Maine Yankee
RELIABLE ELECTRICITY SINCE 1972

EDISON DRIVE • AUGUSTA, MAINE 04330 • (207) 622-4868

December 9, 1993
MN-93-112 JRH-93-250

UNITED STATES NUCLEAR REGULATORY COMMISSION
Attention: Document Control Desk
Washington, DC 20555

References:
(a) License No. DPR-36 (Docket No. 50-309)
(b) USNRC Generic Letter 90-06, (Resolution of Generic Issue 70, "Power-Operated Relief Valve and Block Valve Reliability" and Generic Issue 94, "Additional Low-Temperature Overpressure Protection for Light-Water Reactors"), dated June 25, 1990
(c) MYAPCo Letter to USNRC dated January 31, 1991, (MN-91-21)
(d) USNRC Letter to MYAPCo dated July 30, 1992
(e) USNRC Letters to MYAPCo dated October 28, 1992, November 9, 1982, and May 28, 1985
(f) MYAPCo Letter to USNRC dated September 29, 1992, (MN-92-95)
(g) USNRC Letter to MYAPCo dated July 1, 1988

Subject: Staff Review of Generic Letter 90-06 - PORV and Block Valve Reliability

Gentlemen:

NRC Generic Letter 90-06, Reference (b), specifies actions to be taken by all PWR licensees (Enclosure A) that use or could use PORVs to perform specified safety-related functions. The status of the requested actions for Maine Yankee was provided by Reference (c). By Reference (d), the staff requested Maine Yankee provide the evaluation performed in response to requested action A-3.1.3 to conclude that the modified standard CE Technical Specifications did not provide any added assurance of PORV availability or reliability. This evaluation was provided by Reference (f). In addition, Reference (g) provided a Safety Evaluation on the re-evaluation of the functional performance capabilities of PWR safety, relief and block valves. This re-evaluation concluded that Maine Yankee's valves are constructed in accordance with high quality standards, meeting General Design Criterion No. 30.

Recently, additional questions have been asked by the staff. The questions and the Maine Yankee responses are as follows:

NRC Question:

With Maine Yankee operating with only one PORV and associated block valve as allowed by Technical Specification 3.3.B.4 and assuming a Steam Generator Tube Rupture (SGTR) accident with a concurrent single failure of the operable PORV, what methods and/or proceduralized processes does Maine Yankee have to assure reactor core decay heat removal and core protection?

A019
1/0

Maine Yankee Response:

As stated in Reference (f), Maine Yankee's safety analysis for the Steam Generator Tube Rupture (SGTR) event does not credit use of PORVs and our SGTR casualty procedures specify the use of normal spray to depressurize the pressurizer or auxiliary spray if normal spray cannot be used. Auxiliary spray can be aligned via the charging line or the fill header from either charging pump or the auxiliary charging pump. When auxiliary spray is lined up via the fill header, spray flow bypasses the auxiliary spray valve. The auxiliary charging pump can be powered by the Appendix R diesel generator to provide pressurizer spray during events such as Station Blackout. Our procedure for cooling down the plant from the auxiliary shutdown panel specifies the steps necessary to provide auxiliary spray via the fill header from the auxiliary charging pump. Decay heat is removed by exhausting steam through the steam bypass system if the main condenser is available. Otherwise, decay heat is exhausted through the steam safety valves. Feedwater is provided to the steam generators by one of the emergency feedwater pumps with sufficient capacity to handle decay heat load requirements. By procedure, a PORV is used to depressurize only if normal spray and auxiliary spray cannot be used. This is a very unlikely scenario given the redundancy and defense in depth that exists.

NRC Question:

What prevents Maine Yankee from fixing an inoperable PORV or associated block valve on-line? Does Maine Yankee intend to return an inoperable valve to service only during the next refueling outage or at the first shutdown of sufficient duration to permit repairs?

Maine Yankee Response:

Both valves are located on top of the pressurizer and, at power, would be in a high radiation area. In addition, the block valves are connected directly to the pressurizer without isolation valves and isolation of the PORVs and block valves becomes an issue if valve removal is required in order to effect repairs. Thus, Maine Yankee would repair an inoperable PORV or block valve only during the next cold shutdown, of sufficient duration, following discovery of an inoperable valve.

Please contact us should you have any further questions regarding this matter.

Very truly yours,

James R. Hebert

James R. Hebert, Manager
Licensing & Engineering Support Department

WBD/jag

c: Mr. Thomas T. Martin
Mr. J. T. Yerokun
Mr. E. H. Trottier
Mr. Patrick J. Dostie