

December 12, 1994

Mr. C. S. Hinnant, Vice President
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant,
Unit No. 2
Post Office Box 790
Hartsville, South Carolina 29551-0790

SUBJECT: ISSUANCE OF AMENDMENT NO.154 TO FACILITY OPERATING LICENSE NO.
DPR-23 REGARDING THE CORE OPERATING LIMITS REPORT METHODOLOGY
REFERENCE - H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 (TAC
NO. M90669)

Dear Mr. Hinnant:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 154 to Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR2). This amendment changes the Technical Specifications (TS) in response to your request dated October 7, 1994.

The amendment revises the introduction to TS Section 6.9.3.3 to require the approved revision number for the referenced analytical methods to be listed in the Core Operating Limits Report. The methodology referenced in 6.9.3.3.b.f (XN-NF-82-49(A)) has been updated to clarify that all supplements are included. New methodologies ANF-89-151(A) and EMF-92-081(A) will be added to TS Section 6.9.3.3.b.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

Original signed by:

Brenda L. Mozafari, Project Manager
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-261

Enclosures: 1. Amendment No. 154 to DPR-23
2. Safety Evaluation

cc w/enclosures: See next page

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*See previous concurrence

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

December 12, 1994

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Carolina Power & Light Company
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The amendment revises the introduction to TS Section 6.9.3.3 to require the approved revision number for the referenced analytical methods to be listed in the Core Operating Limits Report. The methodology referenced in 6.9.3.3.b.f (XN-NF-82-49(A)) has been updated to clarify that all supplements are included. New methodologies ANF-89-151(A) and EMF-92-081(A) will be added to TS Section 6.9.3.3.b.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

A handwritten signature in black ink, reading "Brenda Mozafari", is written over a horizontal line.

Brenda L. Mozafari, Project Manager
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-261

Enclosures: 1. Amendment No. 154 to DPR-23
2. Safety Evaluation

cc w/enclosures: See next page

Mr. C. S. Hinnant
Carolina Power & Light Company

H. B. Robinson Steam Electric
Plant, Unit No. 2

cc:

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AMENDMENT NO. 154 TO FACILITY OPERATING LICENSE NO. DPR-23 - H. B. ROBINSON
STEAM ELECTRIC PLANT, UNIT NO. 2

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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-261

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

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 154
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 October 7, 1994, 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 Operating License No. DPR-23 is hereby amended to read as follows:

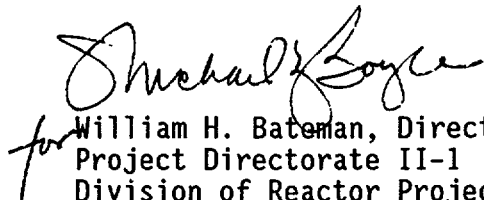
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B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 154 , 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 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION


for William H. Bateman, Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: December 12, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 154

FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

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

Remove Pages

6.9-13
6.9-14
6.9-18

Insert Pages

6.9-13
6.9-14
6.9-18

6.9.3.3.b The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC. The approved revision number shall be identified in the COLR.

- a) XN-75-27(A), latest Revision and Supplements, "Exxon Nuclear Neutronics Design Methods for Pressurized Water Reactors," Exxon Nuclear Company, Richland WA 99352.

(Methodology for Specifications 3.1.3.1 - Moderator Temperature Coefficient, 3.10.1.2 - Shutdown Bank Insertion Limits, 3.10.1.3 and 3.10.1.4 - Control Bank Insertion Limits, 3.10.2.1, 3.10.2.2, 3.10.2.2.1, 3.10.2.2.2 - Heat Flux Hot Channel Factor, 3.10.2.1 - Nuclear Enthalpy Rise Hot Channel Factor, and 3.10.2.2, 3.10.2.2.1, 3.10.2.2.2, 3.10.2.7, 3.10.2.9, and 3.10.2.11 - Axial Flux Difference)

- b) XN-NF-84-73(P), latest Revision and Supplements, "Exxon Nuclear Methodology for Pressurized Water Reactors: Analysis of Chapter 15 Events," Exxon Nuclear Corporation, Richland WA 99352 (Accepted by the NRC for H. B. Robinson Unit 2 in the Safety Evaluation by the Office of Nuclear Reactor Regulation related to Amendment No. 87 to Facility License No. DPR-23, 7 Nov. 84).

