



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 189 TO FACILITY OPERATING LICENSE DPR-38
AMENDMENT NO. 189 TO FACILITY OPERATING LICENSE DPR-47
AMENDMENT NO. 186 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 February 11, 1991, the Duke Power Company (the licensee) submitted a request for changes to the Oconee Nuclear Station, Units 1, 2, and 3, Technical Specifications (TSs). The requested changes would revise the value for the containment free volume (CFV) currently specified in TS 5.2.1 and associated bases.

Specifically, the requested change would replace the current CFV value in TS 5.2.1 from 1.91×10^6 cubic feet to 1.836×10^6 cubic feet. The initial value was based on preliminary estimates of the CFV made prior to the completion of the containment, while the proposed CFV value is based on as-built drawings. Therefore, the proposed CFV value reflects the as-built internal volume of the reactor building as documented in Section 3.8.1.1 and Table 15.16 of the Oconee Final Safety Analysis Report (FSAR).

2.0 EVALUATION

The licensee has proposed to revise the current value of the CFV specified in TS 5.2.1 from 1.91×10^6 cubic feet to 1.836 cubic feet. This value is used as an input for the leak rate test (ILRT) calculations for containment integrity and the FSAR Chapter 15 Loss of Coolant Accident (LOCA) analyses. The proposed reduction in the CFV value resulted from the use of the as-built internal volume of the reactor building as documented in Section 3.8.1.1 and Table 15.16 of Oconee FSAR.

The smaller CFV value will result in higher containment pressure and temperature for the accident pressurization scenario. Reanalysis of the containment pressures and temperatures for the worst case LOCA analysis resulted in a 2 psi increase in the peak containment pressure and a slight increase in peak containment temperature. However, the worst case maximum pressure is well below the design building pressure (59 psig), and the margin between the peak temperature and the limiting equipment qualification temperature profile per IEEE-323 (1974) is maintained.

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The ILRT Type A, B, and C test results are not impacted by the the proposed change in CFV value. The licensee has utilized the design pressure rather than the analyzed peak accident pressure values as the basis for the ILRT. Therefore, the increased accident containment pressure values were still well below the design pressure, and there was no impact on the final results of the Type A tests. For the Type B and C tests the use of a smaller CFV value would result in more restrictive leak rate test criteria. However, a comparison of the new leak rate test criteria and the previous test results indicates that they would meet the revised acceptance criteria and, therefore, would remain valid. In summary, the licensee has evaluated the effects of the proposed change in CFV value on the peak containment pressure and temperature, the effect on accident analysis and equipment qualification, and ILRT calculations as applicable to leak rate test criteria and has found that all parameter and test results remain acceptable.

The NRC staff has reviewed the licensee's request and agrees with the licensee's conclusion. The change would not pose an undue risk to public health and safety and would result in a more accurate parameter for CFV. Therefore, the changes are acceptable.

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 a requirement 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 amendment involves 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 amendment involves no significant hazards consideration, and there has been no public comment on such finding (56 FR 20034). 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 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Date: August 21, 1991