

October 29, 1987

Docket No. 50-247

Mr. Murray Selman
Vice President, Nuclear Power
Consolidated Edison Company
of New York, Inc.
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Dear Mr. Selman:

The Commission has issued the enclosed Amendment No. 126 to Facility Operating License No. DPR-26 for the Indian Point Nuclear Generating Unit No. 2. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated August 6, 1985 (TAC 59509).

The amendment revises the Technical Specifications to further limit use of the containment purge and vent isolation valves during power operations and to clarify requirements relating to the application of containment isolation action statements.

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

Sincerely,

Marylee M. Slosson, Project Manager
Project Directorate I-1
Division of Reactor Projects, I/II

Enclosures:

1. Amendment No. 126 to DPR-26
2. Safety Evaluation

cc: w/enclosures
See next page

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SH Lewis	PDI-1
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*See typos
on SFs
Typo's
corrected
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

DOCKET NO. 50-247

INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 126
License No. DPR-26

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Consolidated Edison Company of New York, Inc. (the licensee) dated August 6, 1985, 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-26 is hereby amended to read as follows:

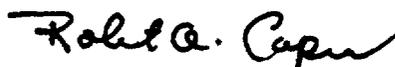
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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 126, 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



Robert A. Capra, Acting Director
Project Directorate I-1
Division of Reactor Projects, I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 29, 1987



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

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 126 TO FACILITY OPERATING LICENSE NO. DPR-26

DOCKET NO. 50-247

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
1-3	1-3
3.6-1	3.6-1
3.6-1a	3.6-1a

1.6.1 Channel Check

A qualitative determination of acceptable operability by observation of channel behavior during operation. This determination shall include, where possible, comparison of the channel with other independent channels measuring the same variable.

1.6.2 Channel Functional Test

Injection of a simulated signal into the channel to verify that it is operable, including alarm and/or trip initiating action.

1.6.3 Channel Calibration

Adjustment of channel output such that it responds, with acceptable range and accuracy, to known values of the parameter which the channel measures. Calibration shall encompass the entire channel, including alarm or trip, and shall be deemed to include the channel functional test.

1.6.4 Source Check

A Source Check is the qualitative assessment of channel response when the channel sensor is exposed to a source of increased radioactivity.

1.7 Containment Integrity

Containment integrity is defined to exist when:

- a. All non-automatic containment isolation valves which are not required to be open during accident conditions, except those required to be open for normal plant operation or testing as identified in Specification 3.6.A, are closed and blind flanges are installed where required.
- b. The equipment door is properly closed.
- c. At least one door in each personnel air lock is properly closed.
- d. All automatic containment isolation valves are either operable or in the closed position, or isolated by a closed manual valve or flange that meets the same design criteria as the isolation valve.
- e. Containment leakage has been verified in accordance with the surveillance requirements of Specification 4.4, and the requirements of Specification 3.3.D are being satisfied.

3.6 CONTAINMENT SYSTEM

APPLICABILITY

Applies to the integrity of reactor containment

OBJECTIVE

To define the operating status of the reactor containment for plant operation

SPECIFICATION

A. CONTAINMENT INTEGRITY

1. The following requirements shall be satisfied: (a) whenever the reactor is above cold shutdown or (b) whenever the reactor vessel head is less than fully tensioned and the shutdown margin is $< 10\% \Delta k/k$:
 - a. All non-automatic containment isolation valves which are not required to be open during accident conditions are closed and blind flanges installed where required. Those non-automatic containment isolation valves listed in Table 3.6-1 and any test connection valves which are located between containment isolation valves and which are normally closed with threaded caps or blind flanges installed, may be opened if necessary for plant operation or for testing and only as long as necessary to perform the intended function.
 - b. All automatic containment isolation valves are either operable or in the closed position or isolated by a closed manual valve or flange that meets the same design criteria as the isolation valve.
 - c. The equipment door is properly closed.
 - d. At least one door in each personnel air lock is properly closed.
 - e. The WC&PPS requirements of Specification 3.3.D are being satisfied.
 - f. Containment leakage has been verified in accordance with the surveillance requirements of Specification 4.4.
2. The following additional requirements shall be satisfied during power operation:

