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

June 23, 1988

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

Mr. H. B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

SUBJECT: ISSUANCE OF AMENDMENT NOS. 168, 168, AND 165 TO FACILITY OPERATING LICENSES DPR-38, DPR-47, and DPR-55 - OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3 (TACS 65768/65769/65770)

The Nuclear Regulatory Commission has issued the enclosed Amendment Nos. 168, 168, and 165 to Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55 for the Oconee Nuclear Station, Units 1, 2, and 3. These amendments consist of changes to the Station's licenses in response to your request dated June 1, 1987, as supplemented November 24, 1987.

The amendments revise the Technical Specifications to update the LOCA-Limited Maximum Allowable Linear Heat Rates reflecting the effects of the NUREG-0630 models and the analytical results with use of the FLECSET correlation. By a January 22, 1988 letter, you state that you are supplementing the June 1, 1987 request. As we have discussed with your staff, we view these two letters as separate issues. Therefore with these amendments, we have approved the June 1987 submittal and are continuing our review of your January 1988 submittal. After completing our review, we will respond to the January 1988 letter by separate correspondence.

A copy of our Safety Evaluation is also enclosed. Notice of issuance of the enclosed amendments will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

Helen Nicolaros Pastis

Helen N. Pastis, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II

Enclosures:
1. Amendment No. 168to DPR-38
2. Amendment No. 168to DPR-47
3. Amendment No. 165to DPR-55
4. Safety Evaluation

cc w/enclosures:
See next page

Mr. H. B. Tucker
Duke Power Company

Oconee Nuclear Station
Units Nos. 1, 2 and 3

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Honorable James M. Phinney
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DUKE POWER COMPANY

DOCKET NO. 50-269

OCONEE NUCLEAR STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 168
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 June 1, 1987, as supplemented November 24, 1987, 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 set forth in 10 CFR Chapter I;

   D. The issuance of this license 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 attachments to this license amendment, and Paragraph 3.B. of Facility Operating License No. DPR-38 is hereby amended to read as follows:

2.B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 168, 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

Attachment:
Technical Specification
Changes

Date of Issuance: June 23, 1988

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

DUKE POWER COMPANY

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 168
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 June 1, 1987, as supplemented November 24, 1987, 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 set forth in 10 CFR Chapter I;

   D. The issuance of this license 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 attachments to this license amendment, and Paragraph 3.B. of Facility Operating License No. DPR-47 is hereby amended to read as follows:

3.B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 168, 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

Attachment:
Technical Specification
Changes

Date of Issuance: June 23, 1988

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

DUKE POWER COMPANY

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 165
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 June 1, 1987, as supplemented November 24, 1987, 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 set forth in 10 CFR Chapter I;

   D. The issuance of this license 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 attachments to this license amendment, and Paragraph 3.B. of Facility Operating License No. DPR-55 is hereby amended to read as follows:

3.B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 165, 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

