

Mr. J. S. Keenan  
 Vice President  
 Carolina Power & Light Company  
 Brunswick Steam Electric Plant  
 Post Office Box 10429  
 Southport, North Carolina 28461

March 1, 2000

SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1 - ISSUANCE OF  
 AMENDMENT REVISING REACTOR CORE SAFETY LIMITS  
 (TAC NO. MA6668)

Dear Mr. Keenan:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 207 to Facility Operating License No. DPR-71 for the Brunswick Steam Electric Plant, Unit 1. The amendment changes the Technical Specifications (TS) in response to your submittal dated September 28, 1999. The amendment revises TS 2.1.1.2, "Reactor Core Safety Limits," and TS 5.6.5, "Core Operating Limits Report," by removing safety limit restrictions which are no longer applicable.

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,

/RA/

Allen Hansen, Project Manager, Section 2  
 Project Directorate II  
 Division of Licensing Project Management  
 Office of Nuclear Reactor Regulation

Docket No. 50-325

Enclosures:

1. Amendment No. 207 to License No. DPR-71
2. Safety Evaluation

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cc w/enclosures:  
 See next page

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\* No substantive changes to SE

Org	PM:PDII-2	LA:PDII-2	SC:SRXB	OGC <sup>NLD</sup> RMW	SC:PDII-2
Name	AHansen <i>AD</i>	EDunnington <i>ED</i>	RCaruso *	R Weisman	RCorreia <i>6</i>
Date	1/3/00	1/27/00	1/19/00	Feb/17/00	3/1/00
Copy	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

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DF01

AMENDMENT NO. 207 TO FACILITY OPERATING LICENSE NO. DPR-71 - BRUNSWICK,  
UNIT 1

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

March 1, 2000

Mr. J. S. Keenan  
Vice President  
Carolina Power & Light Company  
Brunswick Steam Electric Plant  
Post Office Box 10429  
Southport, North Carolina 28461

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Sincerely,

A handwritten signature in black ink, appearing to read "Allen Hansen".

Allen Hansen, Project Manager, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-325

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See next page



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

CAROLINA POWER & LIGHT COMPANY, et al.

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 207  
License No. DPR-71

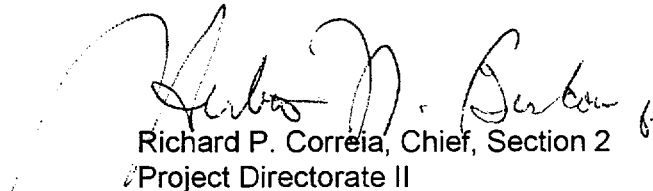
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by Carolina Power & Light Company (the licensee), dated September 28, 1999, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 207, are hereby incorporated in the license. Carolina Power & Light Company 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 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard P. Correia, Chief, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 1, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 207

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove Page

2.0-1  
5.0-19

Insert Page

2.0-1  
5.0-19

## 2.0 SAFETY LIMITS (SLs)

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### 2.1 SLs

#### 2.1.1 Reactor Core SLs

2.1.1.1 With the reactor steam dome pressure < 785 psig or core flow < 10% rated core flow:

THERMAL POWER shall be  $\leq$  25% RTP.

2.1.1.2 With the reactor steam dome pressure  $\geq$  785 psig and core flow  $\geq$  10% rated core flow:

MCPR shall be  $\geq$  1.09 for two recirculation loop operation or  $\geq$  1.10 for single recirculation loop operation.

2.1.1.3 Reactor vessel water level shall be greater than the top of active irradiated fuel.

#### 2.1.2 Reactor Coolant System Pressure SL

Reactor steam dome pressure shall be  $\leq$  1325 psig.

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### 2.2 SL Violations

With any SL violation, the following actions shall be completed within 2 hours:

2.2.1 Restore compliance with all SLs; and

2.2.2 Insert all insertable control rods.

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5.6 Reporting Requirements (continued)

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5.6.5 CORE OPERATING LIMITS REPORT (COLR)

- a. Core operating limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the COLR for the following:
1. The AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR) for Specification 3.2.1;
  2. The MINIMUM CRITICAL POWER RATIO (MCPR) for Specification 3.2.2;
  3. The Allowable Value for Function 2.b, APRM Flow Biased Simulated Thermal Power—High, for Specification 3.3.1.1; and
  4. The Allowable Values and power range setpoints for Rod Block Monitor Upscale Functions for Specification 3.3.2.1.
- b. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following documents:
1. NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel" (latest approved version).
  2. NEDO-32339-A, "Reactor Stability Long Term Solution: Enhanced Option I-A," July 1995.
  3. NEDC-32339-P Supplement 1, "Reactor Stability Long Term Solution: Enhanced Option I-A ODYSY Computer Code," March 1994 (Approved in NRC Safety Evaluation dated January 4, 1996).
  4. NEDO-32339 Supplement 3, "Reactor Stability Long Term Solution: Enhanced Option I-A Flow Mapping Methodology," August 1995 (Approved in NRC Safety Evaluation dated May 28, 1996).

(continued)





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 207 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 September 28, 1999, the Carolina Power & Light Company (the licensee) submitted a request for changes to the Brunswick Steam Electric Plant, Unit 1, Technical Specifications (TS). The requested changes would revise TS 2.1.1.2, "Reactor Core Safety Limits," and TS 5.6.5, "Core Operating Limits Report," by removing safety limit restrictions which are no longer applicable.

2.0 EVALUATION

2.1 TS 2.1.1.2, "Reactor Core Safety Limits"

The licensee proposed to remove the note which states that the minimum critical power ratio (MCPR) safety limit values are only applicable for Cycle 12 operation.

The staff has reviewed the justification for removing the cycle-specific note for Cycle 12 operation. The proposed TS change is acceptable because the staff has approved the methodologies for cycle-specific MCPR safety limit calculations described in General Electric Nuclear Energy (GENE) Report NEDC-32601P and Amendment 25 to GENE Report NEDE-24011-P-A, and the licensee has performed its analyses based on these approved methodologies.

2.2 TS 5.6.5.b.5, "Core Operating Limits Report (COLR)"

The licensee proposed to delete Reference 5.6.5.b.5:

5. NRC Safety Evaluation for Brunswick Unit 1 Amendment No. 194.

The staff has reviewed the proposed change and found it acceptable because the cycle-specific MCPR safety limit values for BSEP Unit 1 were analyzed based on approved methodologies described in NEDC-32601P and Amendment 25 to NEDE-24011-P-A, which describes the latest version of Reference 5.6.5.b.1 (NEDE-24011-P-A). Since Reference 5.6.5.b.5 is no longer in use, it may be deleted.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of North Carolina official was notified of the proposed issuance of the amendment. The State official had no comments.

### 4.0 ENVIRONMENTAL CONSIDERATION

The 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 NRC 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 is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (64 FR 59797). Accordingly, the 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.

### 5.0 CONCLUSION

The Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) 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. Huang

Date: March 1, 2000

Mr. J. S. Keenan  
Carolina Power & Light Company

Brunswick Steam Electric Plant  
Units 1 and 2

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