



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

SAFETY EVALUATION REPORT BY THE OFFICE OF NUCLEAR REACTOR REGULATION

APPENDIX J REVIEW

YANKEE NUCLEAR POWER STATION (YANKEE)

DOCKET NO. 50-29

1.0 INTRODUCTION

On May 20, 1975[1], the NRC requested the Yankee Atomic Electric Company (YAEC) to review its containment testing program for the Yankee Nuclear Power Station (Yankee), and the associated Technical Specifications, for compliance with the requirements of Appendix J to 10 CFR Part 50.

Appendix J to 10 CFR Part 50 was published on February 14, 1973. Since by this date there were already many operating nuclear plants and a number more in advance stages of design or construction, the NRC decided to have these plants reevaluated against the requirements of the new regulation. Therefore, beginning in 1975, requests for review of the extent of compliance with the requirements of Appendix J were made of each licensee. Following the initial responses to these requests, NRC staff positions were developed which would assure that the objectives of the testing requirements of the above cited regulation were satisfied. These staff positions have since been applied to our review of the submittals filed by the licensee for Yankee. The results of our evaluation are provided below.

2.0 EVALUATION

Our consultant, the Franklin Research Center (FRC), has reviewed the licensee's submittals [2, 3, 4, 5, 8, 9, 10] and prepared the attached evaluation of containment leakage test for Yankee.

We have reviewed this evaluation and concur in its bases and findings.

3.0 CONCLUSION

Based on our review of the enclosed Technical Evaluation Report (TER) regarding the Appendix J review for Yankee we conclude that:

- 3.1 YAEC's proposed approach for airlock testing is acceptable, and no exemption from the requirements of Appendix J is needed because of the revision to Section III.D.2 of Appendix J, effective October 1980. YAEC should ensure that its airlock testing program satisfies all requirements of the revised Section III.D.2.
- 3.2 An exemption from the Type B testing requirements for the equipment and emergency hatches, containment leg expansion joints, and the fuel chute expansion joint is acceptable because testing experience has shown that periodic Type A testing provides sufficient leakage monitoring of these penetrations.
- 3.3 YAEC's proposal to test 25% of the electrical penetrations at the Yankee plant annually with provisions for the retest of failures is acceptable, considering the design of the penetrations, the type of penetration, and the continuous containment leakage monitoring system. An exemption from Type B testing should be granted.
- 3.4 The isolation valves listed in Section A of Table 3.6-1 of the Technical Specifications, which are in lines associated with the secondary side of the steam generators, should be removed from the table because Appendix J does not require the testing of these valves.
- 3.5 Valves SI-V-14, CS-V-621, and CH-V-611 do not require Type C testing and no exemption is necessary because Appendix J does not require this testing.

- 3.6 Valves SC-MOV-551 through -554, CH-MOV-522 and BF-CV-1000, -1100, -1200, and -1300 do not require Type C testing, and no exemption is necessary because Appendix J does not require testing. Valves VD-V-752 and -754 should be Type C tested in accordance with Appendix J.
- 3.7 YAEC's request for temporary exemptions from the Type C testing requirements while modifying the penetrations to permit testing is acceptable since all planned modifications will be completed by the 1982 refueling outage.

4.0 Environmental Consideration

We have determined that the exemptions do 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 exemptions involve 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 these exemptions.

5.0 Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the exemptions do not involve a significant increase in the probability or consequences of accidents previously considered, do not create the possibility of an accident of a type different from any evaluated previously, and do not involve a significant decrease in a safety margin, the exemptions do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of these exemptions will not be inimical to the common defense and security or to the health and safety of the public.

REFERENCES

1. NRC generic letter to YAEC, dated May 20, 1975.
2. YAEC letter to NRC, dated June 4, 1975.
3. YAEC letter to NRC, dated September 2, 1975.
4. YAEC letter to NRC dated September 30, 1975.
5. YAEC letter to NRC, dated October 10, 1975.
6. A. Schwencer (NRC) letter to R. Groce (YAEC), dated November 29, 1976.
7. D. M. Crutchfield (NRC) letter to YAEC, dated February 23, 1981.
8. D. E. Vandeburgh (YAEC) letter to A. Schwencer (NRC), dated February 7, 1977.
9. J. A. Kay (YAEC) letter to D. M. Crutchfield (NRC), dated April 27, 1981.
10. Proposed Change No. 149, submitted to NRC on March 9, 1977.

Attached:

TER dated 6/15 '82

Date: SEP 2 1982