



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO.128 TO FACILITY OPERATING LICENSE NO. DPR-3

YANKEE ATOMIC ELECTRIC COMPANY

YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-029

1.0 INTRODUCTION

By letter dated September 14, 1989 (Ref. 1), Yankee Atomic Electric Company (the licensee) proposed changes to the Technical Specifications (TS) for the Yankee Rowe plant. The proposed changes would modify specifications having cycle-specific parameter limits by replacing the values of those limits with a reference to the 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 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 (Ref. 2).

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 Core Operating Limits Report that requires cycle/reload-specific parameter limits to be established on a unit-specific basis in accordance with an NRC approved methodology that maintains the limits of the safety analysis. The definition notes 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 3.1.3.5

The Control Rod Insertion Limits for these Specifications are specified in the COLR.

(b) Specification 3.2.1 and Surveillance Requirement 4.2.1.1

The Peak Linear Heat Generation Rate limits for this Specification and Surveillance Requirement are specified in the COLR.

(c) Surveillance Requirement 4.2.1.2

The multiplier for xenon redistribution and the reduced power multiplier for this Surveillance Requirement are specified in the COLR.

The bases of affected specifications have been modified 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 6.9.4 was added 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 methodologies are the following:

- (a) SN-75-41, Volumes I, II, III and Supplements 1 through 7, "WREM-Based Generic PWR-ECCS Evaluation Model," Exxon Nuclear Corporation, as amended/supplemented by:
1. YAEC-1071, "Yankee Rowe Core XI Decay Heat Redistribution Factor During Shutdown Conditions," June 1974.
 2. Proposed Change to Technical Specifications No. 125.
 3. Proposed Change to Technical Specifications No. 142.
 4. XN-76-44, "Revised Nucleate Boiling Lockout for ENC-WREM-Based ECCS Evaluation Mode," Exxon Nuclear Corporation, September 1976.
 5. YAEC-1125, "Method of Calculating End-of-Bypass Time for Yankee Rowe LOCA Analysis," March 1977.
 6. YAEC-1131, "Method for Calculating Low Flow Film Boiling Coefficients for Yankee WREM-Based Generic PWR ECCS Evaluation Model," June 1977.
 7. YAEC-1133, "Core Flood Rate Stabilization for Yankee WREM-Based Generic PWR ECCS Evaluation Model," July 1977.
 8. Letter, "Yankee Rowe Core XIII LOCA Core Inlet Temperature and Accumulator Delay Sensitivity Analysis," and Errata, October 7, and October 11, 1977.

9. XN-76-27, "WREM-Based Generic Letter PWR ECCS Evaluation Model Update ENC-WREM-11," Exxon Nuclear Corporation, July 1976.
 10. YAEC-1231, Revision 1, "Application of a Lower Plenum Phase Separation Model to Yankee Rowe Large Break LOCA Analysis," March 1981.
 11. Proposed Change to Technical Specification No. 178.
 12. Letter, "LOCA Injection P Penalty," dated August 16, 1985.
 13. Proposed Change to Technical Specifications No. 188.
 14. Letter, "LOCA Reflood Heat Transfer Models," dated January 5, 1988.
 15. Letter, "YAEC Response to NRC Review of Revised Reflood Heat Transfer Model for YNPS LOCA Analysis," dated May 2, 1989.
- (b) Reactor physics methods as described in Proposed Change to Technical Specification No. 115, as amended/supplemented by:
1. Proposed Change to Technical Specification No. 125.
 2. Proposed Change to Technical Specification No. 145.
 3. Proposed Change to Technical Specification No. 163.
 4. Proposed Change to Technical Specification No. 178.
- (c) Transient analysis methods as described in Proposed Change to Technical Specification No. 115, as amended/supplemented by:
1. YAEC-1361, "YNPS Main Steam Line Break Analysis," May 1983.
 2. YAEC-1398, "YNPS Main Steam Line Break Analysis, Addition of Boron Transport Model," February 1984.

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 those items as addressed in the NRC guidance in Generic Letter 88-16 on modifying cycle-specific parameter limits in TS. Because plant operation continues to be limited in accordance with the values of 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 COLR are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes to the surveillance requirements, a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20, and changes in reporting requirements. The 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 published a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (54 FR 46495) on November 3, 1989 and consulted with the State of Massachusetts. No public comments were received and the State of Massachusetts did not have any comments.

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security nor to the health and safety of the public.

5.0 REFERENCES

1. Letter (BYR 89-141) from S. P. Schultz (YAEC) to NRC, dated September 14, 1989.
2. Generic Letter 88-16, "Removal of Cycle-Specific Parameter Limits from Technical Specifications," dated October 4, 1988.

Principal Contributor: D. Fieno

Dated: November 14, 1989