



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 149 AND 88

TO FACILITY OPERATING LICENSE NO. DPR-67 AND NPF-16

FLORIDA POWER AND LIGHT COMPANY, ET AL.

ST. LUCIE PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-335 AND 50-389

1.0 INTRODUCTION

On September 12, 1995, the U.S. Nuclear Regulatory Commission (NRC) approved issuance of a revision to 10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors" which was subsequently published in the *Federal Register* on September 26, 1995, and became effective on October 26, 1995. The NRC added Option B "Performance-Based Requirements" to allow licensees to voluntarily replace the prescriptive requirements of 10 CFR Part 50 Appendix J with testing requirements based on both overall performance and performance of individual components.

By two letters dated October 28, 1996, Florida Power and Light (FPL or the licensee) proposed changes to the Technical Specifications (TS) for St. Lucie Units 1 and 2 to implement 10 CFR Part 50, Appendix J, Option B performance-based requirements. The licensee has established a "Primary Containment Leakage Rate Testing Program," and proposed adding this program to the TS. The program references Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program" which specifies a method acceptable to the NRC for complying with Option B, and Bechtel Topical Report, BN-TOP-1, "Testing Criteria For Integrated Leakage Rate Testing of Primary Containment Structures For Nuclear Power Plants," a deviation from the regulatory guide which the licensee proposes to use for Type A testing.

Changes are also proposed to remove Tables 3.6-1, "Containment Leakage Paths," and 3.6-2, "Containment Isolation Valves" in accordance with Generic Letter (GL) 91-08, "Removal of Component Lists from Technical Specifications" and relocate the information to plant procedures.

2.0 BACKGROUND

Compliance with Appendix J provides assurance that the primary containment, including those systems and components which penetrate the primary

ENCLOSURE 3

containment, do not exceed the allowable leakage rate values specified in the TS. The allowable leakage rate is determined so that the leakage assumed in the safety analyses is not exceeded.

On February 4, 1992, the NRC published a notice in the Federal Register (57 FR 4166) discussing a planned initiative to begin eliminating requirements marginal to safety which impose a significant regulatory burden. 10 CFR Part 50, Appendix J, was considered for this initiative and the staff undertook a study of possible changes to this regulation. The study examined the previous performance history of domestic containments and examined the effect on risk of a revision to the requirements of Appendix J. The results of this study are reported in NUREG-1493, "Performance-Based Leak-Test Program."

Based on the results of this study, the staff developed a performance-based approach to containment leakage rate testing. On September 12, 1995, the NRC approved issuance of this revision to 10 CFR Part 50, Appendix J, which was subsequently published in the *Federal Register* on September 26, 1995, and became effective on October 26, 1995. The revision added Option B "Performance-Based Requirements" to Appendix J to allow licensees to voluntarily replace the prescriptive testing requirements of Appendix J with testing requirements based on both overall and individual component leakage rate performance.

Regulatory Guide 1.163, September 1995, "Performance-Based Containment Leak Test Program," was developed as a method acceptable to the NRC staff for implementing Option B. This regulatory guide states that the Nuclear Energy Institute (NEI) document NEI 94-01, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J" provides methods acceptable to the NRC staff for complying with Option B with four exceptions which are described therein.

Option B requires that the regulatory guide, or other implementation document used by a licensee to develop a performance-based leakage testing program, must be included, by general reference, in the plant TS. The licensee has proposed referencing RG 1.163 and Bechtel Topical Report, BN-TOP-1, in TS 6.8.4.

Regulatory Guide 1.163 specifies an extension in Type A test frequency to at least one test in 10 years based upon two consecutive successful tests. Type B tests may be extended up to a maximum of 10 years based upon completion of two consecutive successful tests and Type C tests may be extended up to 5 years based on two consecutive successful tests. Bechtel Topical Report, BN-TOP-1, specifies a method for Type A testing which has been approved by the NRC and which allows Type A testing to be completed in as little as six (6) hours.

By letter dated October 20, 1995, NEI proposed TS implementing Option B. After some discussion, the staff and NEI agreed on a set of TS which were transmitted to NEI in a letter dated November 2, 1995. These TS are to serve

as a model for licensees to develop plant-specific TS in preparing amendment requests to implement Option B.

In order for a licensee to determine the performance of each component, factors that are indicative of, or affect, performance, such as an administrative leakage limit, must be established. The administrative limit is selected to be indicative of the potential onset of component degradation. Although these limits are subject to NRC inspection to assure that they are selected in a reasonable manner, they are not TS requirements. Failure to meet an administrative limit requires the licensee to return to the minimum value of the test interval.

