold shutdown to hot operating conditions, the heatup rate shall not exceed 60°F/hr in any one hour.
  - b. Allowable combinations of pressure and temperature for a specific cooldown rate are below and to the right of the limit lines for that rate as shown on Figure 3.1-2. This rate shall not exceed 100°F/hr in any one hour. The limit lines for cooling rates between those shown in Figure 3.1-2 may be obtained by interpolation.
  - c. Primary System Hydrostatic leak tests may be performed as necessary, provided the temperature limitation as noted on Figure 3.1-1 is not violated. Maximum hydrostatic test pressure should remain below 2350 psia.
- 3.1.2.2 The secondary side of the steam generator must not be pressurized above 200 psig if the temperature of the vessel is below 70°F.
- 3.1.2.3 The pressurizer shall neither exceed a maximum heatup rate of 100°F/hr nor a cooldown rate of 200°F/hr. The spray shall not be used if the temperature difference between the pressurizer and the spray fluid is greater than 320°F.
- 3.1.2.4 Figures 3.1-1 and 3.1-2 shall be updated periodically in accordance with the following criteria and procedures before the calculated exposure of the vessel exceeds the exposure for which the figures apply.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 32 TO FACILITY LICENSE NO. DPR-23

CAROLINA POWER & LIGHT COMPANY

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2

DOCKET NO. 50-261

Introduction

By letter dated September 9, 1978, Carolina Power & Light Company (the licensee) requested amendment of the Technical Specifications appended to Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant, Unit No. 2 (Robinson-2). The amendment would reduce the maximum pressurizer heatup rate from 200°F per hour to 100°F per hour. We have made certain changes in the proposed wording of the revised Technical Specification. These have been discussed with and agreed to by the licensee.

Background

In August 1977, the licensee was advised by the Westinghouse Electric Corporation (the reactor vendor for Robinson-2) that the Westinghouse document used as a basis for developing the Robinson-2 Technical Specifications contained an error with respect to the maximum allowable pressurizer heatup rate. Because of this error, the licensee determined that the Robinson-2 Technical Specifications contained a limit of 200°F per hour on the rate of heatup of the pressurizer, whereas the correct limit should have been 100°F per hour. The licensee also determined that the present limiting rate for pressurizer cooldown of 200°F per hour remains correct. The requested amendment would correct the error in the pressurizer heatup rate limit. In addition to the request for amendment, the licensee submitted by letter dated August 29, 1977, a Licensee Event Report on this subject, and by letter dated December 8, 1977, a report that a heatup rate of 100°F per hour had not been exceeded during the operating life of the facility. This operating experience is described in further detail below.

### Evaluation

The basis for the present heatup rate limit of 200°F per hour was Westinghouse Electric Corporation Report WCAP-7924, dated July 1972. As noted above, Westinghouse pressurizers have been designed for a heatup rate of 100°F per hour and a cooldown rate of 200°F per hour. These values were specified in the design specifications for these vessels and were used as the basis for the fatigue and stress analyses required by Section III of the ASME Code. We therefore conclude that the limiting heatup rate should be 100°F per hour and the limiting cooldown rate should be 200°F per hour. We further conclude that the proposed reduction in the heatup rate limit is necessary to maintain thermal stresses in the pressurizer to allowable levels.

Because the current Technical Specification provision authorized higher rates of pressurizer heatup than the correct limit, the question arose as to whether the correct limit of 100°F per hour has been exceeded in the past. Discussions with Westinghouse indicate that this is unlikely. This is because system capabilities and Technical Specification limits on the rate of reactor coolant system heatup and pressurization effectively preclude pressurizer heatup rates in excess of 50°F to 75°F per hour. Nevertheless, to confirm that this has been the experience at Robinson-2, we requested by letter dated October 20, 1977, that the licensee review all of his applicable operating records to determine if the limiting heatup rate of 100°F per hour had ever been exceeded. By letter dated December 8, 1977, the licensee reported that his review revealed no instances when the rate of 100°F per hour had been exceeded. Accordingly, we conclude that the only action required for Robinson-2 is modification of the Technical Specifications to reduce the limiting pressurizer heatup rate from 200°F per hour to 100°F per hour.

We have made minor wording changes in the revised Technical Specifications submitted by the licensee. Those changes have been discussed with and accepted by the licensee.

### Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: March 22, 1978

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-261

CAROLINA POWER & LIGHT COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 32 to Facility Operating License No. DPR-23 issued to Carolina Power & Light Company, which revised Technical Specifications for operation of the H. B. Robinson Steam Electric Plant, Unit No. 2 located in Darlington County, Hartsville, South Carolina. This amendment is effective as of the date of issuance.

This amendment reduces the allowable pressurizer heatup rate from 200°F per hour to 100°F per hour. This change corrects the heatup rate to the value specified in the design specifications for these vessels which is used as the basis for the fatigue and stress analyses required by Section III of the ASME Code.

The application for the amendment complies with the standards and requirements of the Atomic Energy of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant

to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated September 9, 1977, (2) Amendment No. 32 to License No. DPR-23, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C. and at the Hartsville Memorial Library, Home and Fifth Avenues, Hartsville, South Carolina 29550. A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda , Maryland , this 22nd day of March 1978.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors