

June 8, 1994

Docket Nos. 50-269, 50-270
and 50-287

Distribution
See attached page

Mr. J. W. Hampton
Vice President, Oconee Site
Duke Power Company
P. O. Box 1439
Seneca, South Carolina 29679

Dear Mr. Hampton:

SUBJECT: ISSUANCE OF AMENDMENTS - OCONEE NUCLEAR STATION, UNITS 1, 2,
AND 3 (TAC NOS. M89150, M89151, AND M89152)

The Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 206, 206, and 203 to Facility Operating Licenses DPR-38, DPR-47, and DPR-55, respectively, for the Oconee Nuclear Station, Units 1, 2, and 3. The amendments consist of changes to the Technical Specifications (TS) in response to your application dated March 23, 1994, as supplemented April 14, May 11, and May 17, 1994.

The amendments revise TS 6.9.2, "Core Operating Limits Report," (COLR) to include a reference to a Duke Power Company Topical Report describing an analytical method for determining the core operating limits and adds a statement that the specific methodology used will be specified in the COLR.

In response to your letter of April 14, 1994, the TS Table of Contents has also been revised to delete reference to Table 4.4-1. This table was removed from the TS by an amendment issued on September 16, 1993.

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

Sincerely,
ORIGINAL SIGNED BY:
Leonard A. Wiens, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 206 to DPR-38
2. Amendment No. 206 to DPR-47
3. Amendment No. 203 to DPR-55
4. Safety Evaluation

cc w/enclosures:
See next page

OFFICE	PDII-3/BA	PDII-3/PM	(A)BC:SRXB	OGC	PDII-8/D
NAME	L. BERRY	L. WIENS	T. COLLINS	OPW	D. MATTHEWS
DATE	5/18/94	5/25/94	5/25/94	5/26/94	6/7/94

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Mr. J. W. Hampton
Duke Power Company

Oconee Nuclear Station

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

June 8, 1994

Docket Nos. 50-269, 50-270
and 50-287

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Vice President, Oconee Site
Duke Power Company
P. O. Box 1439
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A copy of the related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

A handwritten signature in dark ink, appearing to read "A. Wiens".

Leonard A. Wiens, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No.206 to DPR-38
2. Amendment No.206 to DPR-47
3. Amendment No.203 to DPR-55
4. Safety Evaluation

June 8, 1994

OCONEE NUCLEAR STATION, UNIT 1 - AMENDMENT NO. 206 TO DPR-38
OCONEE NUCLEAR STATION, UNIT 2 - AMENDMENT NO. 206 TO DPR-47
OCONEE NUCLEAR STATION, UNIT 3 - AMENDMENT NO. 203 TO DPR 55

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

DUKE POWER COMPANY

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 206
License No. DPR-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 1 (the facility) Facility Operating License No. DPR-38 filed by the Duke Power Company (the licensee) dated March 23, 1994, as supplemented April 14, May 11, and May 17 (two letters), 1994, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Facility Operating License No. DPR-38 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 206, 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 its date of issuance

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: June 8, 1994



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

DUKE POWER COMPANY

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.206
License No. DPR-47

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 2 (the facility) Facility Operating License No. DPR-47 filed by the Duke Power Company (the licensee) dated March 23, 1994, as supplemented April 14, May 11, and May 17 (two letters), 1994, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Facility Operating License No. DPR-47 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 206, 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 its date of issuance

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: June 8, 1994



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

DUKE POWER COMPANY

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 203
License No. DPR-55

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment to the Oconee Nuclear Station, Unit 3 (the facility) Facility Operating License No. DPR-55 filed by the Duke Power Company (the licensee) dated March 23, 1994, as supplemented April 14, May 11, and May 17 (two letters), 1994, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations as 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 set forth in 10 CFR Chapter I;
 - 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 hereby amended by page changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 3.B of Facility Operating License No. DPR-55 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 203, 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 its date of issuance

FOR THE NUCLEAR REGULATORY COMMISSION



David B. Matthews, Director
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Technical Specification
Changes

Date of Issuance: June 8, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 206

FACILITY OPERATING LICENSE NO. DPR-38

DOCKET NO. 50-269

AND

TO LICENSE AMENDMENT NO. 206

FACILITY OPERATING LICENSE NO. DPR-47

DOCKET NO. 50-270

AND

TO LICENSE AMENDMENT NO. 203

FACILITY OPERATING LICENSE NO. DPR-55

DOCKET NO. 50-287

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

Remove Pages

vi

6.9-1

Insert Pages

vi

6.9-1

6.9 CORE OPERATING LIMITS REPORT

Specification

6.9.1 Core operating limits shall be established prior to each reload cycle, or prior to any remaining part of a reload cycle, for the following:

- (1) Axial Power Imbalance Protective Limits and Variable Low RCS Pressure Protective Limits for Specification 2.1.
- (2) Reactor Protective System Trip Setting Limits for the Flux/Flow/Imbalance and Variable Low Reactor Coolant System Pressure trip functions in Specification 2.3.
- (3) Power Dependent Rod Insertion Limits for Specifications 3.1.3.5, 3.1.11, 3.5.2.1.b, 3.5.2.2.d.2.c, 3.5.2.3, and 3.5.2.5.c.
- (4) Concentrated Boric Acid Storage Tank volume and boron concentration for Specification 3.2.2.
- (5) Core Flood Tank boron concentration for Specification 3.3.3.
- (6) Borated Water Storage Tank boron concentration for Specification 3.3.4.
- (7) Quadrant Power Tilt Limits for Specification 3.5.2.4.a, 3.5.2.4.b, 3.5.2.4.d, 3.5.2.4.e, and 3.5.2.4.f.
- (8) Power Imbalance Limits for Specification 3.5.2.6.

and shall be documented in the CORE OPERATING LIMITS REPORTS.

