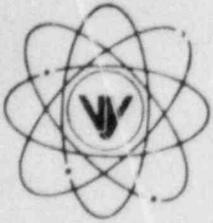


VERMONT YANKEE NUCLEAR POWER CORPORATION



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FVY 85-26

REPLY TO:

ENGINEERING OFFICE

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TELEPHONE 617-872-8100

March 4, 1985

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555Attention: Office of Nuclear Reactor Regulation
Mr. Harold R. Denton, Director

References:

- a) License No. DPR-28 (Docket No. 50-271)
- b) Letter, USNRC to VYNPC, NVY 82-124, dated 8/2/82
- c) Letter, VYNPC to USNRC, FVY 81-15, dated 1/27/81
- d) Letter, VYNPC to USNRC, FVY 81-149, dated 10/27/81
- e) Letter, VYNPC to USNRC, FVY 83-88, Proposed Change No. 105, dated 8/5/83
- f) Telephone Conference, J. Sinclair, P. Johnson, D. Reese, R. Pagudin and R. Wanczyk (VYNPC); V. Rooney and J. Donohew (NRC); and J. Selan (LLNL), dated 11/28/83
- g) Letter, USNRC to VYNPC, NVY 84-143, dated 6/27/84

Dear Sir:

Subject: RPS Power Protection Panel Specifications - Proposed Change No. 105, Supplemental Submittal

Pursuant to Section 50.59 of the 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 175, 177 and 178 of the Vermont Yankee Technical Specifications with the attached revised pages 175, 177 and 178, and add pages 175a, 177a, 177b and 178a. These pages propose limiting conditions for operation and surveillance requirements for the power protection equipment added to our Reactor Protection System during the 1983 refueling outage. These pages were initially submitted to the USNRC in Reference e). Subsequent discussions with members of the USNRC staff [Reference f)] and receipt of Reference g) have resulted in additional changes as indicated in the attached revised pages. This submittal supersedes the Technical Specification pages originally submitted with Proposed Change No. 105, Reference e).

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Reason for Change

Prior to the issuance of the Edwin I. Hatch Unit 2 operating license, the Nuclear Regulatory Commission (NRC) identified a concern that the Reactor Protection System (RPS) power supply output voltage of 120 volts alternating current (V ac) could be varied sufficiently by a seismic event to cause a failure of the RPS.

The normal power supply for the RPS consists of an MG set. An alternate power supply is also provided. Normally, the MG set's output voltage is maintained virtually constant by means of a voltage regulator. Additionally, over-voltage and undervoltage protective devices isolate the MG's output from the RPS if the voltage exceeds + 10% of nominal value. Isolation also occurs if output voltage frequency drops by more than 5%.

The NRC's concern was that the overvoltage, undervoltage, and underfrequency devices were not seismically qualified and could become inoperable, along with the voltage regulator, as a result of a seismic event. The RPS could then receive an out-of-limits voltage supply and thereby sustain damage to the RPS which could prevent a required reactor scram.

In Reference c), we committed to install power protection panels which would alleviate the NRC's concerns, and additional design details on our system were forwarded in Reference d). By letter dated August 5, 1983 [Reference e)], we submitted proposed Technical Specifications as requested by the NRC in their letter of August 2, 1982 [Reference b)]. As a result of subsequent discussions with the NRC staff [Reference f)], VY agreed to provide additional information regarding the voltage and frequency setpoints for the power protection panel specification package. This letter transmits revised Technical Specifications incorporating the additional information requested, as well as the guidance contained in the Safety Evaluation and Technical Evaluation Report provided by the NRC in their letter of June 27, 1984 [Reference g)].

Basis for Change

In our letter of January 27, 1981 [Reference c)], Vermont Yankee committed to install Reactor Power System power protection panels. As a result of this installation, and at the request of the NRC, Proposed Change No. 105 to the Vermont Yankee Technical Specifications was submitted on August 5, 1983 [Reference e)]. Following subsequent conversations with the NRC [Reference f)], VY agreed to submit revised proposed Technical Specifications for the power protection panels providing additional information regarding the voltage and frequency setpoints which would incorporate the guidance contained in the Safety Evaluation and Technical Evaluation Report provided by the NRC [Reference g)].

Specifically, in response to your request for additional information, we have revised pages 175a and 177 of our Technical Specification pages previously submitted with Proposed Change No. 105 [Reference e)] and added page 177b. The setpoints specified in Table 4.10.1 (page 177b) were selected based on the results of our engineering evaluation showing that these setpoints provide adequate equipment protection, while minimizing the possibility of spurious actuation of the protection panels and maximizing the availability of the Reactor Protection System. Page 175a was modified to include a reference to Table 4.10.1 and page 177 was modified to provide additional clarification to the RPS Protection System Power Protection Limiting Condition for Operation.

Safety Considerations

This proposed change provides Technical Specification for the power protection panels, which were installed to provide an enhanced level of protection for the Reactor Protection System. Thus, this proposed change constitutes an additional limitation and control not presently included in the Vermont Yankee Technical Specifications. This change was requested by the NRC and is not considered to constitute an unreviewed safety question as defined in 10CFR50.59(a)(2).

The addition of two redundant, Class 1E, seismically qualified, power protection panels connected in series with each ac power source, including the alternate power source, will provide an enhanced level of overvoltage, undervoltage and underfrequency protection for the Reactor Protection System. With the protective packages installed, any random undetectable or seismically-induced abnormal voltage or frequency conditions in the outputs of the MG sets or alternate power supply would trip either one or both of the protective panels thereby producing a half scram.

This change has been reviewed by the Vermont Yankee Nuclear Safety Audit and Review Committee (NSARC).

Significant Hazards Consideration

The Commission has provided guidance concerning the application of the standards for determining whether a "significant hazards" consideration exists by providing certain examples (48FR14870).

One of these examples (ii) states that a change which constitutes an additional limitation, restriction, or control not presently included in the Technical Specifications (for example, a more stringent surveillance requirement) does not involve a significant hazards consideration.

U.S. Nuclear Regulatory Commission
March 4, 1985
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VERMONT YANKEE NUCLEAR POWER CORPORATION

cc: U.S. Nuclear Regulatory Commission
Washington, D.C. 20555
Attention: Document Control Desk (40 copies)

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