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August 23, 1996

2CAN089601

U. S. Nuclear Regulatory Commission
Document Control Desk
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Washington, DC 20555

Subject: Arkansas Nuclear One - Unit 2
Docket No. 50-368
License No. NPF-6
Technical Specification Amendment Request For Relocation Of The RCS Flow Limit To The COLR

Gentlemen:

Attached for your review and approval is a proposed amendment to Arkansas Nuclear One Unit 2 (ANO-2) Technical Specifications. The proposed amendment relocates the Reactor Coolant System (RCS) flow rate limit from the technical specifications and adds it to the core operating limit report (COLR). This amendment request also adds a previously approved analytical methodolody for the calculation of shutdown margin to the administrative section of the technical specifications.

This amendment request is in accordance with Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications." The requirement to maintain the RCS flow rate above its limit, and the associated surveillance requirement, will be maintained in the technical specifications. This amendment request is necessary due to steam generator tube repairs. It is anticipated that during the next steam generator inspection that a sufficient number of tubes will be removed from service to cause the RCS flow to approach the technical specification limit. Relocating the RCS flow rate limit to the COLR will eliminate the need to make RCS flow rate cycle specific technical specification changes in the future.

The proposed change has been evaluated in accordance with 10CFR50.91(a)(1) using criteria in 10CFR50.92(c) and it has been determined that this change involves no significant hazards considerations. The bases for these determinations are included in the attached submittal.

Entergy Operations requests that the effective date for this change be within 30 days of issuance. Although this request is neither exigent nor emergency, your prompt review is requested prior to the next ANO-2 refueling outage (2R12) which is currently scheduled to begin April 11, 1997.

A001

Very truly yours,

Jerald G. Dewease

JGD/rdc
Attachments

To the best of my knowledge and belief, the statements contained in this submittal are true.

SUBSCRIBED AND SWORN TO before me, a Notary Public in and for Hinds **County and the State of Mississippi, this** 26th **day of** August **, 1996.**

Janis P. Lee

Notary Public
My Commission Expires NOTARY PUBLIC STATE OF MISSISSIPPI AT LARGE MY COMMISSION EXPIRES: August 10, 1997 BONDED THRU HEIDEN MARCHETTI, INC.

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ATTACHMENT

TO

2CAN089601

PROPOSED TECHNICAL SPECIFICATION

AND

RESPECTIVE SAFETY ANALYSES

IN THE MATTER OF AMENDING

LICENSE NO. NPF-6

ENTERGY OPERATIONS, INC.

ARKANSAS NUCLEAR ONE, UNIT TWO

DOCKET NO. 50-368

DESCRIPTION OF PROPOSED CHANGES

- Technical Specification (TS) 3.2.5 was modified by removing the Reactor Coolant System (RCS) flow rate limit of 120.4 x 10^6 lbm/hr. The requirement to refer to the core operating limits report (COLR) for the limit was inserted in its place.

- Specifications 6.9.5.1.4 through 6.9.5.1.8 and proposed specification 6.9.5.1.10 were modified to include a reference to TS 3.2.5 for RCS flow rate.

- Proposed specification 6.9.5.1.9 was added to allow use of "Calculational Methods for the CE Small Break LOCA Evaluation Model," CENPD-137-P, Supplement 1-P.

- Specifications 6.9.5.1.9 through 6.9.5.1.12 were renumbered due to the addition of proposed specifications 6.9.5.1.9 and 6.9.5.1.13.

- Proposed specification 6.9.5.1.13 was added to allow use of CENPD-137, Supplement 1-P, "Small Break LOCA Evaluation Model" that is listed in proposed specification 6.9.5.1.9.

- Proposed specification 6.9.5.1.15 was added to allow use of the Combustion Engineering Nuclear Transient Simulation (CENTS) code for the analysis used to determine core operating limits referenced by the TS.

- Proposed specifications 6.9.5.1.16 and 6.9.5.1.17 were added to allow use of the approved, "Qualification of Reactor Physics Methods for the Pressurized Water Reactors of the Entergy System," ENEAD-01-P, December 1993, Methodology for Specifications 3.1.1.1 and 3.1.1.2 for Shutdown Margin.

