December 20, 2000

Mr. Michael Kansler
Vice President and
Chief Operating Officer
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT NO. 3 - AMENDMENT ISSUED UNDER EMERGENCY CIRCUMSTANCES RE: QUADRANT POWER TILT LIMIT (TAC NO. MB0761)

Dear Mr. Kansler:

The Commission has issued the enclosed Amendment No.204 to Facility Operating License No. DPR-64 for the Indian Point Nuclear Generating Unit No. 3. The amendment is issued under emergency circumstances and consists of changes to the Technical Specifications (TSs) in response to your application transmitted by letter dated December 19, 2000.

The amendment revises the TSs to indicate that the quadrant power tilt ratios are applicable only above 50 percent reactor power. 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,

/RA/

George F. Wunder, Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-286

Enclosures: 1. Amendment No. 204 to DPR-64
2. Safety Evaluation

cc w/encls: See next page

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ACCESSION NO. ML003778994 *See previous concurrence

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NAME	GWunder	SLittle	JWermiel	STurk	MGamberoni
DATE	12/20/00	12/20/00	12/20/00	12/20/00	12/20/00

Official Record Copy

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Westchester County Fire Training Center
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DATED: December 20, 2000

AMENDMENT NO. 204 TO FACILITY OPERATING LICENSE NO. DPR-64 INDIAN POINT NUCLEAR GENERATING UNIT, NO. 3

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OGC
G. Hill (2), T-5 C3
W. Beckner
ACRS
M. Oprendek, Region I
S. Little
G. Wunder
J. Wermiel

cc: Plant Service list

ENTERGY NUCLEAR OPERATIONS, INC.

DOCKET NO. 50-286

INDIAN POINT NUCLEAR GENERATING UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 204
License No. DPR-64

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Entergy Nuclear Operations, Inc. (the licensee) dated December 19, 2000, 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 Appendices A and B, as revised through Amendment No. 204, 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 and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Marsha Gamberoni, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 20, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 204

FACILITY OPERATING LICENSE NO. DPR-64

DOCKET NO. 50-286

Replace the following page of Appendix A, Technical Specifications, with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove Page	Insert Page
3.10-4	3.10-4

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 204 TO FACILITY OPERATING LICENSE NO. DPR-59

ENTERGY NUCLEAR OPERATIONS, INC.

INDIAN POINT NUCLEAR GENERATING UNIT NO. 3

DOCKET NO. 50-286

1.0 INTRODUCTION

By letter dated December 19, 2000, Entergy Nuclear Operations, Inc. (the licensee) submitted a request for changes to the Indian Point Nuclear Generating Unit No. 3 (IP3) Technical Specifications (TSs). The requested changes would revise the TSs to indicate that the restrictions on quadrant power tilt are only applicable above 50 percent reactor power. The licensee provided the justification to request the amendment under emergency circumstances.

2.0 EVALUATION

The quadrant power tilt ratio (QPTR) is defined as the ratio of maximum upper excore detector calibrated output to the average of upper excore detector calibrated outputs, or the ratio of the maximum lower excore detector calibrated output to the average of lower excore detector calibrated outputs, whichever is greater. Limiting the QPTR ensures that the gross radial power distribution remains consistent with the values used in the plant safety analysis.

Current TSs indicate that limits on QPTR are applicable at all power levels. When restarting the reactor after a period of power operation, the buildup of fission product poisons in the core can lead to large QPTR at low power. The licensee's proposal would change the TSs to indicate that the QPTR limiting conditions for operation would become effective only after reactor power was above 50 percent.

The licensee's request is consistent with the Improved Technical Specifications and the Standard Technical Specifications for Westinghouse plants. The NRC staff has determined that a limit on QPTR below 50 percent power is not necessary because there is either insufficient stored energy in the fuel or insufficient energy being transferred to the reactor coolant to require the implementation of a QPTR limit on the distribution of core power. The QPTR limit in these conditions is, therefore, not important to safety; furthermore, the limits on nuclear enthalpy rise hot channel factor and critical heat flux hot channel factor apply whenever the reactor is being operated at power and will ensure that the reactor remains in an analyzed condition when operating below 50 percent power. The staff, therefore, finds the licensee's proposal to be acceptable.

3.0 JUSTIFICATION FOR EMERGENCY CIRCUMSTANCES

In its December 19, 2000, application, the licensee requested the subject amendment to the Technical Specifications be granted on an emergency basis. The licensee states that:

> The QPTR requirement for all operational power levels has the potential to delay the resumption of plant power operation. A QPTR larger than 1.02 is routine during plant startup because the power range nuclear instrumentation is more sensitive to slight deviations in signal when the plant is at low power levels. Furthermore, these power distributions are also increased due to xenon redistribution in the core. The xenon redistribution is expected to "burn out" as the plant is increased in power. TS 3.10.3.1, as currently worded, could require the power range high flux trip setpoint to be set down to zero percent power based on the large tilt expected, thereby precluding any power escalation. The Critical Function Monitoring System is capable of calculating QPTR at any power level. It is expected to show a tilt of up to 70 percent when operational power is reached (70% was the approximate tilt at about 3 percent power during the shutdown on December 18, 2000). Under the current TS, this tilt would require a rapid increase in power during startup in an attempt to burn off the xenon and achieve a tilt of 1.02 or less within two hours. This is inconsistent with current procedural requirements under which power escalation to 50% power is scheduled to take about 15 hours.

