



LER-82-039/01T-1 - 12-24-82

10. - EVENT DESCRIPTION AND PROBABLE CONSEQUENCES

A plant engineer recognized that the excore neutron detectors indication of core power level would be lower than actual core power level. This is reportable under Maine Yankee Technical Specification 5.9.1.b.i because the neutron detectors and associated power measurement and indication system were in a configuration that required remedial action to prevent their operation in a manner less conservative than assumed in safety analyses.

These measurement circuits provide a signal to the reactor protective system's high power level trip functional unit and other functional units which utilize power level as an input. The safety analyses assume automatic protective action at certain core overpower levels and present the results of events terminated by such protective actions. In this situation, overpower protection would have initiated at overpower levels slightly higher than assumed in the analyses.

An evaluation of this event showed that results of the safety analyses for hot zero power CEA bank withdrawal, boron dilution, and CEA ejection would change, but not significantly, if the observed power to signal ratio were included. Other safety analyses would not be affected.

There was no impact on public health and safety.

The plant was conducting low power physics tests in preparation for resumption of power operation following a refueling when this event occurred.

27. - CAUSE DESCRIPTION AND CORRECTIVE ACTIONS

The cause of this event was failure to adjust the excore power level indicators to account for the new core design installed during refueling.

In the past excore flux to core power level ratio variations from one cycle to the next have been accommodated through excore detector calibration using core power level determined by an independent method during power escalation. In this case, conservatively calculated adjustment was made prior to power escalation, and the usual calibration was later performed during power escalation when the power level was high enough to allow an accurate plant heat balance to be conducted.

To prevent recurrence, a procedural control will be instituted to ensure an adjustment will be developed and applied if necessary in startups following refueling.