



VERMONT YANKEE NUCLEAR POWER CORPORATION

SEVENTY SEVEN GROVE STREET
RUTLAND, VERMONT 05701

B.3.2.1
WVY 80-49
REPLY TO:
ENGINEERING OFFICE
TURNPIKE ROAD
WESTBORO, MASSACHUSETTS 01581
TELEPHONE 617-366-9011

March 17, 1980

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

Attention: Office of Nuclear Reactor Regulation

References: a) License No. DPR-28 (Docket No. 50-271)
b) USNRC letter, H.R. Denton to D.E. Vandenburg dated
January 8, 1979
c) USNRC letter, H.R. Denton to R.L. Smith dated
February 21, 1980

Dear Sir:

Subject: Recirculation Pump Trip/Analog Trip System

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

PROPOSED CHANGE: Changes to the Technical Specification are being proposed to reflect the following modifications:

1. Replacement of pressure and differential pressure switches which sense reactor pressure and reactor water level with analog loops each consisting of a transmitter, indicator and trip unit.
2. Installation of an ATWS Recirculation Pump Trip (RPT) system, of the Monticello design, to trip on low-low reactor water level or high reactor pressure.

The Proposed Technical Specification changes and a technical description of Recirculation Pump Trip and Analog Trip systems are enclosed.

REASON FOR CHANGE: In the first portion of the change, selected differential-pressure switches and pressure switches are to be replaced with analog loops to increase plant reliability, reduce setpoint drift, and improve overall safety of the plant.

P 8003310296

The second portion of the change, installation of RPT, is to provide a backup system to the Reactor Protection System (RPS). If in the unlikely event the plant experienced an operational transient without a subsequent scram, RPT would reduce core power generation by rapidly reducing core flow, thus mitigating the consequences of the transient.

BASIS FOR CHANGE: The intent in the first portion of this change is to replace the differential pressure switches and pressure switches with more reliable instrumentation, to improve plant availability, while at the same time not change the design basis, protective function, redundancy, trip point, or logic of the original system.

The second portion of this change, RPT, is a modification that has been requested by the NRC to meet ATWS concerns. The basis for the system's design is the Monticello type RPT with a time delay on low-low reactor water level as described in the letter from H.R. Denton to D.E. Vandenburg, dated 8 January 1979, Reference (b).

SAFETY CONSIDERATIONS: The pressure switch to analog trip unit change involves removing one device and substituting other devices to perform the same function. There is no change to the design basis, protective function, redundancy, trip point, or logic; therefore, it does not change the operation of the associated systems.

Installation of an RPT system will ensure that following an abnormal operational transient there will be a means of substantially reducing maximum reactor vessel pressure in the unlikely event of a failure to scram. The controls and instrumentation installed by this change will be calibrated and tested to assure adequate response to conditions representative of accident conditions. Further, the probability of previously evaluated accidents is not increased by these modifications, the possibility of a different type of accident is not created nor are the margins of safety as defined in the basis of the Technical Specification reduced by this proposed change.

This change does not decrease the safety of the plant; therefore, this change does not constitute an unreviewed safety question as defined in 10CFR50.59(a)(2). This submittal has been reviewed by the Vermont Yankee Nuclear Safety Audit and Review Committee.

FEE DETERMINATION: This proposed change requires an approval that involves a complex safety issue. Therefore, Vermont Yankee Nuclear Power Corporation proposes this change as a Class IV Amendment and a payment of \$12,300.00 is enclosed.

SCHEDULE OF CHANGE: We are planning to install these changes during our 1980 fall refueling outage. Early response by the NRC is necessitated by

