

YANKEE ATOMIC ELECTRIC COMPANY

2.C.15.1
FYR 82-112



1671 Worcester Road, Framingham, Massachusetts 01701

November 26, 1982

United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Office of Nuclear Reactor Regulation

References: (a) License No. DPR-3 (Docket No. 50-29)
(b) YAEC Letter to USNRC, dated September 28, 1982 (FYR 82-95)

Subject: Core XVI Revised LOCA Limits - Proposed Change #178 -
Supplement #2

Dear Sir:

Pursuant to Section 50.59 of the Commission's Rules and Regulations, the Yankee Atomic Electric Company hereby requests the authorization to make the following changes:

Proposed Change

Reference is made to the Technical Specifications and the "Yankee Nuclear Power Station Core XVI Performance Analysis [Reference (b)]" of License No. DPR-3. It is proposed that:

- (1) The attached Figure 3.2-1 replace the corresponding figure in the Technical Specifications and
- (2) The attached pages and Appendix A revise the Core XVI Performance Analysis submittal in Reference (b).

Reason and Basis for Change

This change is being proposed in order to revise the Technical Specification maximum allowable peak rod linear heat generation rate limits as determined by the Core XVI LOCA Analysis.

A revised LOCA limit curve (Figure 3.2-1) has been determined based on more appropriate values of the moderator density reactivity coefficients than assumed in the original analysis. The original LOCA analysis utilized overly conservative values for moderator density reactivity feedback. These coefficients were calculated assuming only the changing moderating properties of a unit cell without regard for spatial leakage effects. The recalculation of moderator density coefficients was based on a one-dimensional diffusion theory model which credited radial core leakage.

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The Core XVI LOCA limits were revised only for the 1,000 MWD/MTU fresh fuel limit. The use of the new reactivity coefficients resulted in lower cladding temperatures at the end of the blowdown phase and, therefore, a higher allowable LHGR limit. Other limits were not optimized, but recalculation would yield higher values. An assessment of the break spectrum showed that the 0.8 DECLG break, as originally assumed, would remain the limiting break.

Safety Consideration

Based on the consideration contained herein, it is concluded that there is reasonable assurance that operation of the Yankee plant, consistent with the proposed Technical Specifications, will not endanger the health and safety of the public. This proposed change has been reviewed by the Nuclear Safety Audit and Review Committee.

Fee Determination

This proposed change is a supplement to those changes submitted in Reference (b) for which a \$12,300 fee has already been submitted.

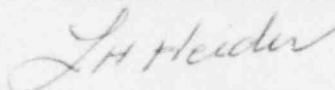
Schedule of Change

These changes to the Yankee Technical Specifications will be implemented upon Commission approval. A timely review and approval of this submittal, consistent with our schedule for Core XVI startup, would be appreciated.

We trust you will find this submittal satisfactory; however, should you desire additional information, please contact us.

Very truly yours,

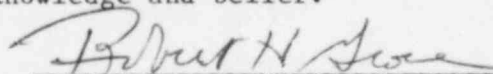
YANKEE ATOMIC ELECTRIC COMPANY



L. H. Heider
Vice President/Manager of Operation

COMMONWEALTH OF MASSACHUSETTS))ss
MIDDLESEX COUNTY)

Then personally appeared before me, L. H. Heider, who, being duly sworn, did state that he is a Vice President of Yankee Atomic Electric Company, that he is duly authorized to execute and file the foregoing request in the name and on the behalf of Yankee Atomic Electric Company and that the statements therein are true to the best of his knowledge and belief.



Robert H. Groce Notary Public
My Commission Expires September 14, 1984

