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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 160 TO

FACILITY OPERATING LICENSE DPR-57

GEORGIA POWER COMPANY
OGLETHORPE POWER CORPORATION
MUNICIPAL ELECTRIC AUTHORITY OF GEORGIA
CITY OF DALTON, GEORGIA

EDWIN I. HATCH NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-321

1.0 INTRODUCTION

By letter dated September 6, 1988, Georgia Power Company (the licensee) requested an amendment to the Technical Specifications (TS) for the Edwin I. Hatch Nuclear Plant, Unit 1 that would: (1) modify the definitions of Hot Shutdown and Cold Shutdown so that changing of operational modes would not be necessary when performing hydrostatic and leakage pressure testing in accordance with the ASME Code, Section XI; and (2) modify TS sections 3.5.A.2, 3.5.B.1.b, 3.5.B.2.c, 3.5.C.2, 3.6.G, and 3.7.C.1.a(7), and the notes to Table 3.2-1 to specify which equipment must be, or need not be, operable during performance of the Section XI hydrostatic and leakage pressure testing. A minor editorial change also would be made to TS 4.5.C.2.

2.0 BACKGROUND

In April of 1987, the NRC informed the licensee that ASME Code, Section XI, inservice hydrostatic and system leak testing at the Hatch plant would have to be performed using non-nuclear heat. Previously, the licensee had conducted these type tests using reactor heat. Amendment No. 137 to the Hatch Unit 1 license, issued on May 26, 1987, made a number of changes to the plant TS to provide for use of non-nuclear heat for the Section XI hydrostatic and system leak tests. The TS changes approved by Amendment No. 137 relaxed requirements regarding the operability of certain systems and the need to maintain primary containment integrity during the tests when reactor coolant temperature is above 212°F.

The TS changes approved by Amendment No. 137 were adequate to allow the hydrostatic and system leakage tests required by ASME Code, Section XI to be conducted using non-nuclear heat. However, they failed to take into account the TS definitions of Cold Shutdown and Hot Shutdown and the required surveillances associated with changing operational modes from Cold to Hot. Conduct of the tests requires increasing the reactor coolant temperature to greater than 212°F which, by definition, is the temperature at which the operational mode changes from Cold Shutdown to Hot Shutdown. Conduct of the

tests thus requires changing operational modes which, in turn, requires certain equipment to be operable even though it is not needed to maintain plant safety during the tests.

The further changes to the TS now proposed by the licensee would modify the definitions of Cold Shutdown and Hot Shutdown such that a mode change is not required in order to conduct the ASME Code, Section XI hydrostatic and system leak tests, and would further clarify which equipment must be operable during the tests.

3.0 EVALUATION

a. Modify the definitions of Cold Shutdown and Hot Shutdown.

The licensee proposes to modify the definition of Cold Shutdown to read as follows:

> Cold Shutdown Condition - Cold shutdown condition means reactor operation with the Mode Switch in the SHUTDOWN position, coolant temperature $\leq$ 212°F, and with no core alterations permitted. During the performance of inservice hydrostatic or leakage testing with all control rods fully inserted and reactor coolant temperature > 212°F, and/or reactor vessel pressurized, the reactor may be considered to be in the Cold Shutdown Condition for the purpose of determining Limiting Condition for Operation applicability. Note that the Cold Shutdown Condition may be referred to in different ways throughout the Technical Specifications. For example, "reactor subcritical and reactor coolant temperature < 212°F," "irradiated fuel in the reactor vessel and the reactor is depressurized," "reactor water temperature <212°F and reactor coolant system vented," or "reactor is not pressurized (i.e., $\leq$ 212°F)" should be interpreted as COLD SHUTDOWN. However, compliance with an ACTION requiring COLD SHUTDOWN shall require a reactor coolant temperature $\leq$ 212°F. In addition, compliance with the following Specifications is required when performing the hydrostatic or leakage testing under the identified conditions: 3.5.B.1.b, 3.5.C.1.c, 3.6.F.2.d, 3.7.C.1.a(7), 3.9.c, and applicable notes in Table 3.2-1.

The definition of Hot Shutdown would be modified to read:

> Hot Shutdown Condition - Hot shutdown condition means reactor operation with the Mode Switch in the SHUTDOWN position, coolant temperature > 212°F, and no core alterations are permitted. During the performance of inservice hydrostatic or leakage testing with all control rods fully inserted and reactor coolant temperature > 212°F, and/or reactor vessel pressurized, the reactor may be considered to be in the Cold Shutdown Condition for the purpose of determining Limiting Condition for Operation applicability. However, compliance with an ACTION requiring COLD SHUTDOWN shall require a reactor coolant temperature $\leq$ 212°F.