In their December 19, 2000, letter, the licensee also states that:

> This emergency situation occurred because TS 3.10.3.1 had not been literally interpreted to apply to all power levels, until this was questioned on October 27, 2000. After reviewing this issue, LER 2000-011-00, submitted on November 27, 2000, reported that TS 3.10.3.1 had been violated because it had been interpreted as applicable only above 50 percent reactor thermal power. Although an action item was generated from that review to revise the TS, we had not yet completed the proposed TS change following our normal TS change process. The emergency situation has presently occurred because Indian Point 3 is shutdown (i.e., generator off-line) to fix a hydrogen leak in the cooler of the main turbine generator and application of the TS at all operational power levels is expected to delay startup. The shutdown was not previously anticipated because hydrogen leakage was being monitored, and it was predicted that the leak rate would remain acceptable until the planned refueling outage in the spring of 2001. At that time, the Improved Technical Specifications (ITS) would have been implemented, based on the current schedule. However, beginning on Sunday, December 17, the leak rate took a two-fold increase, resulting in the decision by plant management to remove the unit from service on Monday, December 18, 2000. The generator is currently off-line and the scheduled work is such that power escalation is scheduled to begin the morning (approximately 0900 hours) of December 21, 2000. Therefore, we are requesting approval by the end of the day on December 20, 2000. The need to literally apply the TS QPTR limits to all operational power levels was not identified until the review of the event associated with LER 2000-011-00. The unanticipated generator shutdown, combined with the short period of time since this TS has been identified as requiring change, together have made the current need for an emergency TS change unavoidable. As previously stated, however, the ITS submittal made in December 1998 for Indian Point 3 already incorporates the change in applicability requested for this specification.

The staff concludes that an emergency condition exists in that failure to act in a timely way to approve the proposed TS changes would result in prevention of resumption of operation. In addition, the staff has assessed the licensee's reasons for not filing an application sufficiently in advance to preclude an emergency, and concludes that the licensee has not abused the emergency provisions by failing to make timely application for the amendment. Thus, emergency circumstances exist, and the amendment is being processed on an emergency basis in accordance with 10 CFR 50.91(a)(5).

4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION (NSHC) DETERMINATION

In accordance with the criteria set forth in 10 CFR 50.91 and 50.92, the licensee performed a Significant Hazards Considerations analysis, which is reproduced below.

Entergy has evaluated the proposed Technical Specification using the criteria of 10CFR50.92 and found that no significant hazards consideration exist for the following reasons:

1) Does the proposed License amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

   The proposed License amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. The change in applicability of TS 3.10.3.1 removes the need to measure QPTR and change the power range high flux setpoint below 50% power. This involves no increase in the probability of an accident previously evaluated because the QPTR limit is not an accident initiator. The change in applicability involves no significant increase in the consequences of an accident because there is either insufficient stored energy in the fuel or insufficient energy being transferred to the reactor coolant to require implementation of a QPTR limit on the distribution of core power when below 50%. The proposed TS change reflects the industry standard technical specifications (STS), approved by the NRC for generic use as NUREG 1431, which are intended to limit the consequences of accidents to design limits.

2) Does the proposed License amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed TS change does not create the possibility of a new or different kind of accident from any accident previously evaluated. The removal of the QPTR specification requirement below 50% power does not change the method of operation of any system or component since it relates only to the initial assumptions made in plant analyses. The possibility of any new type of accident is not created because systems operation will remain the same, the limitation on the TS requirement is to reflect design limitations, and the proposed TS has been generically approved for industry usage. Also, current TS 3.10.3.1b) allows unlimited operation at up to 50% power for measurement, testing or corrective action.

3) Does the proposed License amendment involve a significant reduction in a margin of safety?

The proposed License amendment does not involve a significant reduction in a margin of safety. The proposed change will limit the applicability of QPTR limits below 50% power. The QPTR limits reflect assumptions made in plant accident analyses whose "worst" cases are at 100% power. The change in applicability involves no significant reduction in the margin of safety because adequate margin exists below 50% power since there is either insufficient stored energy in the fuel or insufficient energy being transferred to the reactor coolant to require implementation of a QPTR limit. Also, current TS 3.10.3.1b) allows unlimited operation at up to 50% power for measurement, testing or corrective action. Because of the minimal effect on analyses, current TS allowances for operation up to 50% power, and no system operation changes, there is no significant reduction in the margin of safety of the TS.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff determines that the proposed amendment involves no significant hazards considerations.

5.0 STATE CONSULTATION

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

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to use of facility components located within the restricted area as defined in 10 CFR Part 20. The NRC 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. 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.

7.0 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: G. Wunder

Date: December 20, 2000