



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 214 AND 194 TO FACILITY OPERATING
LICENSE NOS. DPR-70 AND DPR-75
PUBLIC SERVICE ELECTRIC & GAS COMPANY
PHILADELPHIA ELECTRIC COMPANY
DELMARVA POWER AND LIGHT COMPANY
ATLANTIC CITY ELECTRIC COMPANY
SALEM NUCLEAR GENERATING STATION, UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

1.0 INTRODUCTION

By letter dated June 22, 1995, as supplemented on May 13, 1998, the Public Service Electric & Gas Company (the licensee) submitted a request for changes to the Salem Nuclear Generating Station, Unit Nos. 1 and 2, Technical Specifications (TSs). The requested changes would revise TSs 3.4.1.4, "Reactor Coolant System - Cold Shutdown," and 3.9.8.2, "Refueling Operations - Low Water Level." Specifically, footnotes and associated information regarding service water (SW) system header operation to allow residual heat removal (RHR) system operation would be deleted to be consistent with current regulations and the Standard Technical Specifications - Westinghouse Plants (NUREG-1431). These footnotes and associated information had been placed in the TSs because of the concern about SW system piping integrity in the mid-1980's. The TS Bases Sections 3/4.4.1 and 3/4.9.8 would also be revised to incorporate these changes. The May 13, 1998, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination, and was within the scope of the original application.

2.0 EVALUATION

Background

In 1985, Salem Units 1 and 2 had excessive leaks in SW piping systems. Subsequently, the licensee replaced these SW piping systems using piping with improved material properties. The success of the modifications and the current structural integrity of the SW system has been demonstrated by good operating experience. In 1994, the NRC inspectors observed the licensee's SW System Operational Performance Inspection (SWSOPI) self-assessment and concluded that all elements of NRC Temporary Instruction (TI)2518/118, Revision 1, "Service Water System Operational Performance Inspection" were satisfactorily accomplished (NRC Inspection Report No. 50-272/311, 94-22, dated March 22, 1995). The findings of the SWSOPI validated the improved reliability of SW piping systems.

Evaluation

In its June 22, 1995, letter the licensee requested changes to the Salem Units 1 and 2 TSs that would delete the requirements in previous TS amendment nos. 72 and 46 for Units 1 and 2, respectively, regarding RHR system operation in Modes 5 and 6 (cold shutdown and refueling). In order to perform comprehensive SW header inspection during an outage, these amendments were implemented as an additional precaution due to an excessive number of SW piping leaks in 1985. These amendments had additional equipment requirements as listed in Table 3.4-3 for TS 3.4.1.4 and TS 3.9.8.2. The licensee is now proposing to delete the Table 3.4-3 requirements and replace it with the same support systems requirements in the plant operating procedures. These support systems requirements will ensure that adequate decay heat removal capability exists when one service water system is out for maintenance in Modes 5 and 6. The licensee also proposed revisions to TS Bases Sections 3/4.4.1 and 3/4.9.8 to incorporate the above changes.

Salem TSs require that the RHR loops should be available in Modes 5 and 6 as follows:

- a. Mode 5 - Two RHR loops are required to be operable and at least one RHR loop shall be in operation. Additionally, four filled reactor coolant loops, with at least two steam generators with their secondary side water levels greater than or equal to 5 percent (narrow range), may be substitutes for one RHR loop.
- b. Mode 6 - Two RHR loops are required to be operable if the water level in the refueling cavity is less than 23 feet above the reactor vessel flange.

The licensee took several compensatory measures to ensure active component redundancy and elimination of single active failure locations. The plant operating procedures have been revised to include the following support systems requirements before entering into the desired configuration (i.e., one SW loop out for maintenance in Modes 5 and 6). One piping path of SW system and component cooling water system is adequate to support both RHR loops. The plant operating procedures include the following:

- a. Two RHR loops, two component cooling water systems, and two service water pumps, powered from two different vital buses be kept operable.
- b. A listing of the active (air/motor operated) valves in the affected flow path to be locked open or disabled.

The licensee must meet these plant operating requirements to ensure adequate decay heat removal capability exists during operation in Modes 5 and 6.

Summary

The SW systems structural integrity and the plant procedural requirements provide adequate assurance that decay heat removal capability exists during operation in Modes 5 and 6. Thus, the NRC staff finds the proposed changes acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (60 FR 45183). Accordingly, the amendments meet 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 amendments.

5.0 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

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