



UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

SAFETY EVALUATION BY THE DIRECTORATE OF LICENSING
SUPPORTING AMENDMENT NO. 6 TO FACILITY LICENSE NO. DPR-38
CHANGE NO. 16 TO TECHNICAL SPECIFICATIONS;
AMENDMENT NO. 6 TO FACILITY LICENSE NO. DPR-47
CHANGE NO. 11 TO TECHNICAL SPECIFICATIONS;
AMENDMENT NO. 3 TO FACILITY LICENSE NO. DPR-55
CHANGE NO. 3 TO TECHNICAL SPECIFICATIONS;
DUKE POWER COMPANY
OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3
DOCKET NOS. 50-269, 50-270, AND 50-287

Introduction

By letter dated September 20, 1974, and supplemented by letters of October 8, 1974, and October 31, 1974, Duke Power Company (the Licensee) requested changes to the Technical Specifications appended to Facility Operating License No. DPR-38 for the Oconee Power Station, Unit 1. The purpose of the request is to revise the Oconee Technical Specifications as required to operate within the appropriate fuel and core design limits during the second fuel cycle.

Discussion

The reloading of the core for fuel cycle 2 will involve the removal of approximately 1/3 of the fuel assemblies in the core, the reassignment of the remaining 2/3 of the fuel assemblies in the core, and the replacement of the depleted fuel with new fuel. The fuel to be added to the core is not significantly different in design or in operating characteristics from the original fuel it replaces. However, the rearrangement of fuel

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assemblies in the reloaded core does affect core physics and thermal-hydraulic calculations and, as a result, changes to the Technical Specifications are required.

Evaluation

The submittal was reviewed with particular attention to the areas of revised safety analyses and safety margins, adherence to both the interim and final acceptance criteria, changes in the Technical Specifications, and generic considerations (e.g. fuel densification and cladding creep collapse).

Babcox & Wilcox's report BAW 1409 ("Oconee 1, Cycle 2 Reload Report"), which accompanied the Licensee's submittal, discusses the reanalysis of the two limiting accidents of cycle 1 (rod ejection and LOCA) and demonstrates that these cycle 1 limiting accidents are also the limiting accidents for cycle 2. The reanalysis of the two limiting accidents resulted in the conclusion that the consequences are no more severe than previously reported for cycle 1 operation. All other accidents analyzed in the Oconee Final Safety Analysis Report were also reviewed and it was determined that these analyses remain valid and the probability or consequence of these accidents will not be increased.

We also determined that no safety margin or design limit will be exceeded as a result of this change and that the Licensee's submittal appropriately accounts for the effect of fuel densification and fuel cladding creep collapse.

The analytical methods used by the Licensee for cycle 2 are unchanged from those used in original analyses or are methods already found acceptable by the AEC and previously applied to Oconee Unit 1. For example, the critical heat flux correlation (BAW 2) used in this analysis has been favorably evaluated in Supplement 1 to the North Anna Power Station Units 3 and 4 Safety Evaluation (February 21, 1973). This correlation was applied to Oconee Unit 1 in Supplement 17 of the Oconee Final Safety Analysis Report.

The Licensee has stated that the proposed Technical Specifications are in conformance with both the interim acceptance criteria and Appendix K to 10 CFR Part 50 for the first 250 effective full power days of operation.

The proposed Technical Specification for control rod group withdrawal limits (fig. 3.5.2 -1A2) that are required to be used after 250 effective full power days conforms only to the Licensee's proposed Appendix K submittal, and would not conform to the interim acceptance criteria.

10 CFR 50.46 requires that the operation of the facility be within the limits of both the proposed Appendix K Technical Specifications and the existing Technical Specifications based on the Interim Policy Statement until the proposed Appendix K Technical Specifications have been approved. This approval has not been granted and since the proposed Figure 3.5.2 - 1A does not conform to the Interim Acceptance Criteria we cannot include the Technical Specification illustrated by Figure 3.5.2 - 1A2 as proposed by the Licensee. The effect of deleting this proposed Technical Specification is to limit cycle 2 to 250 effective full power days.

The nuclear, mechanical, and thermal-hydraulic analyses that were performed by the Licensee to establish the appropriate operating limits and set-points for cycle 2 operation were reviewed and found to be methods previously used and found acceptable by the AEC for Oconee Unit 1 (e.g. see above discussion of BAW 2). The proposed Technical Specification changes which incorporate these limits and set-points were reviewed and found to be consistent with the reanalyses, and therefore acceptable (except for fig. 3.5.2 - 1A2, as discussed above). None of the proposed Technical Specification changes would increase the probability or consequence of postulated accidents previously analyzed. The bases of the Technical Specifications have been revised to show the result of this reanalysis. However, the method and procedures described in these bases remain unchanged.

Conclusion

We have concluded, based on the reasons discussed above, that the authorization of these changes does not involve a significant hazards consideration. We also conclude that there is reasonable assurance (i) that the activities authorized by these amendments 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 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.

Leo McDonough
Operating Reactors Branch #1
Directorate of Licensing

Robert A. Purple, Chief
Operating Reactors Branch #1
Directorate of Licensing

Date: November 26, 1974

UNITED STATES ATOMIC ENERGY COMMISSION

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

DUKE POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY
OPERATING LICENSES

Notice is hereby given that the U.S. Atomic Energy Commission (the Commission) has issued Amendments No. 6, 6, and 3 to Facility Operating Licenses No. DPR-38, DPR-47, and DPR-55, respectively, issued to Duke Power Company which revised Technical Specifications for operation of the Oconee Nuclear Station, Units 1, 2, and 3, located in Oconee County, South Carolina. The amendments are effective as of the date of issuance.

These amendments include the Technical Specification changes required for the second fuel cycle operation of Oconee Unit 1.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments.

For further details with respect to this action, see (1) the application for amendments dated September 20, 1974, as supplemented October 3 and 31, 1974, (2) Amendments No. 6, 6, and 3 to Licenses No. DPR-38,

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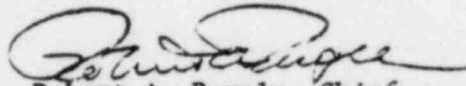
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DPR-48, and DPR-55, with any attachments, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, NW., Washington, D.C. and at the Oconee County Library, 201 South Spring Street, Walhalla, South Carolina 29691.

A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Atomic Energy Commission, Washington, D.C. 20545, Attention: Deputy Director for Reactor Projects, Directorate of Licensing - Regulation.

Dated at Bethesda, Maryland, this 26th day of November, 1974.

FOR THE ATOMIC ENERGY COMMISSION



Robert A. Purple, Chief
Operating Reactors Branch #1
Directorate of Licensing