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

August 27, 1986

Posted
Amdt 150
to DPR-47

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

Mr. Hal B. Tucker
Vice President - Nuclear Production
Duke Power Company
P. O. Box 33189
422 South Church Street
Charlotte, North Carolina 28242

Dear Mr. Tucker:

The Commission has issued the enclosed Amendments Nos. 150 , 150 , and 147 to Facility Operating Licenses Nos. DPR-38, DPR-47 and DPR-55 for the Oconee Nuclear Station, Units Nos. 1, 2 and 3. These amendments consist of changes to the Station's common Technical Specifications (TSs) in response to your request dated September 24, 1985.

These amendments revise the TSs to delete the reference to the enrichment requirement of 3.5 percent uranium-235 in TS 5.3.1.4. The amendments also correct two typographical errors. In Section 5.3.1.2, the active fuel assembly height is changed from 144 to 142 inches. On page 5.3-1, in Reference 2, Table 4.3.1 is changed to 4.3-1 (the period to a hyphen).

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

Sincerely,

Helen N. Pastis

Helen N. Pastis, Project Manager
PWR Project Directorate #6
Division of PWR Licensing-B

Enclosures:
1. Amendment No. 150 to DPR-38
2. Amendment No. 150 to DPR-47
3. Amendment No. 147 to 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 NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 150
License No. DPR-38

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Duke Power Company (the licensee) dated September 24, 1985, 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-38 is hereby amended to read as follows:

   Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No.150, 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

John F. Stolz, Director
PWR Project Directorate #6
Division of PWR Licensing-B

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 27, 1986

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

DUKE POWER COMPANY

DOCKET NO. 50-270

OCONEE NUCLEAR STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.150
License No. DPR-47

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Duke Power Company (the licensee) dated September 24, 1985, 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-47 is hereby amended to read as follows:

   Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No.150 , 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

John F. Stolz, Director
PWR Project Directorate #6
Division of PWR Licensing-B

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 27, 1986

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

DUKE POWER COMPANY

DOCKET NO. 50-287

OCONEE NUCLEAR STATION, UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 147
License No. DPR-55

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Duke Power Company (the licensee) dated September 24, 1985, 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-55 is hereby amended to read as follows:

   Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No.147 , 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

John F. Stolz, Director
PWR Project Directorate #6
Division of PWR Licensing-B

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 27, 1986

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 150 TO DPR-38

AMENDMENT NO. 150 TO DPR-47

AMENDMENT NO. 147 TO DPR-55

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

Replace the following page of the Appendix "A" Technical Specifications with the attached page. The revised page is identified by amendment numbers and contains vertical lines indicating the area of change.

Remove Page	Insert Page
5.3-1	5.3-1

5.3 REACTOR

Specification

5.3.1 Reactor Core

5.3.1.1 The reactor core contains approximately 93 metric tons of slightly enriched uranium dioxide pellets. The pellets are encapsulated in Zircaloy-4 tubing to form fuel rods. The reactor core is made up of 177 fuel assemblies, all of which are prepressurized with Helium. (1)

5.3.1.2 The fuel assemblies shall form an essentially cylindrical lattice with an active height of 142 in. and an equivalent diameter of 128.9 in. (2)

5.3.1.3 There are 61 full-length control rod assemblies (CRA) and 8 axial power shaping rod assemblies (APSR) distributed in the reactor core as shown in FSAR Figure 4.3-3. The full-length CRA and the APSR shall conform to the design described in the FSAR or reload report. (1)

5.3.1.4 Initial core and reload fuel assemblies and rods shall conform to design and evaluation described in the FSAR.

5.3.2 Reactor Coolant System

5.3.2.1 The design of the pressure components in the reactor coolant system shall be in accordance with the code requirements. (3)

5.3.2.2 The reactor coolant system and any connected auxiliary systems exposed to the reactor coolant conditions of temperature and pressure, shall be designed for a pressure of 2,500 psig and a temperature of 650°F. The pressurizer and pressurizer surge line shall be designed for a temperature of 670°F. (4)

5.3.2.3 The maximum reactor coolant system volume shall be 12,200 ft^3.

REFERENCES

(1) FSAR Section 4.2.2
(2) FSAR Section 4.3.1, and Table 4.3-1
(3) FSAR Section 5.2.3.1
(4) FSAR Section 5.2.1

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 150 TO FACILITY OPERATING LICENSE NO. DPR-38