Attachment:
Technical Specification
Changes

Date of Issuance: June 23, 1988

ATTACHMENT TO LICENSE AMENDMENT NO. 168

FACILITY OPERATING LICENSE NO. DPR-38

DOCKET NO. 50-269

AND

TO LICENSE AMENDMENT NO. 168

FACILITY OPERATING LICENSE NO. DPR-47

DOCKET NO. 50-270

AND

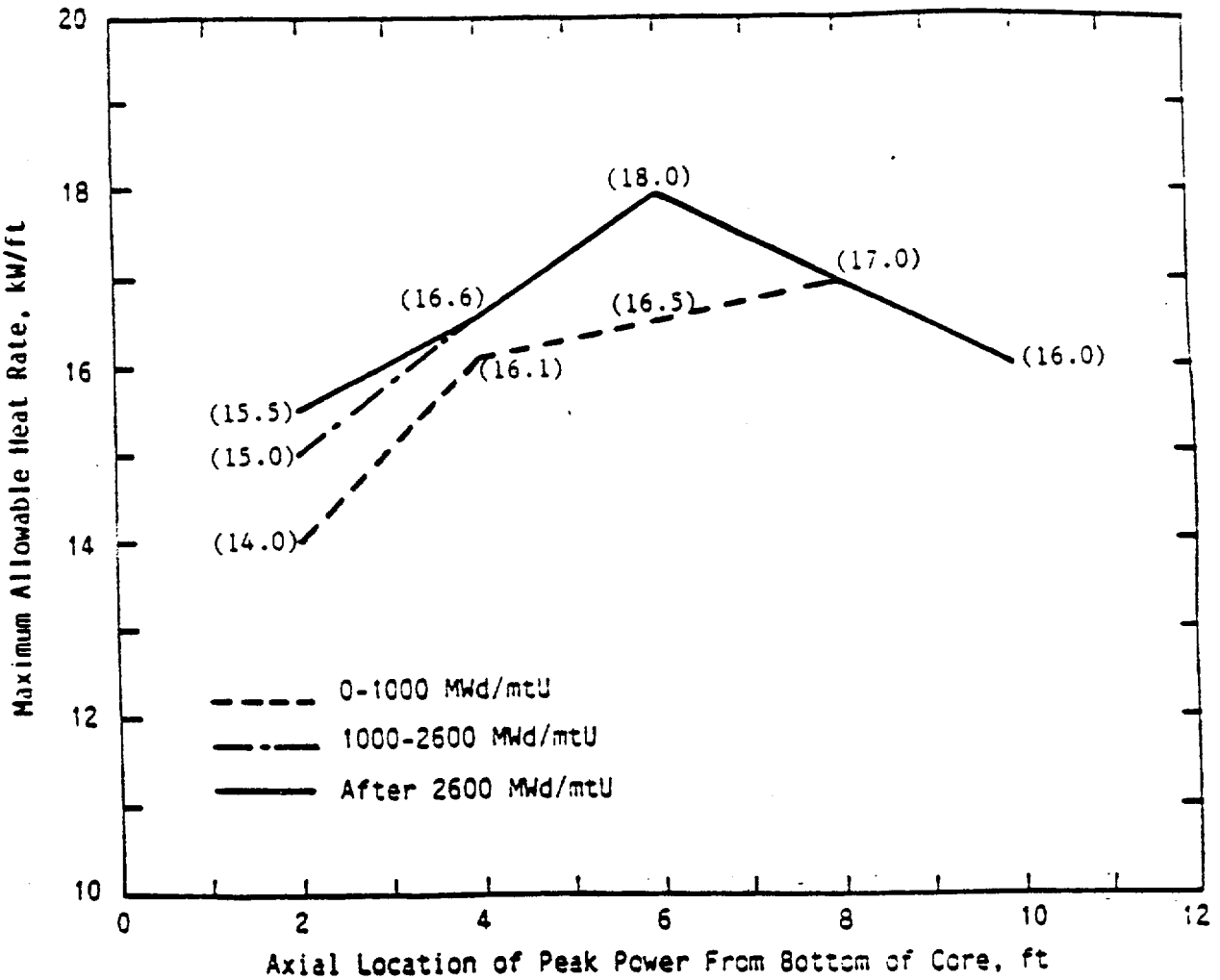
TO LICENSE AMENDMENT NO. 165

FACILITY OPERATING LICENSE NO. DPR-55

DOCKET NO. 50-287

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

Remove Page	Insert Page
3.5-30	3.5-30



LOCA-Limited Maximum Allowable Linear Heat

Oconee Nuclear Station
Figure 3.5.2-15

Amendment No. 168 (Unit 1)
Amendment No. 168 (Unit 2)
Amendment No. 165 (Unit 3)

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 168 TO FACILITY OPERATING LICENSE DPR-38

AMENDMENT NO. 168 TO FACILITY OPERATING LICENSE DPR-47

AMENDMENT NO. 165 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 June 1, 1987, and supplemented on November 24, 1987 (References 1 and 2) Duke Power Company (the licensee) requested amendments to the Technical Specifications (TS) of Facility Operating License Nos. DPR-38, DPR-47 and DPR-55 for the Oconee Nuclear Station, Units 1, 2, and 3. These amendments would revise the Station's common TS.

