



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 87 TO PROVISIONAL OPERATING LICENSE NO. DPR-13
SOUTHERN CALIFORNIA EDISON COMPANY
SAN ONOFRE NUCLEAR GENERATING STATION, UNIT NO. 1
DOCKET NO. 50-206

1.0 INTRODUCTION

By letter dated September 9, 1983, as modified by letter dated April 12, 1984 and supplemented on November 14, 1984, Southern California Edison Company (the licensee) requested an amendment to Provisional Operating License No. DPR-13 for the San Onofre Nuclear Generating Station, Unit No. 1. This amendment would authorize changes to the Technical Specifications (TS) on containment leakage testing. This Safety Evaluation addresses proposed changes to Type B and C testing and recirculation system testing. Changes relating to Type A testing were issued in Amendment No. 75 to the license on June 4, 1984.

A Notice of Consideration of Issuance of Amendment to License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing related to the requested action was published in the Federal Register on June 20, 1984 (49 FR 25374). No public comments or requests for hearing were received.

2.0 DISCUSSION

Technical Specification 4.3.1 establishes the requirements for containment leakage testing. The proposed changes relating to Type B, Type C, and recirculation system testing are discussed below.

2.1 Type B Tests

The licensee submitted proposed changes to Section 4.3.1.II of the plant TS regarding Type B testing, by letter dated September 9, 1983, and supplemental information by letter dated April 12, 1984.

Type B testing is conducted at a test pressure not less than 49.4 psig. The personnel and emergency air locks are tested every 6 months at or above 49.4 psig. If an air lock is used for multiple entries, it will be tested at least once per 72 hours at 10 psig. The foregoing Type B testing is acceptable because it is in accordance with the provisions of Paragraphs III.B.2, III.D.2(b)(i) and III.D.2(b)(iii) of Appendix J to 10 CFR Part 50.

To satisfy Paragraph III.D.2(b)(iv) of Appendix J, the licensee proposed acceptance criteria for air lock testing at the full pressure (49.4 psig) and at the reduced pressure (10 psig). However, the proposed values of 0.05 wt%/day at 49.4 psig (0.42 L_g) and 0.025 wt%/day at 10 psig (0.21 L_g), are substantially greater than what has normally been accepted by the NRC staff. Based on the guidance contained in the Standard Technical Specifications, the leakage contribution of large penetrations, such as air locks, should be limited to no more than a small fraction of the allowable containment leakage; for example, 0.05L_g. On this basis, the proposed acceptance criterion of 0.05 wt%/day is unacceptable. The NRC staff will request the licensee to revise the proposed acceptance criterion for air lock leakage rate testing to an acceptably low level. Pending receipt of the revisions, the staff is deferring action on this portion of the requested changes, as discussed and agreed to by the licensee.

Type B testing, except for airlocks, is performed during every reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than 2 years. This Type B test schedule is in conformance with the requirements in Paragraph III.D.2(a) of Appendix J to 10 CFR Part 50, and, therefore, is acceptable.

2.2 Type C Tests

The proposed changes regarding Type C tests (TS Section 4.3.1.III) are described in Enclosure 2 of the licensee's letter of September 9, 1983, as revised by letter dated April 12, 1984.

Type C tests are conducted at a test pressure not less than 49.4 psig, during each reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than 2 years. The NRC staff finds that the proposed test pressure and test schedule are consistent with the requirements in Paragraph III.C.2(a), and III.D.3 of Appendix J to 10 CFR Part 50, and, therefore, are acceptable. The acceptance criterion for the combined leakage rate from Type B and Type C testing, i.e., the sum of all local leak rate tests, is less than 0.072 wt%/day (0.6 L_g), which satisfies Paragraph III.B.3 of 10 CFR Part 50, Appendix J, and is, therefore, acceptable.

Seal tests conducted on active and passive containment ventilation isolation valves will be performed every 3 and 6 months, respectively. The staff finds this testing frequency to be in conformance with the guidelines of Generic Issue B-24, Containment Purging and Venting During Normal Operation, and, therefore, acceptable.

The enclosure to the April 12, 1984 submittal mislabeled the section of the TS "Containment Isolation Valve Leakage Rate Tests (Type C)" as "II." instead of "III." In addition, Section 4.3.1.III.C was mistitled "Test Pressure" instead of "Test Schedule." The NRC staff corrected these mislabeled headings. These changes are administrative and have no safety significance.

2.3 Recirculation System

The recirculation system provides long-term core cooling during the recirculation phase following a LOCA. The containment penetrations associated with the recirculation system include one containment spray line, three reactor coolant pump seal water injection lines, and the recirculation pump discharge line to the recirculation heat exchangers. The recirculation system consists of two recirculation sump pumps, two refueling water pumps, and two charging pumps. Each pair of pumps is connected in parallel to maintain the recirculation flow in the event of a single failure. When in service, the system provides a sealing function which prevents a release of containment atmosphere through the lines. The system piping configuration provides water loop seals inside the containment in the event a valve fails to open. The licensee has justified that the loop seals on the containment side of the valves would exist for a period greater than 30 days following onset of an accident. Therefore, in lieu of Type C testing, the TS prescribe hydrostatic testing to verify the water seal function. We find this to be in accordance with the provisions of Section III.C.3(b) of Appendix J to 10 CFR Part 50, and, therefore, acceptable.

The licensee's November 14, 1984 submittal included a revised Bases section for TS 4.3 regarding Recirculation System Testing. This revised Bases section provides more detailed information identifying the containment penetrations encompassed by the recirculation and containment spray systems and the basis for the water seal function. This additional discussion in the Bases does not affect or alter the requirements of the specification; rather, it provides additional background information. This revised Bases section is not substantive nor does it have any safety significance. Accordingly, the revised Bases section was incorporated in the TS Section 4.3 Bases.

3.0 ENVIRONMENTAL QUALIFICATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes to the surveillance requirements. The 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this amendment.

4.0 CONCLUSION

The staff 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, and (2) 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.

5.0 ACKNOWLEDGEMENT

C. Li and W. Paulson contributed to this Safety Evaluation.

Dated: February 8, 1985