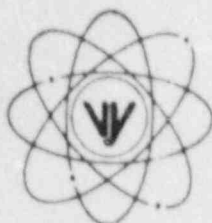


# VERMONT YANKEE NUCLEAR POWER CORPORATION

Proposed Change No. 137, Supplement 1



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

FVY 88-08  
REPLY TO

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

January 29, 1988

United States Nuclear Regulatory Commission  
Washington, DC 20555

Attention: Office of Nuclear Reactor Regulation  
Mr. T. E. Murley, Director

References: (a) License No. DPR-28 (Docket No. 50-271)  
(b) Letter, VYNPC to USNRC, FVY 84-127, "NUREG-0737,  
Supplement 1 - Regulatory Guide 1.97," dated  
October 30, 1984  
(c) Letter, VYNPC to USNRC, FVY 85-99, dated October 25, 1985  
(d) Letter, VYNPC to USNRC, FVY 87-08, "Post-Accident  
Instrumentation Technical Specifications - Proposed  
Change No. 137," dated January 12, 1987  
(e) Letter, VYNPC to USNRC, FVY 87-77, "NUREG-0737,  
Supplement 1 - Regulatory Guide 1.97 Program Status,"  
dated August 11, 1987

Subject: Post-Accident Instrumentation Technical Specifications -  
Supplement 1

Dear Sir:

Pursuant to Section 1.59 of Commission's Rules and Regulations, Vermont  
Yankee Nuclear Power Corporation hereby proposes the following modifications  
to Appendix A of the Operating License.

## Proposed Change

Replace Pages 49 and 49b of the Vermont Yankee Technical Specifications  
with the attached revised Pages 49 and 49b. These proposed changes supplement  
Vermont Yankee Proposed Change No. 137 and revise Table 3.2.6 of the Technical

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Specifications pertaining to post-accident instrumentation. Specifically, this proposed change incorporates: A) instrumentation changes and range expansion for the Drywell Atmospheric and Torus Air Temperature parameter; and B) instrumentation changes and range expansion for the Torus Water Temperature parameter.

#### Reason for Change

By letter, dated January 12, 1987 [Reference (d)], Vermont Yankee submitted Proposed Change No. 137 which included a change to Technical Specification Table 3.2.6 incorporating the addition of certain redundant post-accident instrumentation installed during the 1986 refueling outage in accordance with NUREG-0737, Supplement 1, and Regulatory Guide 1.97 [References (b) and (c)]. Specifically, Proposed Change No. 137 involved three changes: Change I incorporated the addition of certain redundant post-accident instrumentation installed as a result of NUREG-0737, Supplement 1, and Regulatory Guide 1.97; Change II involved a range change to the Torus Water Level instrument parameter to support the emergency operating procedures; and Change III involved several minor corrective updates for currently installed instrumentation.

The purpose of this proposed supplement is to incorporate additional post-accident monitoring instrumentation installed during the 1987 refueling outage for the Drywell Atmospheric and Torus Air Temperature parameter and the Torus Water Temperature parameter as a result of NUREG-0737, Supplement 1, and Regulatory Guide 1.97 requirements [References (b), (c), and (e)].

#### Basis for Change

Based on the Regulatory Guide 1.97 commitment documented in References (b), (c), and (e), the following changes are proposed to Pages 49 and 49b involving Table 3.2.6 of the Technical Specifications:

- A. The Drywell Atmospheric Temperature parameter was upgraded to provide two (2) redundant, fully qualified instrument channels. Temperature Indicator, Meter TI-16-19-30B, with a range of 0 to 350°F is accordingly added to Table 3.2.6. The indicator is a replacement for Temperature Recorder TR-1-149. The instrument range of the Drywell Atmospheric Temperature Recorder TR-16-19-45 is accordingly revised to 0 to 350°F. Based on the drywell temperature range expansion on Temperature Recorder TR-16-19-45, the range of the Torus Air Temperature input to the recorder is accordingly revised to 0 to 350°F to maintain compatibility with the adjacent Drywell temperature input and comply with human factors engineering criteria.

