



Entergy Nuclear Northeast
Entergy Nuclear Operations, Inc.
P.O. Box 5029
White Plains, NY 10601-5029
Tel 914 272 3200 Fax 914 272 3205

Michael R. Kansler
Senior Vice President &
Chief Operating Officer

December 19, 2000
IPN-00-091

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop 0-P1-17
Washington, DC 20555-0001

Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
**Proposed Emergency Change to the Technical
Specification Requirements for Quadrant Power Tilt Limits**

Dear Sir:

This letter requests an emergency change to Indian Point 3 Technical Specification 3.10.3.1 to limit the applicability of the quadrant power tilt limit to power operations with thermal power greater than 50 percent rated thermal power. This Technical Specification (TS) change is needed to facilitate plant startup by eliminating the current TS requirement to limit quadrant power tilt levels at all operational power levels.

Attachment I to this application contains the request for an emergency TS change, including the signed original of the Application for Amendment to the Operating License, the proposed change to the TS and the associated Safety Evaluation in accordance with 10CFR50.91 requirements. Also included with Attachment I, for information only, is a markup of the TS to show the proposed changes. There is no markup of the Improved Technical Specifications (ITS) currently under review by the NRC staff because the proposed change is already incorporated in the industry Standard Technical Specifications and the proposed Indian Point 3 ITS.

Entergy respectfully requests that the proposed TS change be processed on an expedited basis (per 10CFR50.91(a)(5)). Failure to do so (i.e., by providing the normal 30-day public comment period) will result in a delayed resumption of plant operation at power. Currently, the reactor is critical with the main turbine generator off-line. Power escalation is scheduled to begin on the morning of December 21, 2000. Based on this schedule, we request approval of this change by the end of the day Wednesday, December 20, 2000. The need for an emergency amendment has arisen due to insufficient time to process a normal Technical Specification change, in conjunction with an unplanned plant shutdown. The Technical Specification change request in Attachment I discusses the circumstances surrounding this request in more detail, including how this request satisfies the emergency change criteria, and that the situation could not have been

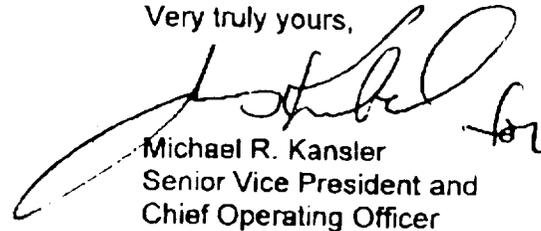
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avoided.

A copy of this letter with the attachment containing the application, proposed changes, safety evaluation and marked up Technical Specification pages is being provided to the designated New York State official as required by 10 CFR 50.91.

This submittal contains no new commitments. If you have any questions, please contact Ms. C. D. Faison.

Very truly yours,



Michael R. Kansler
Senior Vice President and
Chief Operating Officer

Attachment: As stated

cc: Regional Administrator
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Resident Inspector's Office
Indian Point Unit 3
U.S. Nuclear Regulatory Commission
P.O. Box 337
Buchanan, NY 10511

Mr. F. William Valentino, President
New York State Energy, Research,
and Development Authority
Corporate Plaza West
286 Washington Avenue Extension
Albany, NY 12203-6399

Mr. George F. Wunder, Project Manager
Project Directorate I-1
Division of Reactor Projects I/II
U.S. Nuclear Regulatory Commission
Mail Stop 8C4
Washington, DC 20555

ATTACHMENT I TO IPN-00-091

Emergency Technical Specification Change Request
Associated With
Quadrant Power Tilt Ratio

This attachment contains the following four parts:

1. Application for Amendment to the Operating License
2. Proposed Revised Technical Specification Pages
3. Safety Evaluation for the Proposed Changes
4. Markup of Existing Technical Specifications (for Information Only)

ENERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

BEFORE THE UNITED STATES
NUCLEAR REGULATORY COMMISSION

In the Matter of)
ENTERGY NUCLEAR OPERATIONS, INC.) Docket No. 50-286
Indian Point 3 Nuclear Power Plant)

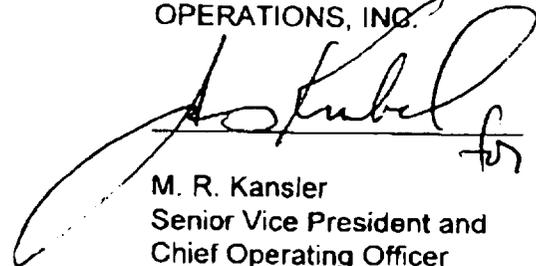
APPLICATION FOR AMENDMENT TO THE OPERATING LICENSE

Pursuant to Section 50.90 of the regulations of the Nuclear Regulatory Commission, Entergy Nuclear Operations, Inc., as holder of the Facility Operating License No. DPR-64, hereby applies for an amendment to the Technical Specifications contained in Appendix A of the license. We respectfully request that this proposed Technical Specification change be processed on an emergency basis (per 10CFR50.91(a)(5)), so as not to delay plant power escalation, currently scheduled for the morning of December 21, 2000.

