VERMONT YANKEE
NUCLEAR POWER CORPORATION

Proposed Change No. 129

RD 5, Box 169, Ferry Road, Brattleboro, VT 05301

REPLY TO:
ENGINEERING OFFICE
1671 WORCESTER ROAD
FRAMINGHAM, MASSACHUSETTS 01701
TELEPHONE 617-872-8100

May 10, 1985
FVY 85-46

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

Attention: Office of Nuclear Reactor Regulation
Mr. H. R. Denton, Director

References:
(a) License No. DPR-28 (Docket No. 50-271)
(b) Letter, VYNPC to USNRC, FVY 83-45, Proposed Change No. 107, dated May 26, 1983
(c) Final Rule [48FR 24008], Fracture Toughness Requirements for Light Water Reactors, dated May 27, 1983
(d) Letter, VYNPC to USNRC, FVY 84-9, Proposed Change No. 118, dated February 7, 1984
(e) Letter, USNRC to VYNPC, Amendment No. 81, dated March 13, 1984
(f) Letter, VYNPC to USNRC, FVY 84-145, dated December 7, 1984

Subject: Reactor Vessel Pressure/Temperature Curves

Dear Sir:

Pursuant to Section 50.59 of the Commission's Rules and Regulations, Vermont Yankee Nuclear Power Corporation hereby proposes the following change to Appendix A of the Operating License.

Proposed Change:

Replace Pages 111, 111a, 111b, 117, and 118 of the Vermont Yankee Technical Specifications with the enclosed revised Pages 111, 111a, 111b, 117, and 118. This submittal supersedes Proposed Change No. 118, submitted on February 7, 1984 [Reference (d)] in its entirety; and we, therefore, request that Proposed Change No. 118 be withdrawn from consideration.

This proposed change will revise the Vermont Yankee Technical Specifications, Figures 3.6.1., 3.6.2, and 3.6.3 (Pages 111, 111a, and 111b) and correspondent bases pages (Pages 117 and 118) to incorporate shifts in the Vermont Yankee reactor vessel pressure/temperature limit curves.

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Rec'd w/check #150.00
#003251

Reason for Change:

This proposed change will revise our Technical Specifications to accommodate shifts in transition temperature for the reactor vessel materials that were induced by radiation effects. Periodic review and, if necessary, adjustment of the curves to account for the effects of increased neutron exposure, is required by 10CFR Part 50, Appendices G and H.

This change adjusts the curves of Figure 3.6.1 to compensate for the effects of increased neutron exposure to permit operation to a cumulative energy output of 1.790E8 MWh(t). This adjustment is necessary because the existing curves are limited to an energy output of 1.33E8 MWh(t), a value which is expected to be reached during May 1986. This change also adjusts the curves of Figures 3.6.1 and 3.6.2 to incorporate revised fast neutron fluence calculations.

Basis for Change:

A revision to Appendix G, which became effective July 26, 1983, required that all reactor vessel pressure/temperature limit curves include additional safety margins for the closure flange region of the vessel. Subsequently, on February 7, 1984 [Reference (d)], Vermont Yankee submitted Proposed Change No. 118 to reflect the additional Appendix G requirements as they applied to our May 26, 1983 [Reference (b)] submittal. On March 13, 1984 [Reference (e)], NRC issued Amendment No. 81 to the Vermont Yankee Facility Operating License. This amendment revised the Vermont Yankee Technical Specifications in response to Vermont Yankee's letter of May 26, 1983 to accommodate shifts in transition temperature for the reactor pressure vessel materials that were induced by radiation effects, as required by 10CFR50, Appendix G. However, Amendment No. 81 did not incorporate the revised reactor vessel pressure/temperature curves submitted under Proposed Change No. 118. The new curves submitted with this proposed change supersede those previously submitted and, therefore, Proposed Change No. 118 can be withdrawn.

The reactor vessel pressure/temperature curves submitted under Proposed Change No. 118 have been revised based upon the results of the Ten-Year Surveillance Capsule Report, prepared by Battelle Laboratories. Pursuant to 10CFR50 Appendix H, Reactor Vessel Material Surveillance Program Requirements, Vermont Yankee submitted [Reference (f)] Battelle Report BCL-585-84-3, "Final Report On Examination, Testing and Evaluation of Irradiated Pressure Vessel Surveillance Specimens From the Vermont Yankee Nuclear Power Station". This report documented the analysis performed on the surveillance specimen removed from the Vermont Yankee reactor vessel during the 1983 refueling outage. Attachment 1 to this proposed change provides documentation of the material parameters required to develop the revised pressure/temperature curves. These parameters are based on the Battelle Laboratories Report results.

Safety Considerations:

This proposed change is submitted as a result of NRC requirements (10CFR50, Appendices G and H) and is not considered to constitute an unreviewed safety question as defined in 10CFR50.59(a)(2). The curves accommodate a higher output limit based on a neutron fluence determination factor derived from the Battelle Report results submitted by letter, dated December 7, 1984 [Reference (f)].

Additionally, the ultimate RT_{NDT} shift values were derived from Regulatory Guide 1.99, Revision 2. Fluence values seen by the reactor vessel at an energy output of 1.790E8 MWh(t) are below the range of Regulatory Guide 1.99 applicability.

This change had been reviewed by the Vermont Yankee Nuclear Safety Audit and Review Committee.

Significant Hazards Consideration:

The NRC has provided guidance concerning the application of standards for conclusions regarding "Significant Hazards Consideration" [48FR14870]. The examples of actions involving no significant hazards consideration include: "A change to make a license conform to changes in the regulations, where the license change results in very minor changes to facility operations clearly in keeping with the regulations."

This change to the pressure/temperature limits is similar to the example cited above because 10CFR Part 50, Appendices G and H require the updating of pressure/temperature limits based on the surveillance program. This proposed change will result in a change to facility operations clearly in keeping with the regulations.

Based on the above, we have determined that this change does not constitute a significant hazards consideration, as defined in 10CFR50.92(c).

Fee Determination:

In accordance with the provisions of 10CFR170.12, an application fee of $150.00 is enclosed.

Schedule of Change:

For the reasons discussed above, we request that your review and approval of this proposed change be completed no later than May 1986, in order to assure continued operation within the bounds of Technical Specifications. This change will be incorporated into the Vermont Yankee Technical Specifications as soon as practicable following receipt of your approval.

We trust that the information provided above adequately supports our request; however, should you have any questions in this matter, please contact us.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORPORATION

Warren P. Murphy
Vice President and Manager of Operations

RC/rcm

Enclosure

cc: U.S. Nuclear Regulatory Commission
Document Control Desk (40 copies)

Vermont Department of Public Services
120 State Street
Montpelier, Vermont 05602
Attention: Mr. Gerald Tarrant, Chairman

STATE OF VERMONT)
)ss
WINDHAM COUNTY)

Then personally appeared before me, Warren P. Murphy, who, being duly sworn, did state that he is a Vice President and Manager of Operations of Vermont Yankee Nuclear Power Corporation, that he is duly authorized to execute and file the foregoing document in the name and on the behalf of Vermont Yankee Nuclear Power Corporation and that the statements therein are true to the best of his knowledge and belief.

Diane M. McCue
Notary Public
My Commission Expires