- B. The Torus Water Temperature parameter was upgraded to provide two (2) redundant, fully qualified instrument channels. Temperature Indicators TI-16-19-33A and TI-16-19-33C, which have a range of 0° to 250°F, are added to Table 3.2.6. These indicators replace the single Temperature Indicator TI-16-19-48. Table 3.2.6, Note 4, has also been revised to reflect the Temperature Indicator meter change. The new instrument range, 0° to 250°F, encompasses the previous range, 60° to 180°F, and the Regulatory Guide 1.97 required range, 40° to 230°F. This range has been selected to comply with human factors engineering criteria.
- C. Note 4 to Table 3.2.6 is changed because the reactor operation requirements for safety/relief valve position indication have been revised to reflect the use of a choice of indicators rather than a specific indicator to determine valve position. This modification maintains the requirement for indication of the Torus Water Temperature parameter, but allows the use of either redundant indicator. The indicator range and tag numbers have been revised accordingly.

#### Safety Considerations

The upgraded redundant, environmentally, and seismically qualified instrumentation enhances the operator's ability to follow the course of an event. The range expansion to the Drywell Atmospheric and Torus Air Temperature instrumentation enhances plant safety by enveloping with margin the maximum analyzed post-accident temperature. The range change to the Torus Water Temperature instrumentation enhances plant safety by enveloping the maximum analyzed post-accident temperature. Using either of the two redundant indicators rather than one specific indicator increases the likelihood that this parameter will be available. In addition, the scale ranges were chosen to comply with human factors engineering criteria.

Therefore, we conclude that these proposed changes do not constitute an unreviewed safety question as defined by 10CFR50.59(a)(2).

This proposed change has been reviewed by the Vermont Yankee Nuclear Safety Audit Review Committee.

#### Significant Hazards Consideration

The standards used to arrive at a determination that a request for amendment involves no significant hazards consideration are included in the Commission's regulations, 10CFR50.92, which state that the operation of the facility in accordance with the proposed amendment would not:

- o Involve a significant increase in the probability or consequences of an accident previously evaluated,

- o Create the possibility of a new or different kind of accident from any accident previously evaluated, or
- o Involve a significant reduction in a margin of safety.

The discussion below addresses each of these three criteria, and demonstrates that the proposed supplemental changes do not constitute a significant hazards consideration.

The proposed changes involve the addition of redundant, environmentally, and seismically qualified instrumentation. These changes enhance the safety of the plant by ensuring the upgraded/qualified instrumentation will operate properly following a Loss of Coolant Accident (LOCA) or High Energy Line Break (HELB). The equipment added and modified in this supplemental change complies with NRC-accepted design and installation standards. In addition, the instrument scale ranges have been selected to enhance operator interface. As such, these changes do not increase in the probability or consequences of accidents previously evaluated. Similarly, no new or different kinds of accidents involving safety-related systems are created by these changes, nor do any of these changes result in reduced plant operating or design safety margins.

The Commission has provided guidance for the application of the standards in 10CFR50.92 by providing certain examples (51FR7751) of actions likely to involve no significant hazards consideration. One of the examples (vii) is 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. The proposed change involves instrumentation enhancements resulting from NUREG-0737, Supplement 1, requirements and, thus, fall within the Commission's example (vii).

Therefore, we conclude that these proposed changes do not constitute a significant hazards consideration as defined in 10CFR50.92(c).

#### Fee Determination

In accordance with the provisions of 10CFR170.12, we request that the application fee of \$150.00 enclosed with Proposed Change No. 137 [Reference (d)], be applied to this Supplement 1 submittal.

#### Schedule of Change

This change to the Vermont Yankee Technical Specifications will be implemented as soon as practical 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*  
Warren P. Murphy  
Vice President and Manager of Operations

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Enclosures

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

STATE OF VERMONT )  
                          )ss  
OF WINDHAM COUNTY)

Then personally appeared before me, Warren P. Murphy, who, being duly sworn, did state that he is 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 McCue*

Diane McCue Notary Public  
My Commission Expires February 10, 1991

