



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 96 TO FACILITY LICENSE NO. DPR-62

CAROLINA POWER & LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

DOCKET NOS. 50-324

1.0 Introduction

By letter dated January 10, 1984, the Carolina Power & Light Company (the licensee) requested an amendment to Facility Operating License No. DPR-62 for the Brunswick Steam Electric Plant (BSEP) Unit No. 2. The amendment would permit postponement of one full-flow test of the core spray pumps until the primary containment suppression chamber is restored to its operational condition.

2.0 Background

Brunswick Unit 2 was shut down on March 11, 1984 for refueling, maintenance work and modification of the Mark I torus suppression pool. In conjunction with the latter, the suppression pool has been drained and therefore it is now not possible to perform the usual full-flow surveillance test of the Core Spray System (CSS) wherein water is pumped from the suppression pool and back into it.

Technical Specification 4.5.3.1.c.1 states:

"4.5.3.1 Each CSS subsystem shall be demonstrated OPERABLE: ...

c. At least once per 92 days by:

1. Verifying that each CSS pump can be started from the control room and develops a flow of at least 4625 gpm on recirculation flow against a system head corresponding to a reactor vessel pressure of \geq 113 psig."

In regard to this requirement, the maximum permissible interval between full flow tests is presently 92 days, plus a 25 percent extension of surveillance intervals generally permitted by Technical Specification 4.0.2.a. Thus, the maximum permissible interval is presently 115 days.

This full flow test was last performed on March 9 and March 11, 1984 for loops B and A, respectively. Due to the modifications being made to the suppression pool the maximum permissible interval between full flow tests

will be exceeded. Carolina Power & Light is, therefore, requesting a one time extension of the maximum surveillance interval during the upcoming refueling outage (Reload 5) until within 48 hours after restoration of the suppression chamber to operable status, but in any case no later than November 15, 1984. Based on the present outage schedule, CP&L plans to restore the suppression chamber to operable status and perform Surveillance Requirement 4.5.3.1.c.1 by approximately August 15, 1984. This will extend the surveillance interval from the present maximum of 115 days to approximately 159 days. The November 15, 1984 date allows for contingencies in the completion of modification to the suppression pool making the total allowable surveillance interval 251 days.

3.0 Evaluation

We have considered the safety significance of extending the present surveillance interval for performing a full flow test of the Core Spray System. The interval would be extended from a nominal 92-day interval to a maximum of 251 days. We have considered the potential need for a CSS during this shutdown period, the availability of the CSS, the verification of operability of the CSS by other surveillance tests, the availability of other means of cooling the reactor core and the past performance of the CSS.

The licensee has provided the following information in response to these considerations.

1. For the majority of the outage (approximately 20 weeks), the fuel will not be in the vessel therefore, removing the need for CSS at that time.
2. Normally, in the refueling condition (OPERATIONAL CONDITION 5), the CSS is not required to be operable if the suppression pool is not operable and the following conditions are met: (1) the reactor vessel head is removed, (2) the refueling cavity is flooded, (3) the spent fuel pool gates are removed and (4) the water level is maintained within specified limits.

The CSS will be available for operation, if needed, during the relatively short interval when operability is required due to plant conditions.

3. The CSS consists of two independent subsystems, each with 100% capacity.

Redundant systems that will be available to supply core reflood capability include the condensate and the service water injection system, with a small volume from the control rod drive system.

4. Surveillance will be performed every 12 hours to verify that the CSS has an operable water source (TS 4.5.3.1.a). Surveillance will be

performed every 31 days to verify that the CSS is filled with water (TS 4.5.3.1.b.1).

Surveillance will be performed every 31 days to verify that all valves in the CSS flow path are properly aligned (TS 4.5.3.1.b.2).

Surveillance will be performed every 92 days to verify the operability of the core spray header differential pressure instrumentation (TS 4.5.3.1.c.2).

5. A review of previous CSS operability testing shows that the system is reliable, as no failures have been identified since 1978.

Based on this information and the considerations above, we have concluded that extending the surveillance interval for a full flow test of the CSS from 92 days to 251 days does not constitute a significant reduction in the verification of operability or the availability of this system. Furthermore, if the CSS were not available, other systems would be available to provide adequate cooling of the reactor core. Therefore, we find the proposed amendment to be acceptable.

4.0 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 §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.

5.0 Conclusions

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: May 8, 1984