- a. The automatic containment purge and containment pressure relief isolation valves are set to limit valve disk travel to no greater than 60° open (90° being full open) with stroke times of three seconds or less.
 - b. The automatic containment purge and containment pressure relief isolation valves may only be open for safety-related reasons.¹⁾
3. Except as specified 3.a. below, if the above requirements are not satisfied, the condition shall be corrected within 4 hours or the reactor shall be brought to a cold shutdown condition within the next 36 hours, utilizing normal operating procedures.
- a. With one or more isolation valve(s) inoperable:
 1. maintain at least one isolation valve operable in each affected penetration²⁾ and
 2. either:
 - (a) Restore the inoperable valve(s) to operable status within 4 hours, or
 - (b) Isolate each affected penetration within 4 hours by use of at least one deactivated automatic isolation valve secured in the isolation position³⁾, or
 - (c) Isolate each affected penetration within 4 hours by use of at least one closed manual valve³⁾ or blind flange that meets the design criteria for an isolation valve or
 - (d) Be in cold shutdown within the following 36 hours, utilizing normal operating procedures.
4. Non-automatic containment isolation valves may be added to plant systems without prior license amendment to Table 3.6-1 provided that a revision to this Table is included in a subsequent license amendment application.

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- 1) Examples of safety-related reasons include containment pressure control, or to facilitate safety-related surveillance or safety-related maintenance.
 - 2) not required for penetrations equipped with only one isolation valve.
 - 3) this may be the valve previously maintained operable per 3.a.1 above or the valve initially declared inoperable.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 126 TO FACILITY OPERATING LICENSE NO. DPR-26
CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NO. 2
DOCKET NO. 50-247

INTRODUCTION

By letter dated August 6, 1985, Consolidated Edison Company of New York, Inc. (the licensee) submitted a proposed change to Operating License No. DPR-26 requesting that their Technical Specification (TS) 3.6, be amended to further limit the use of the containment purge and vent isolation valves during power operations and to clarify associated requirements relating to the application of containment isolation action statements. This safety evaluation addresses these proposed changes.

PROPOSED CHANGES

The licensee proposes to modify the Technical Specifications as follows: (See Enclosure 2)

- ° Paragraph 1.7b, the definition of containment integrity, is changed from "The equipment door is properly closed and sealed by the Weld Channel and Penetration and Pressurization System" to "The equipment door is properly closed."
- ° Paragraph 3.6.A, Containment Integrity, has been extensively reformatted and revised. The items from the original specification, with several clarifying or more restrictive modifications, retains the intent of the original specification. The following summarize the proposed changes:
 1. Paragraph 3.6.A.1 replaces the reference to paragraph 1.7, the definition of Containment Integrity, with incorporation of the definition into the body of the specification,
 2. Paragraph 3.6.A.2 adds further limitations on the use of containment purge and vent isolation valves by limiting the purge and vent valves opening angle to no more than 60° open with stroke times of three seconds or less,
 3. Paragraph 3.6.A.3 adds notes to clarify which valve should be secured in the closed position with one or more isolation valves declared inoperable, and
 4. Format changes were made to facilitate the above proposed changes.

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Review Criteria/Commitments

- ° NUREG-0737, "Clarification of TMI Action Plan Requirements" November 1980
- ° Westinghouse Standard Technical Specifications, September 28, 1981
- ° NRC letters to Consolidated Edison Company of New York, Inc. dated November 28, 1978, November 20, 1981 and September 29, 1983
- ° NRC letter to Consolidated Edison Company of New York, Inc. dated June 17, 1985
- ° NRC Branch Technical Position CSB 6-4, Revision 1

Technical Evaluations

By letter dated November 28, 1978, NRC identified generic concerns associated with containment purging and venting to all operating reactor licensees. These concerns related to the potential failures of automatic isolation of large diameter purge penetrations used during power operations. NRC subsequently established criteria for the review of these issues by all licensees. In order to justify purging during power operation, licensees were required to satisfy the review criteria.

The criteria included:

- ° A review for conformance to Standard Review Plan Section 6.2.4, Revision 1, and NRR Branch Technical Position CSB 6-4, Revision 1, including effects on ECCS performance and radiological consequences.
- ° A demonstration that the containment purge and vent valves were capable of closing against the ascending LOCA differential pressure.
- ° A review of safety actuation signal circuits to assure that overriding of one safety actuation signal did not also cause the bypass of any other safety actuation signal.
- ° A review to assure the adequacy of provisions made to test the availability of the isolation function and the leakage rate of the isolation valves in the vent and purge lines.
- ° A review to ensure that the containment pressure setpoint for containment isolation had been established at the minimum pressure compatible with normal operating conditions.