Option B requires that the licensee maintain records to show that the criteria for Type A, B, and C tests have been met. In addition, the licensee must maintain comparisons of the performance of the overall containment system and the individual components to show that the test intervals are adequate. These records are subject to NRC inspection.

With regard to the removal of component lists from TS, on May 6, 1991, the Commission issued Generic Letter 91-08 (GL 91-08) relating to the issue of removing component lists from the TS. GL 91-08 stated in part:

This guidance includes the incorporation of lists into plant procedures that are subject to the change control provisions for plant procedures in the Administrative Controls Section of the TS. The removal of component lists from TS permits administrative control of changes to these lists without processing a license amendment, as is required to update TS component lists. Any change to component lists contained in plant procedures is subject to the requirements specified in the Administrative Controls Section of the TS on changes to plant procedures. Therefore, the change control provisions of the TS provide an adequate means to control changes to these component lists, when they have been incorporated into plant procedures, without including them in TS.

And, as stated in Enclosure 1 of GL 91-08:

Therefore, specifications may be stated in general terms that describe the types of components to which the requirements apply. This provides an acceptable alternative to identifying components by their plant identification number as they are currently listed in tables of TS components. The removal of component lists is acceptable because it does not alter existing TS requirements or those components to which they apply.

3.0 EVALUATION

The licensee's October 28, 1996, letters to the NRC proposed TS changes to permit the use of Option B of the revised 10 CFR Part 50 Appendix J, establish a "Containment Leakage Rate Testing Program," and proposes to add this program to the TS. The program references Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak Test Program" which specifies a method acceptable to

the NRC for complying with Option B. The licensee program includes an exception to RG 1.163 to allow either Bechtel Topical Report BN-TOP-1, or ANS 56.8-1994 to be used for type A leakage rate testing. In order to use Option B, a change to existing TS 4.6.1.1.c (Unit 2 only), 3/4.6.1.2, 3/4.6.1.3, 3/4.6.1.6, 3/4.6.6.3, and the addition of the "Containment Leakage Rate Testing Program" to TS Section 6.8.4 was required. Changes to the associated bases were also included in the submittals.

Option B permits a licensee to choose Type A; or Type B and C; or Type A, B, and C; testing to be done on a performance basis. The licensee has elected to perform Type A, B, and C testing on a performance basis.

The licensee also proposed to remove Tables 3.6-1, "Containment Leakage Paths," and 3.6-2, "Containment Isolation Valves," in accordance with GL 91-08, from the TS and relocate these tables to plant procedures. This requires a change to existing TS 1.7, 3/4.6.1.1, 3/4.6.1.2, and 3/4.6.3. TS 1.7, "Containment Vessel Integrity," is revised to delete reference to Table 3.6.2 and to add a statement regarding administratively controlled valves previously included with Table 3.6-2. TS 3/4.6.1.1, "Containment Integrity," is revised to reflect the deletion of Table 3.6-2, and adds the statement regarding administratively controlled valves. TS 3/4.6.1.2, "Containment Leakage," is revised to reflect the deletion of Table 3.6.1. TS 3/4.6.3, "Containment Isolation Valves," is revised to reflect the deletion of Table 3.6-2.

The TS changes proposed by the licensee for performance based testing are in compliance with the requirements of Option B and consistent with the guidance of RG 1.163, with the exception noted, and the generic TS of the November 2, 1995 letter and are, therefore, acceptable to the staff. The exception to allow the use of Bechtel Topical Report BN-TOP-1 is acceptable because the test method in this report has been approved by the NRC and still provides acceptable results.

The staff's review of the proposed changes determined that the removal of these tables does not eliminate the requirements for the licensee to ensure that the system, structure, or component is capable of performing its safety function. Although these tables are removed from the TS and incorporated into the St. Lucie Units 1 and 2 procedures, any plant modifications that affect any of these components would constitute a change to the facility as described in the Final Safety Analysis Report and the licensee must continue to evaluate these modifications in accordance with 10 CFR 50.59. Should the licensee's determination conclude that an unreviewed safety question is involved, due to either (1) an increase in the probability or consequences of accidents or malfunctions of equipment important to safety, (2) the creation of a possibility for an accident or malfunction of a different type than any evaluated previously, or (3) a reduction in the margin of safety, NRC approval and a license amendment would be required prior to implementation of the change. Therefore, the removal of the component lists in Tables 3.6-1 and 3.6-2 is acceptable because it does not alter existing TS requirements or those components to which they apply, and the changes are consistent with the guidance of GL 91-08.

4.0 STATE CONSULTATION

Based upon the written notice of the proposed amendments, the Florida State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes the 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 (61 FR 64386). 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.

6.0 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.

Principal Contributor: Len Wiens

Dated: February 10, 1997