BACKGROUND

Generic Letter (GL) 88-16, "Removal of Cycle-Specific Parameter Limits From Technical Specifications," was issued to encourage licensees to prepare amendment requests to relocate cycle specific parameters from the TS to the COLR. This relocation would reduce the TS changes required of utilities for cycle specific parameters and thus reduce the associated burden on the utilities and the NRC. The relocation of the cycle specific parameters were determined to be acceptable because they are calculated using NRC approved methods referenced in the TS.

By letter dated July 22, 1993, (2CAN079301) Entergy Operations requested and received ANO-2 TS amendment 157 allowing the removal of various cycle specific limits from the TS and establishing the use of the COLR. ANO-2 has subsequently determined the RCS flow rate limit to be a cycle specific parameter for future cycles. This limit will become a future cycle specific variable due to the removal of degraded steam generator tubes from service. Having fewer steam generator tubes in service results in a reduced flow area in the steam generators. This reduction in flow area has resulted in a decrease in the RCS flow. If a

significant number of additional tubes are required to be repaired by sleeving or plugging, the reduction in RCS flow could approach the current TS limit. There is a potential of reaching this limit during our next refueling outage currently scheduled to begin April 11, 1997.

Relocating the RCS flow rate limit to the COLR will eliminate the need for cycle specific TS changes to modify the limit. If this limit is not relocated to the COLR from the TS, it will still require periodic TS amendments due to steam generator tube repairs. Due to the impact that RCS flow has on the safety analysis, it is unreasonable to reduce the minimum RCS flow rate limit by a sufficient amount that would bound multiple cycles. Depending upon the margin allowed by each amendment to the RCS flow rate limit, the limit could require a change for each steam generator tube inspection.

The TS will continue to require operation within the RCS flow rate limits and will also retain the same surveillance frequency for the verification of these limits. The appropriate action required if the RCS flow rate limit is violated will remain unchanged in the TS. The requirement will remain for the RCS flow rate limits to be calculated by the NRC approved analytical methodologies.

The proposed amendment request will control the cycle specific RCS flow rate limit within its acceptance criteria to assure conformance with 10 CFR 50.36. This will occur by using the approved methodology for calculating the RCS flow limit instead of specifying its TS value. The COLR will specify the RCS flow rate limit based on the ANO-2 calculations using the approved methodology. Any changes to the COLR will be made in accordance with the provisions of 10 CFR 50.59. The COLR will be revised such that the RCS flow rate limit for the applicable cycle will apply.

DISCUSSION OF CHANGE

TS 3.2.5 was modified by the removal of the RCS flow rate limit of $\geq 120.4 \times 10^6$ lbm/hr and replaced with the requirement to refer to the COLR for the flow limit. The flow limit of $\geq 120.4 \times 10^6$ lbm/hr will be inserted in the COLR as the current RCS flow limit. This format is consistent with Generic Letter 88-16.

Specifications 6.9.5.1.4 through 6.9.5.1.8 and proposed specification 6.9.5.1.10 were modified to include TS 3.2.5 for RCS flow rate as a parameter for which these codes are approved for use. GL 88-16 requires the NRC approved methodology to be listed in TS for limits that are placed in the COLR. CESEC along with the small and large break LOCA analyses codes are all currently being used at ANO-2 for calculating the effects of RCS flow rate in the safety analysis. The CENTS code will be gradually replacing the CESEC code in the ANO-2 safety analysis. The CENTS code will be used for calculating the effects of the steam generator tube repairs on the safety analysis.

Proposed specifications 6.9.5.1.9 and 6.9.5.1.13 were added to allow the use of "Calculational Methods for the CE Small Break LOCA Evaluation Model," CENPD-137-P, Supplement 1-P. GL 88-16 requires the NRC approved methodology to be listed in TS for limits that are

placed in the COLR. Currently, CENPD-137 is used as the ANO-2 small break LOCA methodology. Supplement 1-P of CENPD-137 will be used in the ANO-2 safety analysis for calculating the effects of significant steam generator tube repairs. Specifications 6.9.5.1.9 through 6.9.5.1.12 required renumbering due to the addition of proposed specifications 6.9.5.1.9 and 6.9.5.1.13.

