

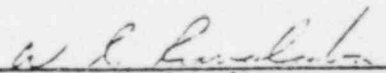
TECHNICAL EVALUATION OF THE RESPONSE TO POSITION NO.5
OF ITEM II: E. 4.2 OF NUREG-0737
CONTAINMENT ISOLATION SETPOINT
FOR THE
VERMONT YANKEE
NUCLEAR POWER PLANT

(DOCKET NO. 50-271)

by

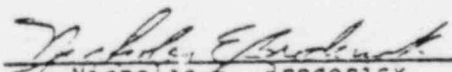
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Approved for Publication


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INTRODUCTION AND BACKGROUND

As a consequence of the incident at TMI-2, implementation of a number of new requirements has been recommended for operating reactors. These new requirements are described in NUREG-0660, "NRC Action Plan Developed as a Result of the TMI-2 Accident," May 1980, and NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980. The NRC staff has also requested licensees to submit information sufficient to permit an independent evaluation of their response to these new requirements. This report provides an evaluation of the response to Action Plan Item II.E.4.2, position 5, by the designated licensee.

DESIGN BASIS OR REVIEW CRITERIA

Position 5 requires that the containment pressure setpoint that initiates containment isolation for non-essential system containment vessel penetrations be at, or reduced to, "...the minimum compatible with normal operating conditions."

TECHNICAL EVALUATION

Response evaluation is based upon the values provided for the following parameters:

- (1) The maximum observed or expected containment pressure during normal operation.
- (2) The loop error and observed drift in the pressure sensing instrumentation providing the isolation signal (see note).
- (3) The containment isolation pressure setpoint.

NOTE: The clarification document (NUREG-0737) provided only the expected margin for instrument error and did not specify acceptable values for instrument drift or atmospheric changes contributing to the total sensing loop error. Additional staff guidance established a limit of 3.0 psi for an isolation setpoint margin over the normal containment pressure to account for total loop error. In addition, for subatmospheric containments, a 3.0 psi setpoint margin over atmospheric pressure is also considered acceptable.

In consideration of these values, the isolation pressure setpoint is to be as low as practical without increasing the probability of inadvertent activation of the isolation signal.

CONCLUSIONS

The letter of December 15, 1980, submitted by Vermont Yankee Nuclear Power Corporation, provided sufficient information to conclude that the containment isolation pressure setpoint for Vermont Yankee Nuclear Power Plant meets the NUREG-0660/0737 requirements and is within the additional limiting guidelines provided by the NRC staff.