UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

ENCLOSURE

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATING TO INADEQUATE CORE COOLING INSTRUMENTATION
MAINE YANKEE ATOMIC POWER COMPANY
MAINE YANKEE ATOMIC POWER STATION
DOCKET NO. 50-309
LICENSE NO. DPR-36

1.0 INTRODUCTION

By letter dated January 19, 1991 (Ref. 1), Maine Yankee Atomic Power Company (MYAPCo) submitted additional information relating to Maine Yankee's inadequate core cooling instrumentation (ICCI) system. The purpose of this submittal is to address three remaining open items (Ref. 2) to be resolved by MYAPCo for Maine Yankee's ICCI system. Those three items are (1) emergency procedures and operator training on the use of the ICCI system, (2) technical specifications for the ICCI system and (3) an implementation letter report.

The Maine Yankee ICCI system consists of the Core Exit Thermocouples (CETs), Saturation Margin Monitor (SMM), and Primary Inventory Trend System (PITS). It was upgraded/installed during the refueling outage ending in December 1988. Its subsystems (CETs, SMM and PITS) have been calibrated and functionally tested. Test results are available on-site for NRC inspection.

The staff review will be based on the NUREG-0737, Item II.F.2 requirement, and Generic Letter No. 83-37.

2.0 EVALUATION

In response to three open items stated in the staff's evaluation (Ref. 2), the licensee has submitted additional information (Ref. 1) to address those open items as follows:

A. Response to Emergency Procedures and Operator training on the use of the ICCI system

Emergency Procedures were implemented in the 1988 refueling shutdown and operator training on the use of the ICCI system was completed in February 1989 (Ref. 3).

B. Response to Technical Specifications for the ICCI System

The Technical Specifications for the ICCI system were reviewed and approved by the staff (Ref. 4).

C. Response to the implementation letter report

1. The ICCI system was upgraded and installed during the refueling outage ending in December 1988.

2. Maine Yankee plans to fill CET position N 11 (Channel A, Quadrant III) with a new qualified CET at a future refueling outage and CET calibration uncertainties are scheduled to be addressed in 1992 as part of Maine Yankee's instrumentation accuracy and setpoint uncertainty program.

3. The revised SMM uncertainties will be incorporated into the EOP setpoint documen and the EOPs by May 31, 1991 (Ref. 5).

4. The operational requirements for PITS have been labeled on the Main Control Board (MCB) directly under the level indicators to inform operators of the limitations on PITS use. They are: (a) containment ventilation system is providing ventilation to the cavity; (b) containment spray system is spraying containment; and (c) actual RCS pressure is equal to or greater than 110 psig. Boiling of the reference leg will not occur during accident conditions if any one of them exists.

5. Technical Specifications to include all ICC instrumentation for accident monitoring has been requested and approved.

6. Maine Yankee EOPs used for operator training conform to the technical content of the NRC approved EOP guidelines.

The staff has reviewed the MYAPCo response (Ref. 1) to NRC's concerns with respect to conformance with the requirements of NUREG-0737, Item II.F.2. Based on this review, the staff has concluded that the Maine Yankee's ICCI system is in compliance with the requirements of NUREG-0737, Item II.F.2 and is acceptable for implementation.

3.0 CONCLUSION

The staff concludes that Maine Yankee Atomic Power Company's ICCI system for Maine Yankee is acceptable for implementation, since the Maine Yankee's ICCI system is in compliance with the NUREG-0737, Item II.F.2 requirements.

4.0 REFERENCE

1. Letter (MN-91-17), from S.E. Nichols (MYAPCo) to UNRC, dated January 19, 1991.

2. Letter, from P.M. Sears (USNRC) to MYAPCo, dated July 7, 1988.

3. Letter from USNRC to to MYAPCo, dated June 7, 1989.

4. Letter from USNRC to MYAPCo, dated April 24, 1989.

5. Letter (MN-91-70), from S. E. Nichols (MYAPCo) to NRC, dated April 30, 1991.