NRC replied to Consolidated Edison's response to the above concerns with Safety Evaluation Reports transmitted by NRC letters dated November 20, 1981 and September 29, 1983. The proposed technical specification changes relative to containment purging and venting are intended to established limits consistent with the assumptions used in the above reviews. The licensee stated and the

staff agrees that the reference to the Weld Channel and Penetration and Pressurization system was deleted in proposed change 1.7b because it is redundant to the reference contained in 1.7e. The staff also finds acceptable the proposed format changes used to facilitate the following proposed changes.

The licensee states that proposed requirement 3.6.A.2.a to limit the purge and vent valves opening angle to no more than 60° open by mechanical means provides assurance that the valves are capable of closing against a differential pressure equivalent to the FSAR peak containment accident pressure without overstressing the valve or its internal parts. The NRC SER transmitted with the September 29, 1983 letter concluded that limiting the opening angles of the purge and vent valves to 60° or less would not jeopardize their ability to close against the buildup of containment pressure in the event of a design basis loss of coolant accident. The staff finds this acceptable and in compliance with NUREG-0737, Item II.E.4.2.5, Attachment 1, Paragraph (2)(a).

The staff finds proposed TS 3.6.A.2.a acceptable for purge and vent valve closure within three seconds since it is within the assumptions used in determining the potential radiological consequences in the event of a design basis loss of coolant accident while purging at power (5 seconds) and conforms to the 5 seconds maximum guidance contained in NRR Branch Technical Position CSB 6-4, Revision 1. The licensee states and the staff concurs that selection of three seconds as the limiting valve stroke time is based on a valve design requirement of two seconds for closure with a one second allowance for valve wear/degradation. With a signal initiation and transient time of less than 1.5 seconds, total time to valve closure occurs about one half second earlier than assumed in the evaluation.

The licensee stated that the proposed requirement, TS 3.6.A.2.b and its clarifying note number 1 to limit use of the purge and vent valve to purging and venting for safety-related reasons, is intended to minimize the amount of time that containment is operated in a "non-passive" mode thereby minimizing the potential for challenging the purge and vent valve isolation function. The staff finds this acceptable and in conformance with Branch Technical Position CSB-6.4, Revision 1.

The licensee stated and the staff concurs that the proposed changes related to the provisions dealing with containment isolation (paragraph 3.6.A.3 of the revised technical specifications) provide clarifying guidance, Notes 2 and 3, related to their application. The licensee states that in the case of a penetration equipped with a single normally open double disc gate containment isolation valve, the presently written LCO would require a second isolation valve be maintained operable in the event of an inoperable containment isolation valve. The specification (extracted from the Standard Technical Specifications) is written for penetrations equipped with two individual containment isolation valves. Accordingly, clarifying note Number 2 indicates that this provision is not applicable to penetrations equipped with single isolation valves. The staff agrees and finds this acceptable.

The licensee also has proposed adding Note 3 to clarify operating requirements for penetrations equipped with two containment isolation valves. With one isolation valve inoperable, the second isolation valve in that penetration is to be maintained operable and within 4 hours the penetration is to be isolated by use of at least one deactivated automatic isolation valve secured in the isolation position. This provision could be read to imply that one isolation valve be maintained operable and the second isolation valve be deactivated and secured in the isolation position. This interpretation would preclude continued plant operation when an isolation valve has been declared inoperable because of a failure in the open position that precludes valve closure, even though the redundant valve is deactivated and secured in the isolation position. The intent of these containment isolation provisions, when originally proposed and submitted, was specifically to assure that the affected penetration was isolated by a single secured valve or flange within 4 hours of identifying the inoperability of the redundant valve. Accordingly, a clarifying note is proposed to indicate that the valve that would initially be maintained operable could subsequently be deactivated and secured in the isolation position to satisfy the isolation requirements. The staff agrees and finds this change acceptable.

The staff has concluded, based on the considerations discussed above, and with the incorporation of the aforementioned additions to Sections 1.7 and 3.6 of Indian Point Nuclear Generating Unit No. 2 Technical Specification that the proposed changes: 1) are consistent with NUREG-0737, Item II.E.4.2, Attachment 1; Branch Technical Position CSB-6.4, Revision 1; and Westinghouse Standard Technical Specifications; 2) further limit the use of the containment purge and vent isolation valves during power operations; and 3) provide clarification of Technical Specification requirements related to containment isolation action statements.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 nor environmental assessment need be prepared in connection with the issuance of this amendment.

CONCLUSION

The staff 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; and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

PRINCIPAL CONTRIBUTOR:

James A. Prell, Region I

Dated: October 29, 1987