In each case, the proposed revision to the definition consists of adding the material following the first sentence. The NRC staff has no problem with the addition of the clarifying information as pertains to conduct of the ASME Code, Section XI inservice hydrostatic and leakage testing. However, the staff is reluctant to change the definitions themselves. Therefore, rather than changing the definitions, the staff has incorporated the explanatory information requested by the licensee as footnotes to the definitions.

The changes will allow the average coolant temperature to be above 212°F while performing the hydrostatic and system leakage tests without changing operational modes from Cold Shutdown to Hot Shutdown. In addition, operator attention is specifically directed to the TS requirements regarding RHR system and RHR service water system operability, coolant conductivity and chloride limits, the requirement for secondary containment integrity, and diesel generator availability while conducting the tests.

The revised definitions of Cold Shutdown and Hot Shutdown will eliminate the need to observe changes in the Limiting Conditions of Operation (LCOs) normally associated with changing operational modes as part of a reactor startup. At the same time, the revised definitions, in conjunction with the other changes proposed for this amendment and those changes previously approved by Amendment No. 137, provide assurance that necessary plant systems are operable so that the tests can be conducted safely. The changes are, therefore, acceptable.

b. Revise TS 3.5.A.2.

TS 3.5.A.2 would be modified to eliminate the requirement for operability of the core spray system during the hydrostatic and leakage tests. During these tests, control rods are fully inserted, the decay heat level is low following a refueling outage, and the reactor is maintained near cold shutdown conditions. There is, therefore, no need to have a core spray system operable, and this change is acceptable.

c. Revise TS 3.5.B.1.b.

This change requires the operability of at least one RHR loop with two pumps or two RHR loops with one pump per loop during conduct of the hydrostatic and leakage testing. The change would assure the availability of adequate core cooling while conducting the tests, and it is, therefore, acceptable.

d. Add TS 3.5.B.2.c.

This added specification requires compliance with TS 3.5.B.1.b (see above). It is, therefore, acceptable.

e. Revise TS 3.5.C.2

This revision would specifically require the operability of at least one RHR service water loop during conduct of the hydrostatic or leakage tests. It would assure the capability of removing heat from the reactor, and it is, therefore, acceptable.

f. Revise TS 3.6.G.

This change would add a footnote to TS 3.6.G eliminating the need to observe LCOs pertaining to system leakage during the hydrostatic and leakage tests. These tests are conducted in accordance with the ASME Code, Section XI, and are subject to acceptability criteria specified in the code. There is, therefore, no need to observe the LCOs pertaining to system leakage which are applicable during normal plant operation. Accordingly, we find this change acceptable.

g. Add TS 3.7.C.1.a(7).

This change requires that secondary containment integrity be maintained during conduct of hydrostatic and leakage tests. It assures that any radioactivity escaping the reactor coolant system during the tests would be collected and processed by the standby gas treatment system, thereby preventing an uncontrolled release to the environs. The change helps assure the overall safety of the tests, and it is, therefore, acceptable.

h. Revise Table 3.2-1.

A note would be added to Table 3.2-1 requiring that the reactor vessel water level instrumentation be operable during the hydrostatic and leakage tests. A low-low (Level 2) signal from this water level instrumentation initiates operation of the standby gas treatment system which would be necessary in the event of a system leak leading to the low-low water level. This change is, therefore, acceptable.

i. Revise TS 4.5.C.2.

TS 4.5.C pertains to the RHR Service Water System. Within this section, TS 4.5.C.2 now contains words regarding the "RHR subsystems." To avoid any ambiguity and possible misinterpretation, the licensee proposes to insert the words "service water" between "RHR" and "subsystems." This wording change is editorial in nature and merely clarifies what is implicit in the existing wording. The change is, therefore, acceptable.

j. Summary

In summary, the changes proposed by the licensee in this amendment, in conjunction with those changes previously approved by Amendment No. 137, will allow the licensee to safely conduct the required ASME Code, Section XI hydrostatic and system leakage tests following refueling outages using non-nuclear heat without the distraction of observing unnecessary LCOs. The changes proposed are acceptable.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes to the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. 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 the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the 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 the amendment.

5.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register on November 2, 1988 (53 FR 44251), and consulted with the state of Georgia. No public comments were received, and the state of Georgia 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 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: February 24, 1989

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