This application for an amendment to the Indian Point 3 Technical Specifications proposes to change Technical Specification 3.10.3.1 to limit the applicability to power operations with thermal power greater than 50 percent rated thermal power. This Technical Specification change is needed to facilitate startup by eliminating the current TS requirement to limit quadrant power tilt levels at all operational power levels.

Attached are the proposed changes to the Technical Specifications and the associated Safety Evaluation in accordance with 10CFR50.91 requirements. Also included, for information only, is a markup of the TS to show the proposed changes.

ENTERGY NUCLEAR
OPERATIONS, INC.



M. R. Kansler
Senior Vice President and
Chief Operating Officer

STATE OF NEW YORK
COUNTY OF WESTCHESTER
Subscribed and sworn to before me

this 19th day of December 2000.



Notary Public

EILEEN E. O'CONNOR
Notary Public, State of New York
No. 4981062
Qualified in Westchester County
Commission Expires January 21, 2002

ATTACHMENT I, PART 2 TO IPN-00-091

Proposed Revised Technical Specification Pages

Associated With

Quadrant Power Tilt Ratio

Affected Technical Specification pages:

Page 3.10-4

ENERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

3.10.2.8 Alarms are provided to indicate non-conformance with the flux difference requirements of 3.10.2.5.1 and the flux difference-time requirements of 3.10.2.6.1. If the alarms are temporarily out of service, conformance with the applicable limit shall be demonstrated by logging the flux difference at hourly intervals for the first 24 hours and half-hourly thereafter.

3.10.2.9 If the core is operating above 75% power with one excore nuclear channel out of service, then core quadrant power balance shall be determined once a day using movable incore detectors (at least two thimbles per quadrant).

3.10.3 Quadrant Power Tilt Limits

3.10.3.1 In the power operation condition, with thermal power greater than 50 percent rated thermal power, whenever the indicated quadrant power tilt ratio exceeds 1.02, except for physics tests, within two hours the tilt condition shall be eliminated or the following actions shall be taken:

a. Restrict core power level and reset the power range high flux setpoint three percent of rated value for every percent of indicated power tilt ratio exceeding 1.0,

and

b. If the tilt condition is not eliminated after 24 hours, the power range nuclear instrumentation setpoint shall be reset to 55% of allowed power. Subsequent reactor operation is permitted up to 50% for the purpose of measurement, testing and corrective action.

3.10.3.2 Except for physics tests, if the indicated quadrant power tilt ratio exceeds 1.09 and there is simultaneous indication of a misaligned control rod, restrict core power level 3% of rated value for every percent of indicated power tilt ratio exceeding 1.0 and realign the rod within two hours. If the rod is not realigned within two hours or if there is no simultaneous indication of a misaligned rod, the reactor shall be brought to the hot shutdown condition within 4 hours. If the reactor is shut down, subsequent testing up to 50% of rated power shall be permitted to determine the cause of the tilt.

3.10-4

Amendment No. 34, 103,

ATTACHMENT I, PART 4 TO IPN-00-091

Markup of Current Technical Specifications

To Show Changes Associated With Proposed Technical Specification Change

Associated with Quadrant Power Tilt Ratio

(FOR INFORMATION ONLY)

Affected Technical Specification pages:

