



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 126 TO FACILITY OPERATING LICENSE NO. DPR-28

VERMONT YANKEE NUCLEAR POWER CORPORATION

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

1.0 INTRODUCTION

By letter dated June 11, 1990, Vermont Yankee Nuclear Power Corporation (the licensee) proposed changes to the Technical Specifications (TS) for Vermont Yankee. The proposed changes would add to Technical Specification 6.7.A.4 six NRC reviewed and approved methodologies for use in generating the limits in the Core Operating Limits Report (COLR). Technical Specification 6.7.A.4 presently requires that certain core operating limits be established and documented in the COLR before each reload cycle. These requirements pertain to:

- (a) The Average Planar Linear Heat Generation Rates (APLHGR) for Specifications 3.11.A and 3.6.G.1a, (b) The  $K_e$  core flow adjustment factor for Specification 3.11.C., (c) The Minimum Critical Power Ratio (MCPR) for Specifications 3.11.C and 3.6.G.1a, and (d) The Linear Heat Generation Rates (LHGR) for Specifications 2.1.A.1a, 2.1.B.1, and 3.11.B.

Technical Specification 6.7.A.4 further requires that these limits be determined by certain methods which have been previously reviewed and approved by the NRC, and which are listed in Technical Specification 6.7.A.4.

In addition, the licensee advised of a needed deletion of Basis page 67a for Technical Specification 4.2, Protective Instrumentation by letter dated November 28, 1989.

2.0 EVALUATION

Technical Specification 6.7.A.4 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, this specification requires that the values of these limits are established using NRC approved methodology and be consistent with all applicable limits of the safety analysis. The proposed additions to the approved methodologies are the following:

- a. Report, A. A. F. Ansari, "Methods for the Analysis of Boiling Water Reactors: Steady-State Core Flow Distribution Code (FIBWR)," YAEC 1234, December 1980.
- b. Report A. S. DiGiovine, et al., CASMO-3G Validation, YAEC-1363-A, April 1988
- c. Report A. S. DiGiovine, J. P. Gorski, and M. A. Tremblay, SIMULATE-3 Validation and Verification, YAEC-1659-A, September 1988
- d. Report, R. A. Woehlke, et al., MICBURN-3/CASMO-3/TABLES-3/SIMULATE-3 Benchmarking of Vermont Yankee Cycles 9 through 13, YAEC-1683-A, March 1989
- e. Report, J. T. Cronin, Method for Generation of One-Dimensional Kinetics Data for RETRAN-02, YAEC-1694-A, June 1989
- f. Report, V. Chandola, M. P. LeFrancois, and J. D. Robichaud, Application of One-Dimensional Kinetics to Boiling Water Reactor Transient Analysis Methods, YAEC-1693-A, Revision 1, November 1989

All of the above methodologies have been reviewed and approved by the NRC staff. Accordingly, the staff finds that the proposed changes are acceptable.

Page 67a of the Basis to TS 4.2 has been deleted to reflect current design. The complete deletion of this Basis page removes language that is no longer applicable to the plant.

### 3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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). 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 CONCLUSIONS

We have reviewed the request by the Vermont Yankee Nuclear Power Corporation to modify the Technical Specifications of the Vermont Yankee plant that would add six NRC reviewed and approved methodologies for use in generating the limits in the COLR. Based on this review, we conclude that the addition of these six reports to the TS is acceptable.

The Commission made a proposed determination that the amendment involves no significant hazards consideration which was published in the Federal Register (55 FR 30315) on July 25, 1990, and consulted with the State of Vermont. No public comments were received and the State of Vermont did not have any comments. The staff concludes that the proposed change to the Technical Specifications is acceptable.

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Dated: August 24, 1990