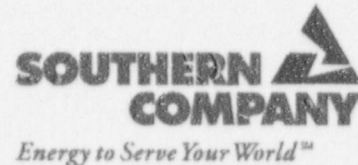


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December 4, 1998

Docket Nos. 50-321  
50-366



HL-5698

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Edwin I. Hatch Nuclear Plant  
Request to Revise Technical Specifications:  
Safety Limit Minimum Critical Power Ratios (SLMCPRs)

Ladies and Gentlemen,

In accordance with the provisions of 10 CFR 50.90, as required by 10 CFR 50.59(c)(1), Southern Nuclear Operating Company (SNC) hereby proposes changes to the Plant Hatch Unit 1 and Unit 2 Technical Specifications (TS), Appendix A to Operating Licenses DPR-57 and NPF-5, respectively. This application proposes to change Unit 1 TS Section 2.1.1.2 to delete the footnote which specifies that the SLMCPRs are for Cycle 18 only. This application also proposes to delete Unit 1 and Unit 2 TS section 5.6.5.b.2). Also, Section 5.6.5.b.1) of each TS is being incorporated into Section 5.6.5.b.

Enclosure 1 provides a description of the proposed changes and an explanation of the basis for each change. Enclosure 2 details the bases for SNC's determination that the proposed changes do not involve a significant hazards consideration. Enclosure 3 provides page change instructions for incorporating the proposed changes. Following Enclosure 3 are the revised Technical Specifications pages. The corresponding marked-up pages follow behind Enclosure 4.

Southern Nuclear Operating Company requests the proposed amendment to be issued and effective prior to restart from the Plant Hatch Unit 1 outage currently to begin April 1999.

Mr. H. L. Sumner, Jr. states he is Vice President of Southern Nuclear Operating Company and is authorized to execute this oath on behalf of Southern Nuclear Operating Company, and to the best of his knowledge and belief, the facts set forth in this letter are true.

Respectfully submitted,

*Lewis Sumner*

H. L. Sumner, Jr.

Sworn to and subscribed before me this 4<sup>th</sup> day of December 1998.

*Elaine E. Bolton*

Notary Public

Commission Expiration Date: August 3, 1999

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U.S. Nuclear Regulatory Commission  
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Enclosures:

1. Basis for Change Request
2. 10 CFR 50.92 Evaluation
3. Page Change Instructions
4. Hand-Marked Pages

cc: Southern Nuclear Operating Company  
Mr. P. H. Wells, Nuclear Plant General Manager  
SNC Document Management (R-Type A02.001)

U.S. Nuclear Regulatory Commission, Washington, D.C.  
Mr. L. N. Olshan, Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II  
Mr. L. A. Reyes, Regional Administrator  
Mr. J. T. Munday, Senior Resident Inspector - Hatch

State of Georgia  
Mr. L. C. Barrett, Commissioner - Department of Natural Resources

Enclosure 1

Edwin I. Hatch Nuclear Plant  
Request to Revise Technical Specifications:  
Safety Limit Minimum Critical Power Ratios (SLMCPRs)

Basis for Change Request

Proposed Change 1

SNC requests that the Technical Specifications contained in Appendix A of the Plant Hatch Unit 1 Operating License DPR-57 be revised to delete the footnote in section 2.1.1.2 that ties the Safety Limit Minimum Critical Power Ratio (SLMCPR) to Cycle 18.

Basis for Proposed Change 1

Prior to Hatch-1 Cycle 18 the SLMCPR for each operating cycle was based on what was thought to be a bounding generic SLMCPR for the most limiting fuel type in the core. In 1996, however, it was discovered that under certain conditions the generic SLMCPR may not be bounding for all operating cycles. In consultation with the NRC, GE agreed to implement a new methodology for calculating cycle-specific SLMCPRs. The cycle-specific limit appears in the Technical Specifications and is the basis for determining cycle-specific MCPR Operating Limits (OLMCPR) which appear in the Core Operating Limits Report (COLR). The cycle-specific SLMCPRs are based on explicitly modeling the bundle R-factor distribution and the radial power distribution in the core.

