



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

ENCLOSURE 2

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATING TO AMENDMENT NO. 146 TO FACILITY OPERATING LICENSE NO. DPR-79

TENNESSEE VALLEY AUTHORITY

SEQUOYAH NUCLEAR PLANT, UNIT 2

DOCKET NO. 50-328

1.0 INTRODUCTION

By letter dated May 24, 1991, and supplemented by letter dated August 3, 1991, the Tennessee Valley Authority (the licensee) proposed changes to the Technical Specifications (TS) for the Sequoyah Nuclear Plant, Units 1 and 2. The proposed changes would modify specifications having cycle-specific parameter limits by replacing the values of those limits with a reference to a Core Operating Limits Report (COLR) for the values of those limits. The proposed changes also include the addition of the COLR to the Definitions section and to the reporting requirements of the Administrative Controls section of the TS. Guidance on the proposed changes was developed by NRC on the basis of the review of a lead-plant proposal submitted on the Oconee plant docket by Duke Power Company. This guidance was provided to all power reactor licensees and applicants by Generic Letter 88-16, dated October 4, 1988.

The licensee's letter dated August 23, 1991, provided clarifying information and changes to the TS Bases that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The licensee's proposed changes to the TS are in accordance with the guidance provided by Generic Letter 88-16 and are addressed below.

- (1) The Definition section of the TS was modified to include a definition of the COLR that requires cycle/reload-specific parameter limits to be established on a unit-specific basis in accordance with Nuclear Regulatory Commission (NRC) approved methodologies that maintain the limits of the safety analysis. The definition indicates that plant operation within these limits is addressed by individual specifications.
- (2) The following specifications were revised to replace the values of cycle-specific parameter limits with a reference to the COLR that provides these limits:

- (a) Specification 3.1.1.3 and Surveillance Requirement 4.1.1.3

The moderator temperature coefficient (MTC) limits for this specification and for this surveillance requirement are specified in the COLR.

- (b) Specification 3.1.3.5 and Surveillance Requirement 4.1.3.5

The shutdown bank insertion limit for this specification and for this surveillance requirement is specified in the COLR.

- (c) Specification 3.1.3.6

The control bank insertion limits for this specification are specified in the COLR.

- (d) Specification 3.2.1

The axial flux difference limits as a function of rated thermal power for this specification are specified in the COLR.

- (e) Specification 3.2.2 and Surveillance Requirement 4.2.2

The total peaking factor ( $F_Q$ ) limit at rated thermal power, the normalized  $F_Q$  limit as a function of core height  $K(z)$ , and the cycle dependent function that accounts for power distribution transients encountered during normal operation,  $W(z)$ , for this specification and for this surveillance requirement are specified in the COLR.

- (f) Specification 3.2.3

The nuclear enthalpy rise hot channel factor ( $F^{N-\Delta H}$ ) limit at rated thermal power and the power factor multiplier ( $PF-\Delta H$ ) for this specification are specified in the COLR.

Changes to the bases of the affected specifications and Basis 2.1.1 have been provided by the licensee to include appropriate reference to the COLR. Based on our review, we conclude that the changes to these bases are acceptable.

- (3) Specification 6.9.1.14 is revised to delete a previous reporting requirement on Peaking Factor Limit Report and to add the COLR to the reporting requirements of the Administrative Controls section of the TS. This specification requires that the COLR be submitted, upon issuance, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector. The report provides the values of cycle-specific parameter limits that are applicable for the current fuel cycle. Furthermore, these specifications require that the values of these limits be established using NRC approved methodologies and be consistent with all applicable limits of the safety analysis. The approved Westinghouse (W) methodologies are the following:

- (a) WCAP-9272-P-A, "Westinghouse Reload Safety Evaluation Methodology," July 1985 (W Proprietary).

(Methodology for Specification 3.1.1.3 - Moderator Temperature Coefficient, 3.1.3.5 - Shutdown Bank Insertion Limit, 3.1.3.6 - Control Bank Insertion Limit, 3.2.1 - Axial Flux Difference, 3.2.2 - Heat Flux Hot Channel Factor, and 3.2.3 - Nuclear Enthalpy Rise Hot Channel Factor.)

- (b) WCAP-10216-P-A, "Relaxation of Constant Axial Offset Control  $F_Q$  Surveillance Technical Specification," June 1983 (W Proprietary).

(Methodology for Specifications 3.2.1 - Axial Flux Difference (Relaxed Axial Offset Control) and 3.2.2 - Heat Flux Hot Channel Factor  $W(z)$  surveillance requirements for  $F_Q$  methodology).

- (c) WCAP-10266-P-A, Revision 2, "The 1981 Version of Westinghouse Evaluation Model Using BASK Code," March 1987 (W Proprietary).

(Methodology for Specification 3.2.2 - Heat Flux Hot Channel Factor.)

Finally, the specification requires that all changes in cycle-specific parameter limits be documented in the COLR before each reload cycle or remaining part of a reload cycle and submitted upon issuance to NRC, prior to operation with the new parameter limits.

On the basis of the review of the above items, the NRC staff concludes that the licensee provided an acceptable response to Generic Letter 88-16 for removing cycle-specific parameter limits from the TS. Because plant operation continues to be limited in accordance with the values of the cycle-specific parameter limits that are established using NRC approved methodologies, the NRC staff concludes that this change is administrative in nature and there is no impact on plant safety as a consequence. Accordingly, the staff finds that the proposed changes are acceptable.

As part of the implementation of Generic Letter 88-16, the staff has also reviewed a sample COLR that was provided by the licensee. On the basis of this review, the staff concludes that the format and content of the sample COLR are acceptable.

The licensee also proposed a change to the Action Statement c.2 of Specification 3.1.3.1, to reference Specification 3.1.3.6 instead of Figure 3.1-1. This change was necessary because the figure has been relocated to the COLR. Consequently, this change is administrative in nature and is acceptable. Other changes to the Bases sections proposed by the licensee consist of information which clarifies the referenced sections. They are, therefore, acceptable.

### 3.0 SUMMARY

We have reviewed the request by the Tennessee Valley Authority to modify the Technical Specifications of the Sequoyah plants that would remove the specific values of some time-dependent parameters from the specifications and place the values in a more Operating Limits Report that would be referenced by the specifications. Based on this review, we conclude that these Technical Specification modifications are acceptable.

### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Tennessee State official was notified of the proposed issuance of the amendment. The State official had no comments.

### 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted areas as defined in 10 CFR Part 20 and changes to the Surveillance Requirements. In addition, this amendment changes reporting or administrative procedures or requirements. 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. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (56 FR 31443). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (c)(10). 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.

### 6.0 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.

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