

U. S. Nuclear Regulatory Commission
May 24, 1999
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Attachment 1

New page for modified
Technical Specification

2.0 SAFETY LIMITS (SLs)

2.1 SLs

2.1.1 Reactor Core SLs

- 2.1.1.1 In MODES 1 and 2, the maximum local fuel pin centerline temperature shall be $\leq 4642 - (5.8 \times 10^{-3} \times (\text{Burnup, MWD/MTU}))^\circ\text{F}$. Operation within this limit is ensured by compliance with the Axial Power Imbalance Protective Limits as specified in the Core Operating Limits Report.
- 2.1.1.2 In MODES 1 and 2, the departure from nucleate boiling ratio shall be maintained greater than the limit of 1.18 for the BWC correlation. Operation within this limit is ensured by compliance with the Axial Power Imbalance Protective Limits and RCS Variable Low Pressure Protective Limits as specified in the Core Operating Limits Report.

2.1.2 RCS Pressure SL

In MODES 1, 2, 3, 4, and 5, the RCS pressure shall be maintained ≤ 2750 psig.

2.2 SL Violations

With any SL violation, the following actions shall be completed:

- 2.2.1 In MODE 1 or 2, if SL 2.1.1.1 or SL 2.1.1.2 is violated, be in MODE 3 within 1 hour.
- 2.2.2 In MODE 1 or 2, if SL 2.1.2 is violated, restore compliance within limits and be in MODE 3 within 1 hour.
- 2.2.3 In MODES 3, 4, and 5, if SL 2.1.2 is violated, restore RCS pressure to ≤ 2750 psig within 5 minutes.
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Attachment 2

Marked up page for changes to
Technical Specification

2.0 SAFETY LIMITS (SLs)

2.1 SLs

2.1.1 Reactor Core SLs

4642 - (5.8×10^{-3})

2.1.1.1 In MODES 1 and 2, the maximum local fuel pin centerline temperature shall be $\leq (5080 - (6.5 \times 10^{-3}) \times (\text{Burnup, MWD/MTU}))^\circ\text{F}$. Operation within this limit is ensured by compliance with the Axial Power Imbalance Protective Limits as specified in the Core Operating Limits Report.

2.1.1.2 In MODES 1 and 2, the departure from nucleate boiling ratio shall be maintained greater than the limit of 1.18 for the BWC correlation. Operation within this limit is ensured by compliance with the Axial Power Imbalance Protective Limits and RCS Variable Low Pressure Protective Limits as specified in the Core Operating Limits Report.

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2.2.3 In MODES 3, 4, and 5, if SL 2.1.2 is violated, restore RCS pressure to ≤ 2750 psig within 5 minutes.

ATTACHMENT 3

Description of Change

Existing technical specification 2.1.1.1 requires the maximum local fuel pin centerline temperature to be $\leq 5080 - (6.5 \times 10^{-3} \times (\text{Burnup, MWD/MTU}))^\circ\text{F}$. This requirement is modified to require the maximum local fuel pin centerline temperature to be $\leq 4642 - (5.8 \times 10^{-3} \times \text{Burnup, (MWD/MTU)})^\circ\text{F}$.

Justification for the Change

The current Oconee Technical Specifications contain a requirement which specifies that the limit for maximum local fuel pin centerline temperature shall be $\leq 5080 - (6.5 \times 10^{-3} \times (\text{Burnup, MWD/MTU}))^\circ\text{F}$. This expression is used in the TACO2 fuel performance code. Current and future cycle designs have been evaluated using the newer TACO3 code. TACO3 was approved for use by Duke in an SER dated April 3, 1995, following an audit by NRC staff which concluded that "DPC has the technical capability to perform TACO3 analyses for reload licensing applications, . . ."

Because of differences in the method that TACO2 and TACO3 treat code uncertainties, the centerline fuel temperature expression is changed in TACO3, to $\leq 4642 - (5.8 \times 10^{-3} \times (\text{Burnup, MWD/MTU}))^\circ\text{F}$. Therefore, this expression must be revised in the ONS Technical Specifications. This new limit is the value contained in the TACO3 topical report (BAW-10162P-A). Approval of Duke Power's use of TACO3 was granted based on an audit of Duke's application of the methodology discussed in the TACO3 topical report. Therefore, this change is considered administrative.

ATTACHMENT 4

No Significant Hazards Evaluation

The following discussion is a summary of the evaluation of the changes contained in this proposed amendment against the 10 CFR 50.92 (c) requirements to demonstrate that all three standards for no significant hazards consideration are satisfied. A no significant hazards consideration is indicated if operation of the facility in accordance with the proposed amendment would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated, or
2. Create the possibility of a new or different kind of accident from any accident previously evaluated, or
3. Involve a significant reduction in a margin of safety.

First Standard

Implementation of this amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated. The use of the revised maximum local fuel pin centerline temperature limit is appropriate since the new limit uses a fuel melt temperature which has been conservatively reduced to account for code uncertainties in calculating fuel centerline temperature. NRC has previously found the use of the TACO3 code by DPC in performing reload licensing to be acceptable. The use of the revised limit for fuel analyzed using an approved code ensures centerline fuel melting is avoided by ensuring the maximum fuel temperature is less than the melting temperature of the fuel. Therefore this change would not involve a significant increase in the probability or consequences of an accident previously evaluated.

Second Standard

Implementation of this amendment will not create the possibility of a new or different kind of accident from any previously evaluated. The use of the revised maximum local fuel pin centerline temperature limit has no affect on accident precursors. Implementation of this amendment will not impact any plant systems that are accident initiators. No other modifications are being proposed in the plant that would result in the creation of a new accident mechanism. Also, no changes

are being made to the way the plant is operated; therefore, no new failure mechanisms will be initiated.

Third Standard

The revised maximum local fuel pin centerline temperature limit has been appropriately reduced to account for uncertainties in predicting centerline fuel temperatures. NRC has previously found the use of the TACO3 code by DPC in performing reload licensing to be acceptable. Therefore, implementation of this amendment would not involve a significant reduction in a margin of safety.

Therefore, Duke has concluded that the proposed amendment does not involve a significant hazards consideration.

ATTACHMENT 5

Environmental Analysis

Pursuant to 10 CFR 51.22 (b), an evaluation of this license amendment request has been performed to determine whether or not it meets the criteria for categorical exclusion set forth in 10 CFR 51.22 (c) (9) of the regulations.

This amendment to the Oconee Nuclear Station Facility Operating License allows for a revised safety limit to be applied to fuel based on the use of an NRC approved methodology. Implementation of this amendment will have no adverse impact upon the Oconee units; neither will it contribute to any additional quantity or type of effluent being available for adverse environmental impact or personnel exposure.

It has been determined there is:

1. No significant hazards consideration,
2. No significant change in the types, or significant increase in the amounts, of any effluents that may be release offsite, and
3. No significant increase in individual or cumulative occupational radiation exposures involved.

Therefore, this amendment to the Oconee Nuclear Station Facility Operation License meets the criteria of 10 CFR 51.22 (c) (9) for categorical exclusion from an environmental impact statement.