Proposed specification 6.9.5.1.15 was added to section 6.9.5.1 to allow use of the CENTS code for the performance of safety analysis to determine the core operating limits. The CENTS code has been approved by the NRC for use in calculations of transient behavior for CE PWRs in the safety evaluation dated March 17, 1994. CENPD 282-P-A, "Technical Manual for the CENTS Code" is the topical report for the CENTS code. The CENTS code will be gradually replacing the CESEC code in the ANO-2 safety analysis and therefore is included in the list of approved methodologies in TS 6.9.5.1.

Proposed specifications 6.9.5.1.16 and 6.9.5.1.17 were added to allow use of the approved, "Qualification of Reactor Physics Methods for the Pressurized Water Reactors of the Entergy System," ENEAD-01-P, December 1993, Methodology for Specifications 3.1.1.1 and 3.1.1.2 for Shutdown Margin. The addition of these sections are considered administrative in nature because this methodology was previously approved by the NRC for use at ANO-2. GL 88-16 requires the NRC approved methodology to be listed in TS for limits that are placed in the COLR.

DETERMINATION OF NO SIGNIFICANT HAZARDS CONSIDERATION

An evaluation of the proposed change has been performed in accordance with 10CFR50.91(a)(1) regarding no significant hazards considerations using the standards in 10CFR50.92(c). A discussion of these standards as they relate to this amendment request follows:

Criterion 1 - Does Not Involve a Significant Increase in the Probability or Consequences of an Accident Previously Evaluated.

This amendment request relocates the cycle specific Reactor Coolant System (RCS) flow rate limit from the technical specifications to the core operating limits report (COLR). This amendment request also lists some NRC approved analytical methods in the administrative section of the technical specifications required by Genetic Letter 88-16. These changes have no impact on plant safety and are considered to be administrative in nature. The proposed changes do not affect the physical design or operation of the plant. The technical specifications will continue to require operation within the RCS flow rate limits with the same surveillance frequency for their verification. The appropriate action required if the RCS flow rate limit is violated will remain in the technical specifications. The technical specifications will continue to require the RCS flow rate limits to be calculated by the NRC approved analytical methodologies. The cycle specific 10 CFR 50.59 evaluations required for changes to the RCS flow limit in the COLR will ensure that any future changes will not involve a significant increase in the probability or consequences of any accident previously evaluated.

Therefore, this change does not involve a significant increase in the probability or consequences of any accident previously evaluated.

Criterion 2 - Does Not Create the Possibility of a New or Different Kind of Accident from any Previously Evaluated.

The proposed changes do not affect the physical design or operation of the plant. The technical specifications will continue to require operation within the RCS flow rate limits with the same surveillance frequency for verification of the limits. The action required if the RCS flow rate limit is violated will remain in the technical specifications. The technical specifications will continue to require the RCS flow rate limits to be calculated by the NRC approved analytical methodologies. Therefore, this change does not create the possibility of a new or different kind of accident from any previously evaluated.

Criterion 3 - Does Not Involve a Significant Reduction in the Margin of Safety.

The existing technical specifications operability and surveillance requirements are not reduced by the proposed change to relocate the cycle specific RCS flow limit to the COLR. The cycle specific COLR limits will continue to be developed based on NRC approved methodologies. The technical specifications will still require the operation within the RCS flow limit and specify appropriate actions if this limit is violated. Each change to the COLR undergoes a 10 CFR 50.59 safety review to assure that operating the unit within the cycle specific limits will not involve a significant reduction in the margin to safety. Therefore, this change does not involve a significant reduction in the margin of safety.

Therefore, based upon the reasoning presented above and the previous discussion of the amendment request, Entergy Operations has determined that the requested change does not involve a significant hazards consideration.