

June 17, 1997

Mr. James Knubel  
Chief Nuclear Officer  
Power Authority of the State  
of New York  
123 Main Street  
White Plains, NY 10601

SUBJECT: ISSUANCE OF AMENDMENT FOR INDIAN POINT NUCLEAR GENERATING UNIT NO. 3  
(TAC NO. M97785)

Dear Mr. Knubel:

The Commission has issued the enclosed Amendment No. 174 to Facility Operating License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3 (IP3). The amendment consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated January 13, 1997, as supplemented March 24, 1997, May 13, 1997, and May 23, 1997.

The amendment revises Technical Specifications Requirements for containment leakage testing to add several containment isolation valves and to implement the requirements of 10 CFR Part 50, Appendix J, Option B for performance-based primary reactor containment leakage testing.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY:

George F. Wunder, Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-286

Enclosures: 1. Amendment No. 174 to DPR-64  
2. Safety Evaluation

cc w/encls: See next page

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in cursive script, appearing to read "George F. Wunder".

George F. Wunder, Project Manager  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-286

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2. Safety Evaluation

cc w/encls: See next page

James Knubel  
Power Authority of the State  
of New York

Indian Point Nuclear Generating  
Station Unit No. 3

cc:

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

POWER AUTHORITY OF THE STATE OF NEW YORK

DOCKET NO. 50-286

INDIAN POINT NUCLEAR GENERATING UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 174  
License No. DPR-64

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Power Authority of the State of New York (the licensee) dated January 13, 1997, as supplemented March 24, 1997, May 13, 1997, and May 23, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-64 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 174, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance to be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Alexander W. Dromerick, Acting Director  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: June 17, 1997

ATTACHMENT TO LICENSE AMENDMENT NO. 174

FACILITY OPERATING LICENSE NO. DPR-64

DOCKET NO. 50-286

Revise Appendix A as follows:

Remove Pages

iv  
vi  
4.4-1  
4.4-2  
4.4-3  
4.4-4  
4.4-5  
4.4-7  
4.4-8  
4.4-9  
4.4-10  
Table 4.4-1 (page 6 of 7)  
6-22  
6-23

Insert Pages

iv  
vi  
4.4-1  
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4.4-3  
4.4-4  
4.4-5  
4.4-7  
4.4-8  
4.4-9  
4.4-10  
Table 4.4-1 (page 6 of 7)  
6-22  
6-23



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 174 TO FACILITY OPERATING LICENSE NO. DPR-64  
CONSOLIDATED EDISON COMPANY OF NEW YORK  
INDIAN POINT NUCLEAR GENERATING UNIT NO. 3  
DOCKET NO. 50-286

1.0 INTRODUCTION

On September 12, 1995, the U.S. Nuclear Regulatory Commission (NRC) approved issuance of revisions 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 letter dated January 13, 1997, as supplemented March 24, 1997, May 13, 1997, and May 23, 1997, the New York Power Authority (the licensee) requested changes to the Technical Specifications (TSs) for Indian Point Nuclear Generating Unit No. 3. The 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 24, May 13, and May 23, 1997, supplemental letters provided clarifying information and a correction that were bounded by the initial 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 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 a 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 referenced RG 1.163 in the proposed Indian Point, Unit 3 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 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.

### 3.0 EVALUATION

The licensee's January 13, 1997, March 24, 1997, May 13, 1997 and May 23, 1997, letters to the NRC proposes to establish a "Containment Leakage Rate Testing Program" that will implement 10 CFR Part 50, Appendix J, Option B requirements for performance-based surveillance frequencies for Type A, B, and C containment leakage testing and to add this program, as well as several containment isolation valves, to the TS. The TS changes reference RG 1.163, "Performance-Based Containment Leak Test Program," dated September 1995, which specifies a method acceptable to the NRC staff for complying with 10 CFR Part 50 Appendix J, Option B. This requires changes to existing TS Section 4.4, and the addition of Section 6.14, "Containment Leakage Rate Testing Program" to the TS. The corresponding basis for TS Section 4.4 was also modified. 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.

