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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 190 TO FACILITY OPERATING LICENSE NO. DPR-26

CONSOLIDATED EDISON COMPANY OF NEW YORK

INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

DOCKET NO. 50-247

## 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 testing requirements of 10 CFR Part 50, Appendix J, with testing requirements based on both overall performance and the performance of individual components.

By letters dated August 7, 1996, and March 12, 1997, Consolidated Edison Company of New York (the licensee) requested changes to the Technical Specifications (TS) for Indian Point Nuclear Generating Unit No. 2 (IP2). The proposed changes would permit implementation of 10 CFR Part 50, Appendix J, Option B, and reference Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak Test Program," dated September 1995, which specifies a method acceptable to the NRC for complying with Option B. The March 12, 1997, supplemental letter did not change the initial letter proposed no significant hazards consideration.

## 2.0 BACKGROUND

Compliance with 10 CFR Part 50, Appendix J, provides assurance that the primary containment, including those systems and components which penetrate the primary containment, do not exceed the allowable leakage rate specified in the TS and Bases. The allowable leakage rate is determined so that the leakage rate 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, "Primary Containment Leakage Testing for Water-Cooled Power Reactors," 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 Containment 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, "Performance-Based Containment Leak Test Program," dated September 1995, was developed as a method acceptable to the NRC staff for implementing Option B. This RG states that the Nuclear Energy Institute (NEI) guidance document NEI 94-01, Rev. 0, "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 RG 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 TSs. The licensee has referenced RG 1.163 in the proposed IP2 TS.

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 interval 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.

By letter dated October 20, 1995, NEI proposed TS to implement Option B. After some discussion, the staff and NEI agreed on final TSs which were transmitted to NEI in a letter dated November 2, 1995. These TSs 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.

## 3.0 EVALUATION

The licensee's August 7, 1996, and March 12, 1997, letters to the NRC propose TS changes to permit the use of Option B of the revised 10 CFR Part 50, Appendix J. 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 TS changes refer to RG 1.163, "Performance-Based Containment Leak Test Program," dated September 1995, which specifies methods acceptable to the NRC for complying with Option B. This requires changes to existing TS 4.0.1, 4.4, and 6.9.2.a. Corresponding bases were also modified.

These TS changes replace specific surveillance requirements related to containment leakage rate testing and the corresponding acceptance criteria and test methods with a requirement to perform the testing as required by 10 CFR Part 50, Appendix J, Option B, as modified by approved exemptions, and in accordance with the guidelines contained in RG 1.163, dated September 1995. The licensee chose not to include its performance-based testing program in the TS as an administrative program, as was proposed in the November 2, 1995, letter to NEI discussed above. The November 2, 1995, letter provided guidance to licensees but is not an NRC requirement. The staff has reviewed the licensee's proposed TS changes and finds them consistent with the requirements of 10 CFR Part 50, Appendix J, Option B, in that the changes include general reference in the TS to the RG used by the licensee to develop the performance-based leakage-testing program for IP2. The staff has also compared the proposed TS with the model TS in the November 2, 1995, letter to NEI, and finds them to be consistent with the intent of the model TS, with several exceptions, noted below.

### 3.1 EXCEPTIONS TO THE MODEL TS GUIDANCE

#### 3.1.1 As-Left and As-Found Leakage Rates

The model TS, in the Bases for TS 3.6.1.1.1, state:

> Reviewer's Note: Regulatory Guide 1.163 and NEI 94-01 include acceptance criteria for as-left and as-found Type A leakage rates and combined Type B and C leakage rates, which may be reflected in the Bases.

As an extension of this concept, the licensee is proposing additional words, beyond the model TS, for TS 4.4.A.2, "Acceptance Criteria," to reflect these acceptance criteria for as-left and as-found Type A leakage rates. The staff has reviewed these additional words and finds that they are consistent with RG 1.163 and NEI 94-01, and are therefore acceptable.

#### 3.1.2 Air Lock Leakage Rate Acceptance Criteria

Proposed TS 4.4.C., "Air Lock Tests," deviates from the model TS in that it does not state separate, individual air lock leakage rate testing acceptance

criteria. It is, however, the same as the current TS. The proposed TS adds the measured air lock leakage rate to other Type B and C leakage rates and requires that the sum be less than 0.6 $L_a$, where $L_a$ is the maximum allowable leakage rate for the containment at peak accident pressure, $P_a$.

This represents no change from the current TS. Further, the provisions of Option B of Appendix J and RG 1.163 do not require separate, individual air lock leakage rate testing acceptance criteria to be placed in the TS. Based on the foregoing, the staff finds the subject TS to be acceptable.

3.1.3 Containment Purge/Vent Valves

It should be noted that the proposed TS set the Type C test interval for containment purge/vent valves to no more than 30 months. Although the model TS guidance provided in the NRC letter to NEI dated November 2, 1995, contains a requirement to perform leakage rate testing of containment purge valves every 6 months, the TS is in brackets, which means that it may or may not be applicable to a specific plant. The licensee's current TS do not contain a requirement for this more frequent leakage rate testing of containment purge/vent valves, which may be compared to the Appendix J, Option A frequency of once per refueling outage. Further, Option B of Appendix J, RG 1.163, and the subordinate guidance documents do not require the testing of these valves more often than once per 30 months. Therefore, the proposed TS sets the test interval for containment purge/vent valves to no more than 30 months, through adherence to Section C.2. of RG 1.163. The staff finds this to be acceptable.

3.2 SUMMARY

In summary, the staff has reviewed the changes to the TS and associated Bases proposed by the licensee and finds that they are in compliance with the requirements of Appendix J, Option B, and are consistent with the guidance of RG 1.163, and finds them to be consistent with the intent of the model TS, with several exceptions reviewed above, and are therefore acceptable.

4.0 STATE CONSULTATION

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

5.0 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 or changes a 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 effluent 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 (61 FR 47976). Accordingly, the 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 the amendment.

## 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.

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