



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 145 TO FACILITY OPERATING LICENSE NO. DPR-23
CAROLINA POWER & LIGHT COMPANY
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261

1.0 INTRODUCTION

In a letter dated November 20, 1992, Carolina Power & Light Company (CP&L), the licensee for the H. B. Robinson Steam Electric Plant, Unit No. 2, requested an amendment for a Technical Specification (TS) modification that adds a requirement for calibrating the auxiliary feedwater (AFW) flow instrumentation at each refueling outage and deletes the separate requirement for a functional test at each refueling outage. The new instrumentation, installed by a plant modification, to monitor AFW flow resulted in a change in the method of verifying operability of the instrumentation. The new instrumentation can be calibrated; whereas, the old instrumentation could only be functionally tested.

2.0 BACKGROUND

The function of the AFW flow indication instrumentation is to provide sufficient and accurate information to an operator to allow for the recognition and isolation of faulted piping supplying AFW flow to a steam generator to ensure continued cooling of the reactor coolant system. The old ultrasonic-type instrumentation was inaccurate because its flow sensor material was not compatible with the AFW maximum fluid temperature. This material would become deformed under maximum temperature to the extent that the acoustic signal would be distorted. To improve the accuracy and reliability of the AFW flow indication in the main control room, CP&L replaced the existing ultrasonic flow sensors with an annubar-type differential pressure flow-measuring sensor.

The new flow-sensing instrumentation can be calibrated; whereas, the old instrumentation could not. Since the old instrumentation could not be calibrated, its operability could only be verified by functional checks. Therefore, existing TS Table 4.1-1 requires a monthly channel check and a refueling interval functional check. Because the new instrumentation can be calibrated, the proposed TS modification requires a refueling interval calibration instead of a refueling interval functional check.

A functional check verifies only the operability of the instrument; whereas, periodic calibration ensures that the presentation and acquisition of plant information are accurate and reliable and that the instrumentation would continue to perform at its required level.

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3.0 EVALUATION

The proposed revision to Item 33 of TS Table 4.1-1, "Auxiliary Feedwater Flow Indication," incorporates two changes: (1) the addition of a requirement for a refueling interval calibration of the instrumentation, and (2) the deletion of the separate requirement for a refueling interval functional test. The addition of the calibration requirement increases accuracy and reliability and ensures that the flow instrumentation continues to perform at its required level. Removing the separate requirement for a refueling interval functional test eliminates duplicate testing because the channel calibration includes the channel functional test. TS Definition 1.6.2 defines Channel calibration as, "Adjustment of channel output such that it responds, with acceptable range and accuracy, to known value of the parameter which the channel measures. Calibration shall encompass the entire channel, including the alarm or trip, and shall be deemed to include the channel functional test." Therefore, the proposed changes would not eliminate any present requirements; on the contrary, they would improve the reliability and accuracy of flow indication provided by the instrumentation.

4.0 SUMMARY

Based on the above evaluation the staff finds that the proposed TS modification to add a requirement for a refueling interval calibration of the AFW flow instrumentation and to delete the separate requirement for a refueling interval functional test, is acceptable.

5.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of South Carolina official was notified of the proposed issuance of the amendment. The State official had no comments.

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes surveillance requirements. The NRC 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 (January 6, 1993, at 58 FR 592). 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.

7.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) 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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Date: March 12, 1993