



Event Description and Probable Consequences

Our investigation of the on-site electric power distribution system at Vermont Yankee has revealed that, under worst case loading, the voltage for the continuous operation of some 480 volt system loads is slightly below the minimum required voltage. This low voltage condition could occur during an accident when the transmission grid voltage is at its minimum expected value and the plant is in the closed cycle cooling mode. Our investigation has also shown that under extreme transmission grid high voltage and light loading (plant in cold shutdown) the 4160 volt system voltage is slightly higher than allowable. This study has been performed as required by your letter dated August 8, 1979.

Cause Description and Corrective Actions

The cause of this occurrence was an incomplete analysis of the on-site electrical power distribution system when the startup transformers were replaced.

We have investigated a transformer tap change as the solution to the high and low voltage conditions. By changing taps on the startup transformers, and 4160/480 volt transformers, adequate voltage can be maintained at all buses under any loading situation.

Vermont Yankee is presently on-line and in the open cycle cooling mode. Because the low and high voltage conditions exist only when the plant is in the closed cycle mode of operation or in cold shutdown there is no cause for immediate action. Vermont Yankee will change transformer taps at the next plant shutdown and before close cycle cooling mode is initiated. This is anticipated to occur no later than April 12, 1980.