## YANKEE ATOMIC ELECTRIC COMPANY



1671 Worcester Road, Framingham, Massachusetts 01701

2.C.15.1 FYR 81-52

March 26, 1981

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 8, 1978 (WYR 78-79) (c) YAEC Letter to USNRC, dated December 21, 1979 (WYR 79-160)

(d) YAEC Letter to USNRC, dated July 8, 1980 (WYR 80-81)

Subject: Core XV Refueling

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 "Yankee Nuclear Power Station Core XIV Performance Analysis (Reference (b)) of License No. DPR-3.

- We propose to refuel the reactor for Core XV operation by replacing 36 fuel assemblies.
- 2. Modifications, implemented in accordance with 10 CFR 50.59(a), will be made to (1) provide automatic quick closure of the four main steam line non-return valves, and (2) upgrade the existing emergency feedwater system capabilities by adding two full capacity motor driven pumps.
- 3. We propose to modify the Technical Specifications to accommodate the above changes. The proposed Technical Specification changes are given in Attachment A.

REASON FOR CHANGE: In support of Core XV refueling, the following Technical Specification changes are necessary (1) to revise safety limit curves to conservatively bound both fresh and recycled fuel assemblies as well as conservatively bound future core characteristics in an effort to eliminate future Technical Specification changes in this area, (2) to revise the Keff (Keff < .96) for operation in Modes 4 and 5 in consideration of boron dilution events, (3) to incorporate the cycle dependent physics characteristics, (4) to increase the shutdown margin requirements for Modes 1, 2, and 3 in consideration of main steam line rupture (MSLR) events, (5) to modify rod insertion restrictions in consideration of MSLR events and control rod ejection events, and (6) to provide Core XV LOCA limits.

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In addition, Technical Specification changes are necessary due to plant modifications to automate the four main steam non-return valves, and increase the existing emergency feedwater capabilities. These changes are necessary to incorporate (1) the addition of the main steam line isolation circuitry and instrumentation, (2) the addition of two motor driven emergency feedwater pumps, (3) the revisions to the containment isolation valve list due to piping modifications, and (4) the revisions to surveillance requirements.

Additional information in support of the modifications to the emergency feedwater system has been provided in References (c) and (d).

BASIS FOR CHANGE: Attachment B provides a description of the modification to automate the four main steam line non-return valves. Attachment C provides a description of the modification to upgrade the emergency feedwater system capabilities. Attachment D provides the Core Performance Analysis Report in support of Core XV operation. This report addresses the mechanical design, thermal hydraulic design, physics and safety analysis aspects of the refueling.

SAFETY CONSIDERATION: Based on the considerations contained herein, it is concluded that there is reasonable assurance that operation of the Yankee Rowe 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 requires an approval that involves several safety issues and is deemed not to involve a significant hazard consideration. For these reasons, Yankee Atomic Electric Company proposes this change as a Class IV Admendment, a payment of \$12,300 is enclosed.

SCHEDULE OF CHANGE: These changes to the Yankee Rowe Technical Specifications will be implemented upon Commission approval. A timely review and approval of this submittal consistent with our schedule for Core XV startup would be appreciated. Core XV is scheduled to commence on or about July 1, 1981.

We trust that 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

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Vice President

COMMONWEALTH OF MASSACHUSETTS)

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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.

Lobert H. Groce Notary Public

My Commission Expires September 14, 1984