



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

March 8, 1995

*Docket  
File*

Mr. Stephen E. Quinn  
Vice President - Nuclear Power  
Consolidated Edison Company  
of New York  
Broadway and Bleakley Avenue  
Buchanan, NY 10511

SUBJECT: ISSUANCE OF SCHEDULAR EXEMPTION FROM THE REQUIREMENTS OF 10 CFR PART 50, APPENDIX J, FOR INDIAN POINT NUCLEAR GENERATING UNIT NO. 2 REGARDING DELAY OF NEXT REQUIRED TYPE A LEAKAGE RATE TEST (TAC NO. M90463)

Dear Mr. Quinn:

By letters dated September 19, 1994, January 13, 1995, and February 3, 1995, Consolidated Edison Company of New York requested a one-time schedular exemption to delay performance of a Type A test, as required by 10 CFR Part 50, Appendix J, for a period of approximately 24 months.

The NRC staff has reviewed the information provided in support of your schedular exemption request. On the basis of the submitted information and as discussed in the enclosed Exemption, the NRC staff has concluded that there is a high degree of confidence that the containment will not degrade to an unacceptable extent while this Exemption is in effect.

We find that granting the Exemption from the requirements of 10 CFR Part 50, Appendix J, Section III.D.1.(a), is authorized by law, will not present an undue risk to public health and safety, is consistent with the common defense and security, and meets the special circumstances described in 10 CFR 50.12(a)(2)(ii). Accordingly, your request for a schedular exemption to delay performance of the Type A test until the 1997 refueling outage is granted.

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S. E. Quinn

-2-

March 8, 1995

A copy of the Exemption is enclosed. The Exemption has been forwarded to the Office of the Federal Register for publication.

Sincerely,

Original signed by

Ledyard B. Marsh, Director  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-247

Enclosure: Exemption

cc w/encl: See next page

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S. E. Quinn

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March 8, 1995

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Ledyard B. Marsh, Director  
Project Directorate I-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-247

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cc w/encl: See next page.

Stephen E. Quinn  
Consolidated Edison Company  
of New York, Inc.

Indian Point Nuclear Generating  
Station Units 1/2

cc:

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Regional Administrator, Region I  
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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
CONSOLIDATED EDISON COMPANY OF NEW YORK ) Docket No. 50-247  
(Indian Point Nuclear Generating )  
Unit No. 2) )

EXEMPTION

I.

Consolidated Edison Company of New York, Inc. (Con Edison or the licensee) is the holder of Facility Operating License No. DPR-26, which authorizes operation of Indian Point Nuclear Generating Unit No. 2 (the facility or IP2), at a steady-state reactor power level not in excess of 3071.4 megawatts thermal. The facility is a pressurized water reactor located at the licensee's site in Westchester County, New York. The license provides among other things, that it is subject to all rules, regulations, and Orders of the U.S. Nuclear Regulatory Commission (the Commission or NRC) now or hereafter in effect.

II.

Section III.D.1.(a) of Appendix J to 10 CFR Part 50 requires the performance of three Type A containment integrated leak rate tests (ILRTs), at approximately equal intervals during each 10-year service period of the primary containment. The third test of each set shall be conducted when the plant is shutdown for the 10-year inservice inspection of the primary containment.

III.

By letters dated September 19, 1994, January 13, 1995, and February 3, 1995, Con Edison requested temporary relief from the requirement to perform a set of three Type A tests at approximately equal intervals during each 10-year service period of the primary containment. The requested exemption would permit a one-time interval extension of the third Type A test by approximately 24 months (from the 1995 refueling outage, currently scheduled to begin in February 1995, to the 1997 refueling outage) and would permit the third Type A test of the second 10-year inservice inspection period to not correspond with the end of the current American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) inservice inspection interval.

The licensee's request cites the special circumstances of 10 CFR 50.12, paragraph (a)(2)(ii), as the basis for the exemption. They point out that the existing Type B and C testing programs are not being modified by this request and will continue to effectively detect containment leakage caused by the degradation of active containment isolation components as well as containment penetrations. It has been the consistent and uniform experience at IP2 during the five Type A tests conducted from 1976 to date, that any significant containment leakage paths are detected by the Type B and C testing. The Type A test results have only been confirmatory of the results of the Type B and C test results. Additionally, the Indian Point 2 Containment Penetration and Weld Channel Pressurization System provides a means for continuously pressurizing the positive pressure zones incorporated into the containment penetrations, the channels over the welds in the steel inner liner and certain

containment isolation valves. This system provides continuous monitoring of these potential containment leakage paths, thus providing further assurance during power operation that a leak path does not exist and further obviates the need for Type A testing at this time. Therefore, application of the regulation in this particular circumstance would not serve, nor is it necessary to achieve, the underlying purpose of the rule.

