



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

SAFETY EVALUATION REPORT

RELATED TO AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NPF-24

CATAWBA NUCLEAR STATION, UNIT 1

DUKE POWER COMPANY, ET AL.

I. INTRODUCTION

On July 18, 1984, the U.S. Nuclear Regulatory Commission issued Facility Operating License NPF-24, together with Technical Specifications and other attachments, authorizing fuel loading and precriticality testing for the Catawba Nuclear Station, Unit 1. The Technical Specifications included surveillance requirements to demonstrate operability of the auxiliary feedwater (AFW) system, in part, by periodic testing of AFW pumps using a test loop of small diameter piping. Acceptance criteria for these periodic tests are specified as a minimum value of the total dynamic head to be developed at a specified minimum flow. The acceptance criteria in Technical Specification 4.7.1.2.1, as issued, are based upon nominal design parameters for the AFW system specified by Westinghouse on the basis of providing adequate protection for the core and to assure orderly cooldown. These nominal design parameters are in excess of the requirements assumed for the limiting safety analyses in Chapter 15 of the FSAR. By letters dated July 31, August 17, 24 and 29, 1984, the licensee stated that the preoperational functional tests conducted on the AFW system revealed that the acceptance criteria in the surveillance requirements of the current Technical Specification can not be met and requested that the criteria be changed to be based upon the minimum flow values established during testing and determined to envelope flow requirements for safety analyses.

II. EVALUATION

The AFW system for Catawba Unit 1 consists of two electric motor-driven pumps and one turbine-driven pump. The acceptance criteria in Specification 4.7.1.2.1a.1 for periodic testing of each motor-driven AFW pump are changed to require development of a total dynamic head of greater than or equal to 3470 feet at a flow of greater than or equal to 400 gpm, rather than a total dynamic head greater than or equal to 3210 feet at a flow of greater than or equal to 500 gpm. Similarly, the total dynamic head in Specification 4.7.1.2.1a.2 to be developed by the turbine-driven pump when the secondary steam supply pressure is greater than 600 psig and the AFW pump turbine is operating at 3600 rpm, is changed to be greater than or equal to 3550 feet at a flow of greater than or equal to 400 gpm, rather than a total dynamic head of greater than or equal to 3217 feet at a flow of greater than or equal to 1000 gpm. The associated bases 3/4.7.1.2 are changed to reflect that a feedwater line break accident, rather than a total loss of offsite power transient, is the limiting event with respect to system flow capacity.

By letters dated July 31, August 17, 24 and 29, 1984, the licensee has confirmed that testing each AFW pump through the test loop to verify a minimum flow of 400 gpm rather than 500 gpm as previously indicated assures that the AFW system is capable of supplying at least 492 gpm to at least two steam generators for core protection and decay heat removal under required design basis accident and transient conditions coupled with a single failure. The staff finds that 492 gpm is the limiting flow value assumed by the licensee in FSAR Chapter 15 safety analyses for Catawba and approved by the staff in the SER. Therefore, the staff concludes that the proposed Technical Specification change is consistent with the safety analyses, and is acceptable.

III. ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets 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 this amendment.

IV. CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (49 FR 33068) on August 20, 1984, and consulted with the state of South Carolina. No public comments were received, and the state of South Carolina did not have any comments.

In conclusion, the staff finds the proposed changes to the plant Technical Specifications to be acceptable and 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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: September 24, 1984

September 24, 1984

AMENDMENT NO. 1 TO FACILITY OPERATING LICENSE NPF 24 - CATAWBA NUCLEAR STATION,
UNIT 1

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