Section 4.4.A.1.a, b, c, and d, which specify the test requirements, such as test pressure, duration, pre-test general containment inspection, and method of closure of containment isolation valves, for the integrated leakage rate test are removed based on those requirements being translated to the Containment Leakage Rate Testing Program as proposed in TS Section 6.14. Similarly, Section 4.4.A.2, and 3, "Acceptance Criteria," and "Frequency" are also being removed and their performance-based criteria incorporated into the Containment Leakage Rate Testing Program. Section 4.4.B is unchanged. The test, acceptance criteria, and frequency of test found in Sections 4.4.C.1, 2, and 3, "Sensitive Leakage Rate" are combined into one section, Section 4.4.C, under the change. This editorial change refers to the Weld Channel and Containment Penetration Pressurization System [WCCPPS) instead of identifying containment penetrations, weld channels, and certain double gasketed seals and isolation valve interspaces, as written in the current TS. Sub-sections 1 and 2 of Section 4.4.D.1 and 2, which provide test pressure, frequency, acceptance criteria, and containment integrity verification requirements for air lock tests are removed and replaced by a reference to Containment Air Lock leak rate testing in the Containment Leak Rate Testing Program added as TS Section 6.14. Current TS Section 4.4.E, "Containment Isolation Valves" contains individual requirements (sub-sections 1.a-e, and 2.a-c) for test frequencies and acceptance criteria for standard, non-pressurized, service water pressurized, and seal water pressurized containment isolation valves. TS Section 4.4.E consolidates the test pressures and acceptance criteria for each of the previously mentioned isolation valve categories and references the Containment Leakage Rate Testing Program. TS Sections 4.4.F, "Containment Modifications," 4.4.G, "Report of Test Results," and 4.4.H, "Annual Inspection," are deleted in the TS amendment. These changes are in accordance with 10 CFR Part 50 Appendix J, Option B, as modified by approved exemptions and RG 1.163 dated September 1995. Section V.B of Option B of 10 CFR Part 50, Appendix J requires licensees who wish to adopt Option B, submit to the NRC the implementation plan and request for revision to the TS, including a general reference in the plant TS to the regulatory guide or other implementation documents used by the licensee to develop a performance-based, leakage testing program. Accordingly, the licensee proposed TS Section 6.14,

"Containment Leakage Rate Testing Program," to implement the requirements of 10 CFR Part 50, Appendix J, Option B as modified by approved exemptions. Further, proposed TS Section 6.14 states that the program shall be in accordance with the guidelines contained in RG 1.163 dated September 1995, as modified by an exception, which is discussed below.

RG 1.163 specifies conformance to NEI 94-01, "Industry Guideline For Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," Rev. 0. NEI 94-01 states that the methods and techniques of ANSI/ANS 56.8-1994, "Containment System Leakage Testing Requirements," should be used. The licensee proposes to take exception to section 3.3.1 of the standard, in that certain WCCPPS isolation valves will not be Type C tested.

The licensee's letter dated May 13, 1997, states that these valves have not been Type C tested throughout the plant's life, and that NRC inspection reports from 1975 and the staff SER and supplements for IP3, issued in 1973 and 1975, indicate that the staff found it acceptable that these valves were not Type C tested. Consideration was given to the following design features, (1) the WCCPPS system is constantly monitored for changes to the system leakage rate while at power, (2) the WCCPPS system leakage rate is quantified during every refueling outage, and (3) pressure, higher than the peak containment accident pressure, is constantly maintained by the system. Therefore, the staff finds the proposed exception from RG 1.163 and its subordinate documents to be acceptable.

Based on the above, the staff finds the proposed changes to the TS to be acceptable.

The technical bases contained in TS Section 4 provide background information and are generally related to the individual Section 4 subsections. These technical bases were updated to be consistent with the overall amendment request and those changes are viewed by the staff as administrative, and are found to be acceptable.

To the list of containment isolation valves in Table 4.4-1, "Containment Isolation Valves," the licensee added four containment isolation valves that are currently identified in the FSAR and tested as containment isolation valves. The TS amendment request also adds two references to TS Section 4. The first reference is to Supplement 2 of the Indian Point 3 safety evaluation report. The second reference added is to the NRC safety evaluation related to Amendment No. 129 to Operating License No. DPR-64. The staff finds these administrative changes acceptable.

### 3.1 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, 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 and changes a surveillance requirement. 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 (62 FR 13173). 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.

Principal Contributor: W. Gleaves

Date: June 17, 1997

DATE: June 17, 1997

ISSUANCE OF AMENDMENT NO. 174 TO FACILITY OPERATING LICENSE NO. DPR-64

Docket File  
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