#### IV.

Section III.D.1.(a) of Appendix J to 10 CFR Part 50 states that a set of three Type A leakage rate tests shall be performed at approximately equal intervals during each 10-year service period.

The licensee proposes an exemption to this section which would provide a one-time interval extension for the Type A test by approximately 24 months. The Commission has determined, for the reasons discussed below, that pursuant to 10 CFR 50.12(a)(1) this exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. The Commission further determines that special circumstances, as provided in 10 CFR 50.12(a)(2)(ii), are present justifying the exemption; namely, that application of the regulation in the particular circumstances is not necessary to achieve the underlying purpose of the rule.

The underlying purpose of the requirement to perform Type A containment leak rate tests at intervals during the 10-year service period, is to ensure that any potential leakage pathways through the containment boundary are identified within a time span that prevents significant degradation from continuing or becoming unknown. The NRC staff has reviewed the basis and supporting information provided by the licensee in the exemption request. The

NRC staff has noted that the licensee has a good record of ensuring a leak-tight containment. All Type A tests have passed with significant margin and the licensee has noted that the results of the Type A testing have been confirmatory of the Type B and C tests which will continue to be performed. The licensee has stated to the NRC Project Manager that they will perform the general containment inspection although it is only required by Appendix J (Section V.A.) to be performed in conjunction with Type A tests. The NRC staff considers that these inspections, though limited in scope, provide an important added level of confidence in the continued integrity of the containment boundary. The NRC staff also notes that the unique IP2 Containment Penetration and Weld Channel Pressurization System provides a means for continuously monitoring potential containment leakage paths.

The NRC staff has also made use of the information in a draft staff report, NUREG-1493, which provides the technical justification for the present Appendix J rulemaking effort which also includes a 10-year test interval for Type A tests. The integrated leakage rate test, or Type A test, measures overall containment leakage. However, operating experience with all types of containments used in this country demonstrates that essentially all containment leakage can be detected by local leakage rate tests (Type B and C). According to results given in NUREG-1493, out of 180 ILRT reports covering 110 individual reactors and approximately 770 years of operating history, only 5 ILRT failures were found which local leakage rate testing could not detect. This is 3% of all failures. This study agrees well with

previous NRC staff studies which show that Type B and C testing can detect a very large percentage of containment leaks. The IP2 experience has also been consistent with these results.

The Nuclear Management and Resources Council (NUMARC), now the Nuclear Energy Institute (NEI), collected and provided the NRC staff with summaries of data to assist in the Appendix J rulemaking effort. NUMARC collected results of 144 ILRTs from 33 units; 23 ILRTs exceeded  $1.0L_a$ . Of these, only nine were not due to Type B or C leakage penalties. The NEI data also added another perspective. The NEI data show that in about one-third of the cases exceeding allowable leakage, the as-found leakage was less than  $2L_a$ ; in one case the leakage was found to be approximately  $2L_a$ ; in one case the as-found leakage was less than  $3L_a$ ; one case approached  $10L_a$ ; and in one case the leakage was found to be approximately  $21L_a$ . For about half of the failed ILRTs the as-found leakage was not quantified. These data show that, for those ILRTs for which the leakage was quantified, the leakage values are small in comparison to the leakage value at which the risk to the public starts to increase over the value of risk corresponding to  $L_a$  (approximately  $200L_a$ , as discussed in NUREG-1493). Therefore, based on these considerations, it is unlikely that an extension of one cycle for the performance of the Appendix J, Type A test at IP2 would result in significant degradation of the overall containment integrity. As a result, the application of the regulation in these particular circumstances is not necessary to achieve the underlying purpose of the rule.

Based on generic and plant specific data, the NRC staff finds the basis for the licensee's proposed exemption to allow a one-time exemption to permit

a schedular extension of one cycle for the performance of the Appendix J, Type A test, provided that the general containment inspection is performed, to be acceptable.

Pursuant to 10 CFR 51.32, the Commission has determined that granting this Exemption will not have a significant impact on the environment (60 FR 12787 ).

This Exemption is effective upon issuance and shall expire at the completion of the 1997 refueling outage.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by

Steven A. Varga, Director  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,  
this 8th day of March 1995

\*See previous concurrence

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Dated at Rockville, Maryland,  
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