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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 81 TO FACILITY OPERATING LICENSE NPF-9

AND AMENDMENT NO. 62 TO FACILITY OPERATING LICENSE NPF-17

DUKE POWER COMPANY

DOCKET NOS. 50-369 AND 50-370

McGUIRE NUCLEAR STATION, UNITS 1 AND 2

INTRODUCTION

By application dated February 5, 1988, Duke Power Company (the licensee) proposed amendments which would delete from the Design Features section 5.3.1 of the Technical Specifications (TS) the maximum fuel rod weight limit of 1766 grams of uranium. The purpose of the change was to permit the use of assemblies found to be slightly over the weight limit. Additional change requests within the February 5, 1988 letter are outside the scope of these amendments and will be addressed separately.

EVALUATION

The NRC staff has reviewed the proposed change and finds that the deletion of the fuel rod uranium weight limit does not have an adverse impact upon safety analyses or plant operation. The variation in fuel rod weight that can occur even without a TS limit is small based on other fuel design constraints, e.g., rod diameter, gap size, UO-2 density and active fuel length; all of which provide some limit on the variation in rod weight. The current safety analyses are not based directly on fuel rod weight, but rather on design parameters such as power and fuel dimensions. These parameters are either not affected at all by fuel rod weight, or are only slightly affected. A review of design parameters which may be affected indicated that a change in fuel weight does not cause other design parameters to exceed the values assumed in the various safety analyses, or to cause acceptance criteria to be exceeded. The effects are not significant with respect to measured nuclear parameters (power, power distribution, nuclear coefficients), i.e., they remain within their TS limits. Although future reloads may consist of fuel fabricated by a different vendor, all of the fuel contained in the fuel rod is and will be similar to and designed to function similarly to previous fuel. In addition, the existing new and spent fuel storage criticality analyses bound the proposed changes observed.

The margin of safety is also maintained by continued adherence to other fuel related TS limits and the FSAR design bases. Adherence to these TS limits and FSAR design bases is confirmed for each fuel cycle by reload safety evaluations.

Accordingly, we conclude that deletion of fuel rod weight limits in the TS Design Features section 5.3.1 does not adversely affect any safety analysis, or safety limit or plant operation. The proposed change is, therefore, acceptable.

ENVIRONMENTAL CONSIDERATION

These amendments involve changes to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. The staff has 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 exposure. The NRC staff has made a determination that the 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.

CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (53 FR 11368) on April 6, 1988 and consulted with the state of North Carolina. No public comments were received, and the state of North 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.

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