

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO.171 TO FACILITY OPERATING LICENSE DPR-38

# AMENDMENT NO. 171TO FACILITY OPERATING LICENSE DPR-47

AMENDMENT NO. 168TO FACILITY OPERATING LICENSE DPR-55

# DUKE POWER COMPANY

OCONEE NUCLEAR STATION, UNITS 1, 2 AND 3

DOCKET NOS. 50-269, 50-270 AND 50-287

## 1.0 INTRODUCTION

By a February 6, 1986 letter, Duke Power Company (Duke or the licensee) proposed revisions to the Technical Specifications (TSs) of Facility Operating License Nos. DPR-38, DPR-47, and DPR-55 for the Oconee Nuclear Station, Units 1, 2, and 3. These amendments would revise the Station's common TS 4.5.2.1.1(a) on the reactor building spray (RBS) system to test only the initiation control circuitry without actually energizing the pump. Duke proposed to eliminate the need for valve line-up and pump operation; actions which constitute redundant tests to the inservice testing (IST) program at Oconee. By letter dated August 20, 1986, Duke responded to our request for a more substantive evaluation of a no significant hazards consideration. By a December 1, 1987 letter, Duke clarified its original submittal by adding to TS 4.5.2 testing of the RBS valves. This clarification would assure that the testing of the RBS valves would be in accordance with the requirements of subsection IWV, Section XI of the ASME Boiler and Pressure Vessel Code.

#### 2.0 DISCUSSION

The RBS and the reactor building cooling system remove heat from containment following an accident. These systems prevent building pressure from exceeding design pressure. The RBS system serves no function during normal operation. It removes post-accident energy by spraying borated water into the reactor building atmosphere.

The RBS system consists of two pumps, two spray headers, isolation valves, piping, instrumentation, and controls. Each unit's pumps and remotely operated valves can be operated from the control room. The RBS system, with both spray paths in operation, is sized to provide 100 percent of the design cooling capacity. Both paths operate independently; the RBS system operates separately from the reactor building cooling units; and these cooling units independently possess full capacity for post-accident cooling.

To demonstrate proper operation of the system, the present TS 4.5.2.1.1(a) requires Duke to test the RBS system during each refueling outage. To meet the existing TS and demonstrate operability of all system components but without spraying the reactor building, Duke tests each train of the RBS system twice; once with pump power isolated - to verify valve movement; and once with valves

8810180405 881014 PDR ADOCK 05000269 PDC PDC inoperable - to verify pump operation. The TS requires Duke to start the RBS pump and circulate water from the borated water storage tank through the pumps, the test-line, and back to the tank. TS 4.5.2.2.1 requires Duke to start the pumps and operate them to verify proper operation in accordance with the requirements of TS 4.0.4, which references the IST program.

The IST program requires verification of RBS pump operation every three months. The program tests inlet pressure, differential pressure, flow, vibration, lube oil level, and bearing temperature. The program verifies valve operation at least once every refueling outage.

The proposed amendments would eliminate a redundant test of the RBS system by deleting from the TSs the requirement for valve line-up and pump operation; this requirement is a redundant test to the Oconee IST program. The proposed amendments would add to the TSs the requirement for testing the initiation control circuitry only. Testing with the pump breaker in the "TEST" position allows the control circuitry to be tested without actually energizing the pump. Similar type of testing is presently permitted for the high pressure injection system. Furthermore, the proposed amendments would add TS 4.5.2.2.2 to assure that the RBS valves are included in the IST program.

### 3.0 EVALUATION

TS Section 4.5.2.1.1.a currently requires a signal and flow circulation test during each refueling outage to assure the operability of the RBS system. The proposed TSs would eliminate the flow circulation test which states the following: "Water will be circulated from the borated water storage tank through the reactor building spray pumps and returned through the test line to the borated water storage tank." Duke indicated that the valve and pump testing in the IST program assures the operability of the RBS system.

Specifically, TS Section 4.5.2.2.1 requires the pumps in the RBS system to be tested pursuant to TS Section 4.0.4, surveillance requirements for inservice testing of ASME Class 1, 2, and 3 components. The proposed TS Section 4.5.2.2.2 adds the requirement that the valves in the RBS system will also be tested in accordance with the requirements of TS Section 4.0.4. The Oconee IST program requires verification of RBS system pump operation every three months. The capability of the RBS pump to deliver water can be tested by opening the corresponding valve in the test line and starting the pump. Pump discharge pressure and flow indication will demonstrate the system flow performance. Therefore, the required flow circulation test in current TS Section 4.5.2.1.1.a to verify the operability of the system is redundant to normal testing per the IST program when the pumps and valves in the system are required to be tested per the IST program as specified in TS Section 4.0.4.

Therefore, we find acceptable Duke's proposed TSs on the RBS system: (1) to delete the flow circulation test from TS 4.5.2.1.1.a; and (2) to add valve testing in accordance with the IST program to TS 4.5.2.2.2.

### 4.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of facility components located within the restricted area as defined in 10 CFR Part 20. We have 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 these amendments involve no significant hazards consideration, and there has been no public comment on such finding. 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 these amendments.

#### 5.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (52 FR 16941) on May 6, 1987, and consulted with the state of South Carolina. No public comments were received, and the state of South Carolina did not have any comments.

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

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Dated: October 14, 1988