

amendment request involves no significant hazards consideration.

Local Public Document Room

location: York County Library, 138 East Black Street, Rock Hill, South Carolina 29730

Attorney for licensee: Mr. Albert Carr, Duke Power Company, 422 South Church Street, Charlotte, North Carolina 28242

NRC Project Director: Herbert N. Berkow

Duke Power Company, Docket Nos. 50-369 and 50-370, McGuire Nuclear Station, Units 1 and 2, Mecklenburg County, North Carolina

Date of amendment request: June 13, 1994, as supplemented August 15, 1994.

Description of amendment request:

The proposed changes would increase the initial fuel enrichment limit from a current maximum of 4.0 weight % to 4.75 weight % and establish new loading patterns for new and irradiated fuel in the spent fuel pool to accommodate this increase. These changes would also increase the efficiency of fuel storage cell use in the spent fuel pools and provide additional flexibility to the reload design efforts at Duke Power Company, while at the same time maintaining sufficient criticality safety margin and decay heat removal capabilities.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

1. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

There is no increase in the probability or consequences of an accident in the new fuel vault since the only credible accidents for this area are criticality accidents and it has been shown that calculated, worst case K_{eff} for this area is ≤ 0.95 under all conditions.

There is no increase in the probability of a fuel drop accident in the Spent Fuel Storage Pool since the mass of an assembly will not be affected by the increase in fuel enrichment. The likelihood of other accidents, previously evaluated and described in Section 9.1.2 of the FSAR [Final Safety Analysis Report], is also not affected by the proposed changes. In fact, it could be postulated that since the increase in fuel enrichment will allow for extended fuel cycles, there will be a decrease in fuel movement and the probability of an accident may likewise be decreased. There is also no increase in the

consequences of a fuel drop accident in the Spent Fuel Pool since the fission product inventory of individual fuel assemblies will not change significantly as a result of increased initial enrichment. In addition, no change to safety related systems is being made. Therefore, the consequences of a fuel rupture accident remain unchanged. Also, it has been shown that k_{eff} is ≤ 0.95 , under all conditions therefore, the consequences of a criticality accident remain unchanged as well.

2. The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed changes do not create the possibility of a new or different kind of accident since fuel handling accidents (fuel drop and misplacement) are not new or different kinds of accidents. Fuel handling accidents are already discussed in the FSAR for fuel with enrichments up to 4.1 weight %. As described in Section VI.9 of Attachment IV, additional analyses have been performed for fuel with enrichment up to 4.75 weight %. Worst case misloading accidents associated with the new loading patterns were evaluated. For all possible misloading accidents the negative reactivity provided by soluble boron maintains $k_{eff} \leq 0.95$, of safety.

3. The proposed changes do not involve a significant reduction in the margin of safety.

The proposed change does not involve a significant reduction in the margin of safety since, in all cases, a $k_{eff} \leq 0.95$ is being maintained. Criticality analyses have been performed which show that the new fuel storage vault will remain subcritical under a variety of moderation conditions, from fully flooded to optimum moderation. As discussed above, the Spent Fuel Pool will remain sufficiently subcritical during any fuel misplacement accident.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

Local Public Document Room location: Atkins Library, University of North Carolina, Charlotte (UNCC Station), North Carolina 28223.

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Duke Power Company, Docket Nos. 50-269, 50-270 and 50-287, Oconee Nuclear Station, Units 1, 2 and 3, Oconee County, South Carolina

Date of amendment request:

November 11, 1994, as supplemented January 30, 1995.

Description of amendment request:

The amendments would revise the Technical Specifications Design Features section to establish restricted loading patterns and associated burnup criteria for placing fuel in the Oconee Spent Fuel Pools. These changes are necessary to address two new fuel designs which have increased initial fuel enrichment and therefore cannot be stored in the spent fuel pools under existing Technical Specifications.

Basis for proposed no significant hazards consideration determination: As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

Standard 1. The proposed amendments will not involve a significant increase in the probability or consequences of an accident previously evaluated.

Each accident analysis addressed in the Oconee Final Safety Analysis Report (FSAR) has been examined with respect to changes in Cycle 15 parameters to determine the effect of the Cycle 16 reload and to ensure that the acceptance criteria of the FSAR safety analyses remain satisfied. The transient evaluation of Cycle 16 is considered to be bounded by previously accepted analyses. Section 7 of the Reload Report addresses "Accident and Transient Analysis" for this core reload.

There is no increase in the probability or consequences of an accident due to the spent fuel storage restrictions proposed in this amendment request. It has been shown that the calculated, worst case k_{eff} for this area is [less than or equal to] 0.95 under all conditions. There is no increase in the probability of a fuel drop accident in the SFP [spent fuel pool] since the mass of the new assemblies is not significantly different from the mass of the old assemblies. The likelihood of other accidents, previously evaluated and described in the FSAR, is also not affected by the proposed changes. In fact, it could be postulated that since the increase in fuel enrichment will allow for extended fuel cycle lengths, there will be a decrease in fuel movement and the probability of an accident may actually be reduced. There is also no increase in the consequences of a fuel rod drop accident in the SFP since the fission product inventory of