

UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 2055%

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 9 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 2, 1979 (Reference 1), 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 amendment would modify to porarily the Technical Specifications by deleting the High Pressure Coolant Injection (HPCI) and Reactor Core Isolation Cooling (RCIC) Systems automatic isolation signals on indicated high steam flow in the HPCI and RCIC steam supply lines. This temporary change will permit the conduct of the special startup testing as requested by us in Reference 2 and described in the licensee's submittal.

Background

On June 3, and 27, 1979, the Hatch Unit No. 2 HPCI and RCIC systems failed to perform as designed following reactor trips. Following the latter occurrence, the Commission's Uffice of Inspection and Enforcement, Region II, issued a letter (Reference 2) to the licensee confirming the action. to be taken by the licensee as they elate to these HPCI and RCIC System failures. The licensee's actions were to include, among others:

'Investigate the HPCI and RCIC System failures and take corrective actions as necessary

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'Determine the cause of failures

'Establish comprehensive retesting requirements which verify that the HPCI and RCIC systems perform as designed.

The licensee's request for a temporary change to the Technical Specifications was submitted to permit the conduct of a special startup testing program of the RCIC and HPCI systems to demonstrate adequate performance.

Evaluation

The HPCI and RCIC turbine driven pumps are used to provide water to the core under various conditions. The steam lines which provide the turbine steam contain two normally open containment isolation valves to minimize reactor coolant loss and radioactive materials release from the nuclear steam process barrier in the event of a gross leak or rupture of the line. The HPCI and RCIC steam line isolation function can be initiated by a number of abnormal conditions in their respective equipment rooms or piping. These diverse isolation signals which are redundant within themselves include:

a. High room ambient temperature,

b. High suppression pool area ambient temperature,

c. High suppression pool area differential temperature,

d. Emergency area cooler high temperature,

e. High steam flow,

f. Low steam line pressure.

This variety of signals provides protection against both small and large steam leaks in the supply lines for either the HPCI or RCIC system. For small breaks, the high steam line flow isolation function is not required. The isolation functions, which have been assumed in the analyses of the small HPCI and RCIC steam line breaks, are high area air temperature (a through d above). Therefore the temperary deletion of the high steam line flow isolation function does not affect the consequences of the s⁻¹ HPCI or RCIC steam line breaks.

For large HPCI and RCIC steam line breaks the analysis assumes an isolation at 13 seconds based on the concurrent loss of all off-site power, i.e., isolation cannot occur until diesel generator power is available. The isolation signals for this type event are principally the high steam flow (>300%) and low steam supply pressure. Each of these signals is redundant. That is, if one low steam supply pressure isolation signal fails, there is another which would initiate automatic isolation. This assures isolation of any large break in the systems steam supply line. Therefore, the consequences of any "large" steam line break are not affected by the temporary bypassing of the high steam flow isolation function does not affect the probability of occurrence of any transient or accident.

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On the bases of the above, the proposed modification does not involve an unreviewed safety question and is, therefore, acceptable.

The licensee has proposed a compensatory measure for the purpose of conducting this special test program; i.e., personnel will be stationed at each HPCI and RCIC local panel. The sole function of these personnel will be to observe the HPCI and RCIC steam line flow indication (as well as other available indications) and to notify the control room operator in the event of the persistence of a high steam line flow. The licensee has established an allowable time for high steam line flow which is presistent with instrument response time (13 seconds), i.e., if a flow rate, which is greater than 300% of normal steady state for test conditions, persists for 13 seconds or more, the operator will be notified. Thus, the operator will have the capability to isolate the steam line in the event of a break. This adds another degree of protection to break mitigation. It does not affect the consequence or probability of occurrence of any accident or transient and is therefore considered acceptable although credit can not be taken for this operator action in the event.

Environmental Consideration

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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 the 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 5, 1979

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References

- Letter from C. F. Whitmer, Georgia Power Company, GPC, to United States Nuclear Regulatory Commission, USNRC, "HPCI and RCIC Special Test Program", dated July 2, 1979.
- Letter from J. P. O'Reilly (USNRC) to J. H. Miller, Jr., (GPC) dated June 28, 1979.

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