The proposed amendments would revise the LOCA-Limited Maximum Allowable Linear Heat Rate (Figure 3.5.2-16). These revisions would reflect NUREG-0630, Cladding Swelling and Rupture Models for LOCA Analysis and Babcock and Wilcox (B&W) Owners Group Topical Report BAW-1915P, Bounding Analytical Assessment of NUREG-0630 models of LOCA kilowatt-per-foot limits with use of FLECSET.

A generic bounding assessment of the impact of NUREG-0630 on loss-of-coolant accident (LOCA) linear heat rate (LHR) limits has been performed for all core elevations consistent with B&W Emergency Core Cooling System (ECCS) Evaluation Model methods. The impact of NUREG-0630 was a reduction in LOCA LHR limits at the two-, four- and six-foot core elevations because of rupture time dependency of these elevations.

In an effort to reduce the NUREG-0630 impact, the B&W Owners Group has incorporated the benefits of using compensating models. B&W has evaluated the FLECHT-SEASET heat transfer correlation and modified it for B&W plant application. The modified correlation is modeled in the computer program "FLECSET."

BAW-1915P and BAW-10104, Revision 5 have been reviewed by the Commission and approved on October 5 and December 27, 1987 (References 3 and 4). These reports provide the technical basis for these revisions. The models addressed in these reports are used to determine the LOCA-Limited Maximum Allowable LHR. The proposed revision to Figure 3.5.2-16 reflects application of the new models.

The previously analyzed accident that is pertinent to this revision would be a large break loss-of-coolant accident. FLECSET is a B&W modified version of the FLECHT-SEASET reflood heat transfer correlation. Reflood heat transfer coefficients versus time were calculated using FLECSET and compared to those calculated by the present large break LOCA Evaluation Model (BAW-10104, Revision 3). The FLECSET reflood heat transfer coefficients at the two-foot core elevation are higher than those calculated by the current Evaluation Model during the early stage of reflooding. These higher reflood heat transfer coefficients allow the peak cladding temperature to turn over earlier in the transient.

2.0 EVALUATION

The proposed TS revisions are to update the LOCA-Limited Maximum Allowable Linear Heat Rates reflecting the effects of the NUREG-0630 models and the analytical results with use of the FLECSET correlation (Reference 5). We have reviewed the proposed TS changes and find that the proposed LOCA-Limited Maximum Allowable Linear Heat Rates are consistent with the calculated results presented in Table 3.2 of Reference 5, which had previously been approved by the Commission (Ref. 3) for licensing applications for the B&W lowered loop 15x15 fuel assembly plants including the Oconee plants. B&W performed the large break LOCA analyses to support the request of the TS revisions by using the modified ECCS Evaluation Model as described in the B&W topical report BAW-10104, Revision 5. On December 27, 1987, we generically approved the topical report BAW-10104, Revision 5. The staff also found the plant specific application of the B&W topical report BAW-10104, Revision 5 to the Oconee plants to be adequate and acceptable. Therefore, we conclude that the proposed TS revisions are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. We have 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 these 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 these amendments.

4.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (53 FR 17787) on May 18, 1988, and consulted with the state of South Carolina. No public comments were received, and the state of South Carolina did not have any comments.

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

5.0 REFERENCES

1. Letter from H. Tucker (Duke Power Co.) to NRC, dated June 1, 1987.

2. Letter from H. Tucker (Duke Power Co.) to NRC, dated November 24, 1987.

3. Letter from A. Thadani (NRC) to C. Turk (B&WOG), "Acceptance for Referencing Topical Report BAW-1915 - Bounding Analytical Assessment of NUREG-0630 Models on LOCA kw/ft Limits With Use of FLECSET," October 5, 1987.

4. Letter from A. Thadani (NRC) to C. Turk (B&WOG), BAW-10104, Revision 5, (B&W ECCS Evaluation Model) December 27, 1987.

5. J. Paljug, et al., "Bounding Analytical Assessment of NUREG-0630 Models on LOCA Kw/ft Limits With Use of FLECSET," BAW-1915, May 1986.

Principal Contributors: H. Pastis, PD#II-3/DRP-I/II
S. Sun

Dated: June 23, 1988