(Methodology for Specifications 3.1.3.1 - Moderator Temperature Coefficient, 3.10.1.2 - Shutdown Bank Insertion Limits, 3.10.1.3 and 3.10.1.4 - Control Bank Insertion Limits, 3.10.2.1, 3.10.2.2, 3.10.2.2.1, 3.10.2.2.2 - Heat Flux Hot Channel Factor, 3.10.2.1 - Nuclear Enthalpy Rise Hot Channel Factor, and 3.10.2.2, 3.10.2.2.1, 3.10.2.2.2, 3.10.2.7, 3.10.2.9, and 3.10.2.11 - Axial Flux Difference)

- c) XN-NF-82-21(A), latest Revision, "Application of Exxon Nuclear Company PWR Thermal Margin Methodology to Mixed Core Configurations," Exxon Nuclear Company, Richland WA 99352.

(Methodology for Specification 3.10.2.1 - Nuclear Enthalpy Rise Hot Channel Factor)

- d) XN-NF-83(A), latest Revision and Supplements, "Steamline Break Methodology for PWR's," Exxon Nuclear Corporation, Richland, WA 99352.

(Methodology for Specifications 3.1.3.1 - Moderator Temperature Coefficient, 3.10.1.2 - Shutdown Bank Insertion Limits, 3.10.1.3 and 3.10.1.4 - Control Bank Insertion Limits, 3.10.2.1 - Nuclear Enthalpy Rise Hot Channel Factor.)

- e) XN-75-32(A), Supplements 1, 2, 3, 4, "Computational Procedure for Evaluating Rod Bow," Exxon Nuclear Company, Richland WA 99352.

(Methodology for Specifications 3.10.2.1, 3.10.2.2, 3.10.2.2.1, 3.10.2.2.2 - Heat Flux Hot Channel Factor, 3.10.2.1 - Nuclear Enthalpy Rise Hot Channel Factor)

- f) XN-NF-82-49(A), latest Revision and Supplements, "Exxon Nuclear Company Evaluation Model EXEM PWR Small Break Model," Exxon Nuclear Company, Richland WA 99352.

(Methodology for Specifications 3.10.2.1, 3.10.2.2, 3.10.2.2.1, 3.10.2.2.2 - Heat Flux Hot Channel Factor, 3.10.2.1 - Nuclear Enthalpy Rise Hot Channel Factor, and 3.10.2.2, 3.10.2.2.1, 3.10.2.2.2, 3.10.2.7, 3.10.2.9, and 3.10.2.11 - Axial Flux Difference)

- g) EXEM PWR Large Break LOCA Evaluation Model as accepted in Letter, D. M. Crutchfield (NRC) to G. N. Ward (ENC), "Safety Evaluation of Exxon Nuclear Company's Large Break ECCS Evaluation Model EXEM/PWR and Acceptance for Referencing of Related Licensing Topical Reports," July 8, 1986.

EXEM PWR LBLOCA Model includes the following references:

XN-NF-82-20(P), latest Revision and Supplements, "Exxon Nuclear Company Evaluation Model EXEM/PWR ECCS Model Updates," Exxon Nuclear Company, Richland WA 99352.

- q) AN 88-133 (P)(A), "Qualification of Advanced Nuclear Fuels' PWR Design Methodology for Rod Burnups of 62 Gwd/MTU." Advanced Nuclear Fuels Corporation, Richland WA 99352, latest revisions and supplements.

(Methodology for Specifications 3.10.2.1, 3.10.2.2, 3.10.2.2.1, 3.10.2.2.2 - Heat Flux Hot Channel Factor, 3.10.2.1 - Nuclear Enthalpy Rise Hot Channel Factor).

- r) ANF-89-151(A), latest Revision and Supplements, "ANF-RELAP Methodology for Pressurized Water Reactors: Analysis of Non-LOCA Chapter 15 Events," Advanced Nuclear Fuels Corporation, Richland WA 99352.