Page 3.10-4

ENERGY NUCLEAR OPERATIONS, INC.
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- 3.10.2.8 Alarms are provided to indicate non-conformance with the flux difference requirements of 3.10.2.5.1 and the flux difference-time requirements of 3.10.2.6.1. If the alarms are temporarily out of service, conformance with the applicable limit shall be demonstrated by logging the flux difference at hourly intervals for the first 24 hours and half-hourly thereafter.
- 3.10.2.9 If the core is operating above 75% power with one excore nuclear channel out of service, then core quadrant power balance shall be determined once a day using movable incore detectors (at least two thimbles per quadrant).
- 3.10.3 Quadrant Power Tilt Limits
- 3.10.3.1 In the power operation condition, with thermal power greater than 50 percent rated thermal power, whenever the indicated quadrant power tilt ratio exceeds 1.02, except for physics tests, within two hours the tilt condition shall be eliminated or the following actions shall be taken:
- a. Restrict core power level and reset the power range high flux setpoint three percent of rated value for every percent of indicated power tilt ratio exceeding 1.0,
- and
- b. If the tilt condition is not eliminated after 24 hours, the power range nuclear instrumentation setpoint shall be reset to 55% of allowed power. Subsequent reactor operation is permitted up to 50% for the purpose of measurement, testing and corrective action.
- 3.10.3.2 Except for physics tests, if the indicated quadrant power tilt ratio exceeds 1.09 and there is simultaneous indication of a misaligned control rod, restrict core power level 3% of rated value for every percent of indicated power tilt ratio exceeding 1.0 and realign the rod within two hours. If the rod is not realigned within two hours or if there is no simultaneous indication of a misaligned rod, the reactor shall be brought to the hot shutdown condition within 4 hours. If the reactor is shut down, subsequent testing up to 50% of rated power shall be permitted to determine the cause of the tilt.

ATTACHMENT I, PART 3 TO IPN-00-091

**Safety Evaluation of Technical Specification Changes
Associated With
Quadrant Power Tilt Ratio**

ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT 3 NUCLEAR POWER PLANT
DOCKET NO. 50-286
DPR-64

Section I - Description of Change

This application for amendment to the Indian Point 3 (IP3) Technical Specification (TS) proposes to revise TS 3.10.3.1 to limit the applicability to power operations with thermal power greater than 50 percent rated thermal power. Specification 3.10.3.1 states that "When ever the indicated quadrant power tilt ratio exceeds 1.02, except for physics tests, within two hours the tilt condition shall be eliminated or the following actions taken." The proposed change will say "In the power operation condition, with thermal power greater than 50 percent rated thermal power, when ever the indicated quadrant power tilt ratio exceeds 1.02, except for physics tests, within two hours the tilt condition shall be eliminated or the following actions taken."

Section II - Purpose of Proposed Changes

Indian Point 3 desires this change to clarify the applicability of the Quadrant Power Tilt Ratio (QPTR) limits consistent with the industry Standard Technical Specification (STS), approved by the NRC for generic use as NUREG 1431. The change is desired on an emergency basis so as not to delay power escalation planned for the morning of December 21, 2000.

Section III - Safety Implications of Proposed Changes

Evaluation of Basis for Emergency Situation

Entergy has requested that this proposed change be processed as an emergency change per 10CFR50.91(a)(5), since insufficient time exists to provide a 30-day public comment period without delaying the resumption of plant power operation.

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 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. Therefore, we expect the tilt could very easily result in a power range high flux trip setpoint well below 50% power. An additional 24 hours would be required before the power range high flux trip setpoint could be reset to 55%. Once reset, the time to achieve a tilt that would allow increased power above 50% is unknown.

Based on the above, it is concluded that the requirements for an emergency TS change found in 10 CFR 50.91(a)(5) have been met.

Evaluation of Safety Significance of the Change.

The proposed emergency TS change has no effect on the safe operation of the plant. Standard Technical Specification (STS) 3.2.4 limits the QPTR to less than or equal to 1.02 in "Mode 1 with thermal power > 50% rated thermal power (RTP)." This is the change being proposed in this emergency TS change. The STS bases state that the QPTR limits prevent core power distributions that: violate the peak clad temperature limit for a loss of coolant accident; could cause the hot fuel rod to experience departure from nucleate boiling for the loss of forced reactor coolant flow accident; could cause the energy deposition to a fuel rod to exceed specified limits for the ejected rod accident; and, to assure the control rods can shutdown the reactor with the minimum required margin and the presence of a stuck rod. The bases to the STS says that the QPTR limits ensure that the nuclear enthalpy rise hot channel factor (F_{NH}^N) and the heat flux hot channel factor ($F_Q(Z)$) remain below their limiting values by preventing an undetected change in the gross radial power distribution. The bases also say that applicability in mode 1 \leq 50% RTP is "not required 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. The QPTR limit in these conditions is, therefore, not important" to safety. The Indian Point 3 ITS has the same bases statements as the STS. The accident analyses and the shutdown margin determination for Indian Point 3 are all based on full power operations for worst case events. Note that the hot channel factors (i.e., F_{NH}^N and $F_Q(Z)$) still apply but they allow progressively higher peaking factors at \leq 50 RTP.

