



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 89 TO FACILITY OPERATING LICENSE NO. NPF-29
ENTERGY OPERATIONS, INC., ET AL.
GRAND GULF NUCLEAR STATION, UNIT 1
DOCKET NO. 50-416

1.0 INTRODUCTION

By letter dated June 25, 1991, the licensee (Entergy Operations, Inc.), submitted a request for changes to the Grand Gulf Nuclear Station, Unit 1 (GGNS) Technical Specifications (TS). The requested changes would revise the TS to allow a one-time extension of the required test interval for overall integrated containment leak rate tests (Type A tests) as specified in TS 4.6.1.2.a. The licensee also requested deletion of the TS 4.6.1.2.a requirement coupling the third Type A tests to the plant shutdown for the 10-year Inservice Inspection (ISI) outage.

The licensee indicated that the preoperational integrated leak rate tests (ILRTs) at GGNS were completed on January 4, 1982; the first periodic ILRT was completed during a maintenance outage on November 4, 1985, and the second (most recent) ILRT on April 15 and 16, 1989, during Refueling Outage 3. In accordance with the current TS 4.6.1.2.a requirement, a third (the next periodic) ILRT must be performed 40 ± 10 months later (between October 1991 and June 1993). This TS also requires that the third periodic test in a 10-year service period be conducted during the shutdown for the 10-year ISI outage. As the GGNS entered commercial operation on July 1, 1985, the first 10-year ISI will be conducted during the Refueling Outage 7 (RF07), planned for April 1995. Because of this timing, it is not possible to simultaneously meet all of the test interval requirements of TS 4.6.1.2.a as currently written. The licensee proposed to perform the third ILRT during Refueling Outage 6 (RF06), planned for October 1993 (approximately 54 months from previous test). The proposed TS revision provides for a one-time extension of the 40 ± 10 month interval via a footnote to TS 4.6.1.2.a. The one-time extension of the ILRT test interval and the deletion of coupling requirements to the 10-year ISI outage are exemptions to Appendix J requirements.

2.0 EVALUATION

The licensee indicated that the past timing of the Type A tests has been the result of an unanticipated delay of approximately 42 months between the

preoperational ILRT and completion of power ascension testing. The intent of the established test interval is to conduct three approximately equally spaced Type A tests within a given 10-year inservice period. The proposed extension remains consistent with the intent. The alternative of conducting the third periodic ILRT during RF05 in order to meet the 40 ± 10 -month requirement would necessitate conducting another test during RF07. The result would be four Type A tests during the first 10-year inservice, clearly contrary to the intent of Appendix J regulations. The licensee has estimated that performance of an additional test would add 2 days to the outage schedule with associated costs and 9 man-rem of exposure to test personnel. The licensee indicated that such additional costs are in excess of those contemplated when the regulation was adopted.

According to the licensee, no trend in previous test results at GGNS indicates that an extension of the maximum test interval by approximately 4 months would jeopardize the ability of the containment to maintain the leakage rate at or below the required Type A limits. The three previous tests conducted at GGNS showed leakage rates of 42%, 57%, and 54%, respectively, of the allowable leakage rate of 9.75La. Moreover, industry data indicate that most ILRT failures are due to leakage through penetrations that are Type B or C local leak rate tested. These penetrations are tested at every refueling outage and provide sufficient verification of acceptable containment leakage rates between ILRTS.

The licensee also indicated that there have been no permanent modifications to the containment structure, liner, or penetrations, nor other temporary alterations that would adversely affect the Type A test results since the last successful ILRT. Presently, no such modifications to the containment boundary are planned prior to RF06 when the next ILRT will be conducted under the proposed TS revision. Any major modifications to the containment would be subject to the special testing requirements of Section IV.A of Appendix J. The proposed modification of the Type A test schedule is a one-time extension. Following RF06, the ILRT schedule will be appropriately planned to meet the required test interval in the future.

Based on the past ILRT test results and the absence of modifications to the containment and its penetrations, the staff finds that the proposed amendment for a one-time extension of the required test interval to allow performance of the third periodic ILRT during RF06 would not adversely affect plant safety and, therefore, is acceptable.

Regarding decoupling, the licensee indicated that no practical need exists to link the third Type A ILRT with the inspections performed during each 10-year ISI outage. The two programs evaluate different plant characteristics, and the methods of complying with each program are considerably different. The purpose of the containment leak rate test program, as described in the

introduction to Appendix J to 10 CFR Part is to ensure that leakage through the primary containment and components penetrating the primary containment does not exceed allowable leakage rate limits. These limits help to ensure compliance with the guidelines of 10 CFR Part 100. The 10-year ISI or ASME Section XI inspection program is intended to separately ensure that the structural integrity of Class 1, 2, and 3 components is maintained in accordance with the requirements of the ASME code or 10 CFR 50.55a.

The proposed decoupling has no safety consequences because the requirements of containment integrity in Appendix J and the TS and the structural integrity of Class 1, 2, and 3 components in the ASME code are not being changed. The three Type A tests will continue to be performed at approximately equal intervals during each 10-service period. The staff finds that deletion of the requirements of TS 4.6.1.2.a linking the Type A test to the 10-year ISI outage would not adversely affect the plant safety.

Based on the above evaluation, the staff concludes that changing TS 4.6.1.2.a to allow a one-time extension of the interval between containment integrity leak rate tests for performance of the third periodic Type A test during the RFO6 and to delete the requirement coupling the third Type A test to the plant shutdown for the 10-year inservice inspection outage will not adversely impact containment integrity and is, therefore, acceptable.

3.0 STATE CONSULTATION

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

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes 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 changes in surveillance requirements. The NRC 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 the amendment involves no significant hazards consideration, and there has been no public comment on such finding (56 FR 33954). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9).

Pursuant to 10 CFR 51.32, an environmental assessment of the exemption from certain requirements of 10 CFR Part 50, Appendix J, related to these actions was published in the Federal Register on February 19, 1992 (57 FR 6046). Accordingly, the Commission has determined that the issuance of this amendment will not result in any environmental impacts others than those evaluated in the Final Environmental Statement.

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

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Date: February 20, 1992