(Methodology for Specifications 3.1.3.1 - Moderator Temperature Coefficient; 3.10.1.2 - Shutdown Bank Insertion Limits; 3.10.1.3 and 3.10.1.4 - Control Bank Insertion Limits; 3.10.2.1, 3.10.2.2, 3.10.2.2.1 and 3.10.2.2.2 - Heat Flux Hot Channel Factor; 3.10.2.1 - Nuclear Enthalpy Rise Hot Channel Factor, and 3.10.2.2, 3.10.2.2.1, 3.10.2.2.2, 3.10.2.7, 3.10.2.9, and 3.10.2.11 - Axial Flux Difference)

- s) EMF-92-081(A), latest Revision and Supplements, "Statistical Setpoint/Transient Methodology for Westinghouse Type Reactors," Siemens Power Corporation - Nuclear Division, Richland, WA 99352

(Methodology for Specifications 3.1.3.1 - Moderator Temperature Coefficient; 3.10.1.2 - Shutdown Bank Insertion Limits; 3.10.1.3 and 3.10.1.4 - Control Bank Insertion Limits; 3.10.2.1, 3.10.2.2, 3.10.2.2.1 and 3.10.2.2.2 - Heat Flux Hot Channel Factor; 3.10.2.1 - Nuclear Enthalpy Rise Hot Channel Factor, and 3.10.2.2, 3.10.2.2.1, 3.10.2.2.2, 3.10.2.7, 3.10.2.9, and 3.10.2.11 - Axial Flux Difference)

6.9.3.3.c The core operating limits shall be determined so that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met.

6.9.3.3.d The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided upon issuance, for each reload cycle, to the Document Control Desk with copies to the Regional Administrator and Resident Inspector.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 154 TO FACILITY OPERATING LICENSE NO. DPR-23
CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261

1.0 INTRODUCTION

By letter dated October 7, 1994, the Carolina Power & Light Company (licensee) submitted a request for changes to the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR2), Technical Specifications (TS). The requested change would revise the introduction to TS Section 6.9.3.3 to require the approved revision number for the referenced analytical methods to be listed in the Core Operating Limits Report (COLR). The methodology referenced in 6.9.3.3.b.f (XN-NF-82-49(A)) will be updated to clarify that all supplements are included. New methodologies ANF-89-151(A) and EMF-92-081(A) will be added to TS Section 6.9.3.3.b..

2.0 EVALUATION

The licensee requested TS changes in accordance with the 10 CFR 50.90 and 10 CFR 2.101. The revised TS were proposed as follows:

(a) TS 6.9.3.3.b

Add the words "the approved revision number shall be identified in the COLR." This change fulfills a commitment made by the licensee in an August 12, 1994, letter in support of Amendment No. 151, dated September 16, 1994.

(b) TS 6.9.3.3.b.f)

Add the words "and supplements" to the methodology referenced in 6.9.3.3.b.f (XN-NF-82-49(A)) to clarify that all supplements are included.

(c) TS 6.9.3.3.b.r)

Add new methodology ANF-89-151(A), latest Revision and Supplements, "ANF-RELAP Methodology for Pressurized Reactors: Analysis of Non-LOCA Chapter 15 Events." Advanced Nuclear Fuels Corporation, Richland, WA 99352.

d) TS 6.9.3.3.b.s)

Add new methodology EMF-92-081(A), latest Revision and Supplements, "Statistical Setpoint/Transient Methodology for Westinghouse Type Reactors." Siemens Power Corporation - Nuclear Division, Richland, WA 99352.

The change to the introductory wording of TS Section 6.9.3.3.b satisfies an administrative commitment and the requirements it adds are administrative in nature. The addition of methodologies to the list of NRC-approved methodologies is an administrative change to reflect the design bases support for numerical values reported in the plant's COLR. No change is made to plant operations as the result of the addition of these methodologies. Therefore, the proposed changes are acceptable.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

This amendment changes recordkeeping, reporting, or administrative procedures or requirements. Accordingly, this action meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in conjunction with the issuance of this 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: B. Mozafari

Date: December 12, 1994