



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 22 TO FACILITY OPERATING

LICENSE NO. DPR-72

FLORIDA POWER CORPORATION, ET AL

CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT

DOCKET NO. 50-302

Introduction

Amendment No. 17 to the Crystal River Unit 3 Operating License added the requirement to check emergency core cooling system (ECCS) injection flow rates following modifications which might alter these flow rates. Minimum acceptable flow rates were specified.

As a result of a high pressure injection (HPI) system modification approved by NRC letter dated May 29, 1979, Florida Power Corporation (licensee) has proposed to upgrade the flow rate test requirements to apply to the modified system and to allow credit for flow rate tests performed in the modified system configuration but prior to actual modification completion. We have evaluated the proposed change.

Evaluation

Currently Technical Specification (TS) 4.5.2g requires that each of the four HPI flow paths be demonstrated to have a flow rate of at least 250 gpm. This assumes one HPI pump (500 gpm) injecting through two lines in both HPI trains. This testing demonstrates both a minimum total flow (500 gpm per pump) and a generally equal distribution.

The approved modification to the HPI system could alter flow characteristics because the pump discharge cross connect valves are open instead of closed. This modification was necessary to insure at least 70% flow from one HPI pump was available for core cooling in the event of the most limiting small break and the worst single failure. The licensee's analysis supporting the 350 gpm (70% flow from one HPI pump) minimum flow requirement was found acceptable during our review of the proposed modification.

Since the most limiting flow distribution requirement now is that one HPI pump will supply 350 gpm through any combination of three injection lines (while injecting through four lines), the licensee has proposed to change the test requirement accordingly. In addition, the requirement that each HPI pump supply 500 gpm will be retained.

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We have determined that the proposed change is in accordance with the currently approved ECCS flow rate requirements and is therefore acceptable.

The licensee also proposed to change the current requirement that the flow rate tests be performed following completion of the modification. The proposed change would allow credit for testing done with the HPI system in the modified configuration (in this case with the pump discharge cross-connects open) but prior to completing the entire system modification (e.g., electric circuit changes). Since this testing meets the intent of the current requirement to demonstrate adequate flow rates in the modified system configuration, we find the proposed change acceptable.

Environmental Consideration

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 §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 23, 1979