6.9.2 The approved methods used to determine the core operating limits given in Technical Specification 6.9.1 are specified in the CORE OPERATING LIMITS REPORT. The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically:

- (1) DPC-NE-1002A, Reload Design Methodology II, October 1985.
- (2) NFS-1001A, Reload Design Methodology, April 1984.
- (3) DPC-NE-2003A, Oconee Nuclear Station Core Thermal Hydraulic Methodology Using VIPRE-01, July 1989.
- (4) DPC-NE-1004A, Nuclear Design Methodology Using CASMO-3/SIMULATE-3P, November 1992.

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

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

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 206 TO FACILITY OPERATING LICENSE DPR-38
AMENDMENT NO. 206 TO FACILITY OPERATING LICENSE DPR-47
AND AMENDMENT NO. 203 TO FACILITY OPERATING LICENSE DPR-55

DUKE POWER COMPANY

OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3

DOCKET NOS. 50-269, 50-270, AND 50-287

1.0 INTRODUCTION

By letter dated March 23, 1994 as supplemented by letters dated April 14, May 11, and May 17 (two letters), 1994, Duke Power Company, et al. (the licensee or DPC) submitted requests for changes to the Oconee Nuclear Station, Units 1, 2, and 3, Technical Specifications (TS). The change requested by the letter dated March 23, 1994, would revise TS 6.9.2, "Core Operating Limits Report" to include a reference to a DPC Topical Report describing an analytical method for determining the core operating limits. Specifically, the amendments would add: "(4) DPC-NE-1004A, Nuclear Design Methodology Using CASMO-3/SIMULATE-3P," to TS 6.9.2. The April 14, 1994, letter requested the deletion of the reference to Table 4.4-1 from the TS Table of Contents. This table was removed from the TS by an amendment issued on September 16, 1993.

The letter of May 11, 1994, added the statement: "The approved methods to determine the core operating limits given in Technical Specification 6.9.1 are specified in the CORE OPERATING LIMITS REPORT" to TS 6.9.2. The May 11 and May 17, 1994, letters provided information regarding DPC's transition from the EPRI-NODE-P based methodology to the SIMULATE methodology to determine core operating limits. Revision 1 to the Core Operating Limits Report for Oconee Unit 1, Cycle 16, was submitted by letter dated May 17, 1994, in which the methodology used to calculate each cycle-specific parameter for Oconee 1 Cycle 16 is specified.

The letters of April 14, May 11, and May 17, 1994, provided additional information that did not change the scope of the March 23, 1994, application and the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The NRC staff reviewed Topical Report DPC-NE-1004A and concluded in a Safety Evaluation dated November 23, 1992, that the described nuclear design

methodology using CASMO-3/SIMULATE-3P is acceptable for performing reload analyses for the DPC B&W 177-assembly cores in the Oconee units. The addition of this approved nuclear design methodology to those referenced in TS 6.9.2 provides an additional method for determining core operating limits such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met.

The revision to TS 6.9.2 requested in the licensee's letter of May 11, 1994, adds a statement that the approved methods used to determine core operating limits are specified in the Core Operating Limits Report (COLR). This revision would serve to identify the approved methodology used to determine each core operating limit. The letters of May 11 and May 17, 1994, provide information on DPC's transition from the use of EPRI-NODE-P to the use of SIMULATE nuclear design methodology. In these letters, DPC states its intent to calculate future operating limits using the SIMULATE methodology and its intent not to apply mixed EPRI-NODE-P/SIMULATE methodology to future designs. Future COLRs will also specify the methods used to calculate the operating limits.

On the basis of its review of the licensee's submittals summarized above, the NRC staff finds that the revision to TS 6.9.2 requested in the licensee's letters of March 23 and May 11, 1994, are acceptable. The addition of Topical Report DPC-NE-1004A to the references listed in TS 6.9.2 and the addition of the statement that the methodology used to determine each core operating limit will be specified in the COLR is acceptable because the Topical Report has been approved by the NRC for performing reload analyses for the Oconee units and the COLR will identify unequivocally the approved methodology used to determine each core operating limit.

In the period of transition from the EPRI-NODE-P methodology to the SIMULATE methodology, the staff finds that the singular use of EPRI-NODE-P methodology to determine the shutdown margin-restricted limits for Oconee 1, Cycle 16, while all of the other core operating limits were based on SIMULATE methodology, as specified in Revision 1 to the COLR, is acceptable because (1) the EPRI-NODE-P methodology has been approved for calculating the shutdown margin-restricted limits, (2) the resulting values appeared satisfactory and were in the expected range, and (3) the methodology used for each limit would be identified in the COLR.

The licensee's request in the letter of April 14, 1994, to delete the reference to Table 4.4-1 from the TS Table of Contents is acceptable because this table was removed from the TS by an amendment issued on September 16, 1993.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements 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 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 is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (59 FR 22007 dated April 28, 1994). 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.

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

Principal Contributor: S.S. Kirslis

Date: June 8, 1994