Since the Hatch-1 Cycle 18 SLMCPR was larger than the generic Safety Limit for the limiting fuel type in the core, SNC submitted a request to the NRC to increase the TS value to 1.10 (and 1.12 for single loop operation). As part of their approval, the NRC determined that a footnote should be included in the TS restricting the new SLMCPR to Cycle 18 only. GE has calculated the cycle-specific SLMCPR for Hatch-1 Cycle 19 and determined that it does not increase as a result of the change in either fuel design or core configuration. It is concluded, therefore, that the current TS value remains valid for the next operating cycle and that the only TS change required to implement the new value is a change in the footnote restricting its applicability to Cycle 18.

As an alternative to revising the footnote in Section 2.1.1.2 every cycle, SNC proposes to delete it. This will allow an existing SLMCPR to be used for multiple, successive cycles as long as the value remains bounding for all of those cycles, as determined by cycle-specific calculations. This change obviates the need to expend utility and NRC resources to revise the TS when the SLMCPR does not change. If the TS value is determined to be non-bounding for an operating cycle, it will be revised prior to the startup of that cycle.

Enclosure 1  
Basis for Change Request

On the other hand, if a cycle-specific calculation shows that an existing TS value is overly conservative, SNC may revise the TS to decrease the SLMCPR, or not revise the TS and continue to use the existing TS value.

Proposed Change 2

SNC requests that the Technical Specifications contained in Appendices A of the Plant Hatch Unit 1 and 2 Operating Licenses, DPR-57 and NPF-5, respectively, be amended to delete Section 5.6.5.b.2) of each TS. Also, Section 5.6.5.b.1) of each TS is being incorporated into Section 5.6.5.b.

Basis for Proposed Change 2

One of the requirements for removing cycle-specific power distribution limits from the Technical Specifications (TS) and putting them in the Core Operating Limits Report (COLR) was the inclusion of references in the Technical Specifications to the NRC-approved methods used to develop those limits. The NRC-approved Reload Licensing Analysis (RLA) methods for analyzing GE BWR fuel assemblies are described in GESTAR-II which appears as the reference in Section 5.6.5.b.1) in both the Unit 1 and 2 Technical Specifications. At the time the COLR was approved for Plant Hatch, both units had four of Advanced Nuclear Fuel's Lead Use Assemblies in their cores. Reference 5.6.5.b.2) was included in the Technical Specifications to reference the NRC-approved methods used to analyze those assemblies. Since the ANF LUAs have been permanently discharged from the Unit 1 and Unit 2 reactors, Section 5.6.5.b.2) no longer describes NRC-approved methods used to analyze fuel in the Hatch reactors. Therefore, this section is being deleted. The remainder of the proposed change involves incorporating the information presently in 5.6.5.b.1) into 5.6.5.b.

Enclosure 2

Edwin I. Hatch Nuclear Plant  
Request to Revise Technical Specifications:  
Safety Limit Minimum Critical Power Ratios (SLMCPRs)

10 CFR 50.92 Evaluation

Proposed Change 1

SNC requests that the Technical Specifications contained in Appendix A of the Plant Hatch Unit 1 Operating License DPR-57 be revised to delete the footnote in section 2.1.1.2 that ties the Safety Limit Minimum Critical Power Ratio (SLMCPR) to Cycle 18.

Basis for Proposed Change 1

No Significant Hazards Consideration Determination:

The change does not involve a significant hazards consideration for the following reasons:

1. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The footnote in Section 2.1.1.2 of the Hatch-1 Technical Specifications restricts the applicability of the Safety Limit for MCPR (SLMCPR) to Cycle 18 only. By applying the same NRC-approved methods used to calculate the Cycle 18 SLMCPR it has been determined that the current value is bounding for Cycle 19 as well. However, because of the footnote, it can not be applied to Cycle 19 without a Technical Specifications amendment. In order to eliminate future Technical Specifications revisions that do not change the SLMCPRs values, SNC proposes to delete the footnote which ties those values to a specific operating cycle. Removing the footnote does not change the method of calculating SLMCPR for other cycles, nor does it eliminate the requirement to revise the Technical Specifications if a different value is used for future cycles. Deletion of the cycle-specific footnote does not change the operation of any plant structure, system or component; therefore, it has no effect on the probability or consequences of an accident previously evaluated.