AMENDMENT NO. 150 TO FACILITY OPERATING LICENSE NO. DPR-47

AMENDMENT NO. 147 TO FACILITY OPERATING LICENSE NO. DPR-55

DUKE POWER COMPANY

OCONEE NUCLEAR STATION, UNITS NOS. 1, 2 AND 3

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

1.0 INTRODUCTION

By letter dated September 24, 1985, Duke Power Company (the licensee) proposed changes to the Technical Specifications (TSs) of Facility Operating Licenses Nos. DPR-38, DPR-47, and DPR-55 for the Oconee Nuclear Station, Units 1, 2 and 3. These amendments would consist of changes to the Station's common TSs and would delete the reference to the enrichment requirement of 3.5 percent of uranium-235 in TS 5.3.1.4. The amendments would also correct two typographical errors. In Section 5.3.1.2, the active fuel assembly height would be changed from 144 to 142 inches. On page 5.3-1, in Reference 2, Table 4.3.1 would be changed to 4.3-1 (the period to a hyphen).

2.0 DISCUSSION

Fuel Enrichment

The proposed amendments would delete the specification that new fuel shall not exceed an enrichment of 3.5 percent uranium-235 (U-235). The licensing basis safety analyses are not directly affected by the initial fuel enrichment. Changing the enrichment will affect the core physics parameters; however, variations in the physics parameters will be in accordance with reload design methodology previously accepted by the NRC. The enrichment of new fuel which will be stored in the spent fuel pool is limited by TS 3.8.15. That TS ensures that fuel in the pool will remain sufficiently subcritical under all possible conditions.

The fuel enrichment is not a direct input to the reactor safety analysis. Fuel enrichment is used in conjunction with a number of parameters and considerations in determining safe operation of the reactor core. The fuel enrichment, number of fuel assemblies, exposure (burnup) of existing fuel, burnable poisons and fuel management schemes are used to derive measurable reactor core parameters important to safe operation. These dynamic parameters, rod worths and peaking factors are currently included in the plant's TSs. The specification of fuel enrichment in the core design section alone does not uniquely determine nor limit the values of the reactor core parameters which are important

for safe operation. The existing safety limits and limiting conditions of operation in the TSs will have to be addressed and evaluated for each specific future reload and will take into account the fuel enrichment, but they will not be changed by the proposed amendments.

Typographical Errors

These proposed amendments would also correct an error in Section 5.3.1.2. The active fuel assembly height is 142 inches, not 144 inches.

Also, Table 4.3.1 will be changed to read "Table 4.3-1."

3.0 EVALUATION

Reference to initial fuel enrichment in TS 5.3.1.4 will be deleted. All fuel that is inserted into the core must first go through the spent fuel pool. TS 3.8.15 limits the enrichment in the pool, which will in turn, limit the initial enrichment in the core. While actual increases in the enrichment level of selected fuel assemblies and/or fuel rods are capable of reducing certain safety margins, the proposed amendment request does not address the actual enrichment but instead deletes the specification of enrichment from TS 5.3.1.4. Any changes in assembly and rod enrichment would, of necessity, be included in the reload report accompanying the reload amendment request.

For a given cycle, safety and operating limits are established and verified acceptable to the appropriate criteria, in accordance with the NRC approved Reload Design Methodology for Oconee. Specifically, TS 2.1 assures the fuel cladding integrity; TS 2.2 assures the reactor coolant system integrity and also prevents the release of significant amounts of fission product activity; TS 2.3 assures availability of sufficient instrumentation to provide automatic protective action to prevent any combination of process variables from exceeding a safety limit; TS 3.5.2 assures an acceptable core power distribution during power operation and assures core subcriticality after a reactor trip. Finally, the Oconee Reload Reports document the acceptance of key physics parameters to the appropriate criteria, the review of each FSAR accident analysis, and assure that the transient evaluation of the reload cycle is bounded by previously accepted analysis.

The change of TS 5.3.1.2 for the active fuel assembly height to 142 inches from 144 inches is not a physical dimension change but simply a typographical correction.

The proposed amendments also correct a typographical error on page 5.3-1, in Reference 2. Table 4.3.1 is changed to Table 4.3-1. This change is also purely administrative.

We have reviewed the proposed amendment request and find it acceptable.

4.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of the facilities' components located within the restricted areas as defined in 10 CFR 20. We have determined that these 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, these 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.

5.0 CONCLUSION

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.

Dated: August 27, 1986

Principal Contributor: H. N. Pastis