

March 31, 1986

Docket No. 50-247

Mr. John D. O'Toole  
Vice President  
Nuclear Engineering and Quality Assurance  
Consolidated Edison Company  
of New York, Inc.  
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Dear Mr. O'Toole:

The Commission has issued the enclosed Amendment No. 110 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 November 26, 1985.

The amendment revises the Technical Specifications to change the  $F^N$  delta H part power multiplier from 0.2 to 0.3. The amendment was requested by Consolidated Edison in order to allow optimization of future core loading patterns by minimizing restrictions on  $F^N$  delta H at low power.

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,

/s/MSlosson

Marylee M. Slosson, Project Manager  
PWR Project Directorate #3  
Division of PWR Licensing-A

Enclosures:

1. Amendment No.110 to DPR-26
2. Safety Evaluation

cc: w/enclosures  
See next page

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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. 110  
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 November 26, 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:

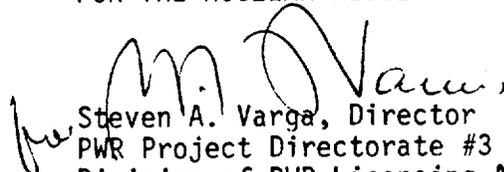
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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 110, 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

  
Steven A. Varga, Director  
PWR Project Directorate #3  
Division of PWR Licensing-A

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 31, 1986

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 110 TO FACILITY OPERATING LICENSE NO. DPR-26

DOCKET NO. 50-247

Revise Appendix A as follows:

Remove Page

3.10-1

Insert Page

3.10-1

### 3.10 CONTROL ROD AND POWER DISTRIBUTION LIMITS

#### Applicability:

Applies to the limits on core fission power distributions and to the limits on control rod operations.

#### Objectives:

To ensure:

1. Core subcriticality after reactor trip,
2. Acceptable core power distribution during power operation in order to maintain fuel integrity in normal operation and transients associated with faults of moderate frequency, supplemented by automatic protection and by administrative procedures, and to maintain the design basis initial conditions for limiting faults, and
3. Limit potential reactivity insertions caused by hypothetical control rod ejection.

#### Specifications:

##### 3.10.1 Shutdown Reactivity

The shutdown margin shall be at least as great as shown in Figure 3.10-1.

##### 3.10.2 Power Distribution Limits

3.10.2.1 At all times, except during low power physics tests, the hot channel factors defined in the basis must meet the following limits:

(a)  $F_{\Delta H}^N \leq 1.55 (1 + 0.3 (1-P))$

(b) For 25% steam generator tube plugging:

$$F_Q(Z) \leq (2.32/P) \times K(Z) \text{ for } P > .5$$

$$F_Q(Z) \leq (4.64/P) \times K(Z) \text{ for } P \leq .5$$

Where P is the fraction of full power at which the core is operating; K(Z) is the fraction given in Figure 3.10-2 and Z is the core height location of  $F_Q$ .



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 110 TO FACILITY OPERATING LICENSE NO. DPP-26  
CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.  
INDIAN POINT NUCLEAR GENERATING UNIT NO. 2  
DOCKET NO. 50-247

Introduction

By letter dated November 26, 1985, (Reference 1), the Consolidated Edison Company of New York (Con Ed), licensee for the Indian Point Unit 2 plant, requested a change to the Technical Specification concerning the formula for the limit on  $F_{\Delta H}$ . The same Technical Specification change has been approved for several plants and specifically for Indian Point 3. This change was requested to allow optimization of the core loading pattern by minimizing restrictions on the  $F_{\Delta H}$  at lower power.

Evaluation

Specifically, it is requested that the  $F_{\Delta H}$  part power multiplier in Technical Specification 3.10.2.1(a) be changed from .20 to .30 to read:

$$F_{\Delta H} \leq 1.55 [1.0 + .30(1-P)]$$

where P is the fraction of rated thermal power at which the reactor is operating. This change does not affect the  $F_{\Delta H}$  value at full power, however, it increases the  $F_{\Delta H}$  at low power. Levels above 100% thermal power are not impacted because the (1-P) term is taken to be equal to zero.

The core safety limits currently used bound both the High Parasitic (HIPAR) and the Low Parasitic (LOPAR) absorption fuel. At power levels below 100% thermal power the HIPAR fuel is the limiting fuel for the DNB analyses. For Cycle 8 and all subsequent cycles all LOPAR fuel will be used. Use of all LOPAR fuel (instead of HIPAR) affords a bigger margin of conservatism associated with core safety limits. The use of the LOPAR fuel creates margin that more than compensates for the increased value of  $F_{\Delta H}$  at part power stemming from the increased value of the multiplier.

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A reanalysis with a full LOPAR core showed that the current Indian Point Unit 2 safety limits are applicable including the effect of the increased value of the part power multiplier. Therefore, the safety limit curves in Technical Specification 2.1, Figure 2.1.1 remain unchanged and the current overpower and over temperature  $\Delta T$  setpoint equation constants are applicable. For non-LOCA accident events no reanalysis is required because they are not impacted by the change in the part power multiplier. Finally the LOCA accident analyses remain unchanged because they are performed at rated power.

#### Summary

We reviewed the submittal by ConEd requesting a change in the Technical Specification of Indian Point 2 to increase the part power multiplier for the value of  $F_{\Delta H}$  from .20 to .30. Analyses showed that the current overpower and over temperature  $\Delta T$  limits do not change. Likewise the non-LOCA and the LOCA accident limits remain unchanged and applicable. We, therefore find that the proposed Technical Specification change is acceptable.

#### Environmental Consideration

This amendment involves a change in 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 Sec 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 this amendment.

Conclusion

We have 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.

Dated: March 31, 1986

Principal Contributor:

L.Loie

REFERENCE

1. Letter J. D. O'Toole, Consolidated Edison Company to Director, NRR, dated November 25, 1995.