2. The proposed amendment does not create the possibility of a new or different kind of accident from any previously evaluated.

Deleting the cycle-specific footnote in Section 2.1.1.2 of the Technical Specifications does not result in any new methods of operating the facility and does not involve any facility modifications. No new initiating events or transients result from this change.

Therefore, this proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. The proposed amendment does not involve a significant reduction in a margin of safety.

The purpose of the SLMCPR in the Technical Specifications is to ensure at least 99.9% of the fuel pins in the core are expected to avoid transition boiling during the worst anticipated operational occurrence (AOO) throughout an operating cycle. The footnote in Section 2.1.1.2 of the Hatch-1 Technical Specifications is intended to ensure the correct SLMCPR is used each cycle. Prior to the Spring of 1996, the Safety Limits had been calculated for each fuel type, independently of operating cycle. As long as the limiting fuel type in the core did not change from cycle to cycle, the Safety Limit did not change. It was discovered in 1996, however, that generic SLMCPRs based on fuel type alone may not be bounding for all cycles for all reactors. In response to this discovery GE committed to evaluating SLMCPRs based on cycle-unique information as a more accurate method of ensuring 99.9% of the fuel pins in the core are expected to avoid transition boiling during AOOs. The new methodology, which is now applied each cycle, is based on NRC-approved methods and incorporates implementing procedures that model cycle-specific parameters. This methodology was used to calculate the Cycle 18 value that is currently in the Technical Specifications. The same procedure was also employed to determine that the Hatch-1 Cycle 19 SLMCPR and it was determined the Cycle 19 value is bounded by the Cycle 18 value. Thus, except for the footnote in Section 2.1.1.2, there is no need to revise the Hatch-1 Technical Specifications in order to ensure the correct SLMCPR is implemented for Cycle 19. As a way of avoiding similar changes in the future, SNC proposes that the footnote be deleted. Since NRC-approved methodology will still be used to determine the cycle-specific SLMCPRs to ensure that ensure 99.9% of the fuel pins are expected to avoid transition boiling during AOOs, there will be no reduction of margin of safety as a result of this change.

#### Proposed Change 2

SNC requests that the Technical Specifications contained in Appendices A of the Plant Hatch Unit 1 and 2 Operating Licenses, DPR-57 and NPF-5, respectively, be amended to delete Section 5.6.5.b.2) of each TS and Section 5.6.5.b.1) is being incorporated into Section 5.6.5.b. of each TS.

Basis for Proposed Change 2

No Significant Hazards Consideration Determination:

The change does not involve a significant hazards consideration for the following reasons:

1. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

Section 5.6.5.b.2) no longer describes NRC-approved methods for analyzing fuel in the Unit 1 and Unit 2 reactors because the ANF LUAs have been permanently discharged. Deleting Section 5.6.5.b.2) from the Administrative Controls portion of the Technical Specifications does not change the operation of any structure, system, or component in the facility. Therefore, this amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The proposed amendment does not create the possibility of a new or different kind of accident from any previously evaluated.

Deleting Section 5.6.5.b.2), which describes the use of ANF methods for analyzing LUAs, from the Technical Specifications does not result in any new methods of operating the facility and does not involve any facility modifications. No new initiating events or transients result from this change. Therefore, this proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. The proposed amendment does not involve a significant reduction in a margin of safety.

ANF LUAs are no longer used as fuel in the Plant Hatch reactors, therefore, ANF NRC-approved methods described in Technical Specifications Section 5.6.5.b.2) are not used to determine power distribution limits which appear in the COLR. GE's reload licensing methodology described in Section 5.6.5.b.1) will be incorporated into Section 5.6.5.b. and will continue to be used to analyze the GE fuel in both units. Therefore, this change does not involve a significant reduction in the margin of safety.