Indian Point 3 proposed a TS change (i.e., ITS) to adopt the STS. The proposed ITS change has been reviewed by NRC and the safety evaluation for approval is currently scheduled for February 2001. The draft safety evaluation identifies more restrictive, administrative and less restrictive changes to the current TS that were reviewed for the potential to require supporting TS changes. The review for potential supporting changes was conducted with the following results:

- The draft SER identified three changes that were more restrictive than current TS. The first is a requirement to verify within 12 hours that QPTR limits are met following a reduction in power to meet those limits. The second is a requirement to verify that hot channel factors are not affected when QPTR is exceeded. Third is a requirement to periodically verify that QPTR is within limits. Since all of these changes apply to conditions above 50% RTP, none of them is required to support the proposed change.
- The review identified 11 administrative changes from the current TS. By their nature administrative changes would not be expected to require supporting changes. The change in applicability to 50% RTP was categorized as an administrative change. The current TS requires a reduction in power level to less than 50% RTP as an action. The ITS does not require a reduction below 50% RTP as a specific action statement because a power reduction below 50% RTP due to tilt would result in the TS being not applicable. Also, the current TS allows operation up to 50% RTP for measurement, testing and corrective action after the power range high flux trip is reset to 55% RTP. The SER concluded that the TS implied it was intended for QPTR that occurred during operation at 50% and higher power levels. This is implied also in the basis of the current TS when it states "Therefore, the Technical Specification has been so as to prevent escalation above 50 percent power if a large tilt is present." The second change in the ITS was the removal of the exception for physics testing. The draft SER noted that the physics testing exception was only allowed below 50% RTP. The proposed change achieves the same purpose because the specification and therefore the exception would not be applicable below 50% RTP.

It is concluded that there would be no effect on the public health and safety since the application of the QPTR limit below 50% RTP is not important to safety and there are no other TS changes that need to be made to support the proposed TS change.

Section IV - No Significant Hazards Evaluation

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.

Section V - Implementation of the Proposed Change

This amendment request meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) as follows:

- (i) The amendment involves no significant hazards consideration.

As described in Section IV of this evaluation, the proposed change involves no significant hazards consideration.

- (ii) There is no significant change in the types or significant increase in the amounts

of an effluent that may be released offsite.

The proposed change does not involve the installation or any new equipment, or the modification of any equipment that may negatively affect the types or amounts of effluents that may be released offsite. There are no new modes of plant operation. Therefore, there is no significant change in the types or significant increase in the amounts that may be released offsite.

- (iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed changes are associated with removal of QPTR limitations on power operation below 50% rated thermal power and reflect operations that are currently allowed following entry into an action statement. There are no new modes of plant operation. Therefore, there is no significant increase in individual or cumulative occupational radiation exposure.

Based on the above, Entergy concludes that the proposed changes meet the criteria specified in 10 CFR 51.22 for a categorical exclusion from the requirements of 10 CFR 51.21 relative to requiring a specific environmental assessment by the Commission.

Section VI - Conclusion

The proposed change will not involve a significant hazards analysis and meets the criteria for categorical exclusion for a specific environmental report. The proposed change meets the criteria for an emergency change found in 10 CFR 50.91(a)(5). The proposed TS changes will not adversely affect the ALARA program because the plant operations are not being changed to require additional manpower or releases. The Security and Fire Protection Programs will not be affected because there are no plant modifications and the applicability of a plant TS for QPTR limits cannot affect plant security provisions or fire protection program features. The Emergency Plan is not affected since the applicability statement does not affect components or plant areas required for plan implementation. Furthermore, current plant acceptance criteria for plant analyses remain unchanged. Overall plant operations and the environment are not affected because the method of operation of the plant is not being changed, there are no plant discharges or wastes being generated from the applicability statement change. There are no effects on the conclusions of the FSAR or SER.

The Plant Operating Review Committee and Safety Review Committee have reviewed this proposed change to the TS and have concluded that it does not involve a significant hazards consideration and will not endanger the health and safety of the public.

Section VII - References

1. IPN-00-084, "Licensee Event Report # 2000-011-00, Reactor Core Quadrant Power Tilt Ratio Exceeded Technical Specification Limit During Startup and Specified Actions Not Taken; A Condition Prohibited by Technical

Specifications," dated November 27, 2000.

2. NUREG 1431, "Standard Technical Specifications - Westinghouse Plants,"
Revision 1, dated April 1995.