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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 10 TO FACILITY OPERATING LICENSE NO. NPF-5

GEORGIA POWER COMPANY
OGLETHORPE ELECTRIC MEMBERSHIP CORPORATION
MUNICIPAL ELECTRIC ASSOCIATION OF GEORGIA
CITY OF DALTON, GEORGIA

EDWIN I. HATCH NUCLEAR PLANT, UNIT NO. 2

DOCKET NO. 50-366

Introduction

By letter dated July 23, 1979, Georgia Power Company (the licensee) proposed a change to the Technical Specifications appended to Operating License No. NPF-5 for the Edwin I. Hatch Nuclear Plant Unit No. 2. The change increases the Limiting Condition for Operation on Drywell Average Air Temperature from 135°F to 145°F. The change was requested because the licensee has encountered difficulty in maintaining the volumetric average temperature below this limit, particularly during the summer season.

Evaluation

The current Technical Specifications require that in Mode 1, 2 or 3 operation, the drywell average air temperature shall not exceed 135°F. This value is one of the assumed initial conditions for evaluating the containment response to a LOCA to ensure that the structure's design limits are not exceeded. The licensee's analysis of the effect of the 10°F increase in drywell average air temperature would result in a short-term post-LOCA containment pressure increase of 1 psi or less.

We have reviewed the licensee's request as well as the initial analysis of containment response to a design basis accident as described in Section 6.2 of the Hatch Unit No. 2 FSAR. We have previously verified the analytical results of the licensee's model, (see NUREG-0411), and determined that an input value of 135°F drywell air temperature yields a calculated peak drywell pressure of 57.5 psig. Thus an input value of 145°F would yield a maximum containment pressure of <58.5 psig, which is still less than the ASME Code allowable pressure of 62 psig.

The licensee's submittal also addressed the effect of local temperatures on the environmental qualifications of safety related equipment which might be affected by the proposed 145°F limit. His submittal stated that he has established regional temperature limits based on equipment qualifications. In discussions with the licensee he indicated that these limits are lower than those for which the equipment is qualified for normal operation.

Further, he stated that temperature will be monitored and maintained to assure a satisfactory long-term environment for components within the drywell.

We have reviewed the licensee's discussion of environmental qualification of equipment as well as data on temperature profiles within the drywell, as discussed in the Staff's Safety Evaluation supporting Amendment No. 1 to NPF-5. Since the Technical Specification on average drywell temperature is a volumetric average, the effect of a 10°F average increase on local temperatures within the drywell will not be linear. Thus, local temperatures may increase on the order of 20-30°F at certain locations. The effect of increased temperatures over a long period of time would accelerate aging of safety related equipment. Since data on local temperatures is not available, we suggested to the licensee that the increased limit of 145°F average drywell air temperature be permitted only until the first refueling outage of Hatch Unit No. 2. It is our judgement that the effect of the increased temperature limit until the first refueling outage would have negligible effect on aging, since the actual elevated temperatures will occur only during seasons of expecially hot weather, i.e., only a few days per year. This temporary change would thus permit the licensee to continue operation of the facility while concurrently designing and performing appropriate modifications to reduce the air temperature in the drywell. He agreed.

In view of the foregoing we find the licensee's request as modified by the staff to be acceptable. The acceptability is based on the calculated peak containment pressure being within Code allowable and the insignificant effect of increased temperature on aging of equipment during the few days of especially hot weather that will be experienced.

Environmental Considerations

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR Section 51.5(d)(4) that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: July 26, 1979