

Maine Yankee

RELIABLE ELECTRICITY FOR MAINE SINCE 1972

Charles D. Frizzle
President

January 31, 1991
MN-91-21

CDF-91-12

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Augusta, Maine 04336
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UNITED STATES NUCLEAR REGULATORY COMMISSION
Attention: Document Control Desk
Washington, DC 20055

- 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) USNRC Letters to MYAPCo dated October 28, 1982 and November 9, 1982
 - (d) MYAPCo Letter to USNRC dated December 2, 1988
 - (e) USNRC Letter to MYAPCo dated May 28, 1985

Subject: Response to 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 at Maine Yankee, consistent with their presentation in Enclosures A and B of Reference (b), is as follows:

NRC Requested Action A-3.1.1:

Include PORVs and block valves within the scope of an operational quality assurance program that is in compliance with 10 CFR Part 50, Appendix B. This program should include the following elements:

- a. The addition of PORVs and block valves to the plant operational Quality Assurance List.
- b. Implementation of a maintenance/refurbishment program for PORVs and block valves that is based on the manufacturer's recommendations or guidelines and is implemented by trained plant maintenance personnel.
- c. When replacement parts and spares, as well as complete components, are required for existing non-safety-grade PORVs and block valves (and associated control systems), it is the intent of this generic letter that these items may be procured in accordance with the original construction codes and standards.

Maine Yankee Response:

- a. The power operated relief valves (PORVs) (PR-S-14, 15) and block valves (PR-M-16, 17) at Maine Yankee are shown on the control prints and the VAX computer data base as safety class 1 components. In addition, the mechanical and electrical systems and components associated with the PORVs

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- are identified in the Maine Yankee Operational Quality Assurance Program as safety class 1.
- b. The block valves (PR-M-16, 17) at Maine Yankee are included in the Generic Letter 89-10 Motor Operated Valve Program. The PORVs (PR-S-14, 15) are included in the Generic Letter 89-04 Inservice Test Program. Plant preventative maintenance/refurbishment programs are based on manufacturer's recommendations or guidelines and are implemented by trained plant maintenance personnel.
 - c. Maine Yankee's PORVs and block valves are designated as being subject to QA Program controls.

NRC Requested Action A-3.1.2:

Include PORVs, valves in PORV control air systems, and block valves within the scope of a program covered by Subsection IWV, "Inservice Testing of Valves in Nuclear Power Plants," of Section XI of the ASME boiler and pressure vessel code. Stroke testing of PORVs should only be performed during Mode 3 (HOT STANDBY) or Mode 4 (HOT SHUTDOWN) and in all cases prior to establishing conditions where the PORVs are used for low-temperature overpressure protection. Stroke testing of the PORVs should not be performed during power operation. Additionally, the PORV block valves should be included in the licensee's expanded MOV test program discussed in NRC Generic Letter 89-10, "Safety-Related Motor Operated Valve Testing and Surveillance," dated June 28, 1989.

Maine Yankee Response:

PORVs and associated block valves are included in Maine Yankee's ASME Section XI Inservice Test Program. PORVs are tested after the plant is shut down for a refueling outage and prior to the valves being relied on for LTOP protection. PORVs are not stroke tested during power operation. PORV block valves are included in Maine Yankee's MOV program which was developed in response to NRC Generic Letter 89-10.

NRC Requested Action A-3.1.3:

For operating PWR plants, modify the limiting conditions of operation of PORVs and block valves in the Technical Specifications for Modes 1, 2, and 3 to incorporate the position adopted by the staff in recent licensing actions. Attachments A-1 through A-3 are provided for guidance. The staff recognizes that some recently licensed PWR plants already have Technical Specifications in accordance with the staff position. Such plants are already in compliance with this position and need merely state that in their response. These recent Technical Specifications require that plants that run with the block valves closed (e.g., due to leaking PORVs), maintain electrical power to the block valves so they can be readily opened from the control room upon demand. Additionally, plant operation in Modes 1, 2, and 3 with PORVs and block valves inoperable for reasons other than seat leakage is not permitted for periods of more than 72 hours.

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Maine Yankee Response:

Maine Yankee Technical Specification 3.3.B establishes the limiting conditions of operation for PORVs and PORV block valves. The applicable portions of this specification relating to PORVs and PORV block valves were approved by the NRC by the Safety Evaluations in References (c) and (e). Maine Yankee has conducted an evaluation of this approved specification versus the modified standard CE Technical Specification contained in Attachment A-1 of Reference (b) and has identified several differences. We have evaluated these differences and have concluded that the modified standard CE Technical Specifications do not provide any added assurance of PORV availability or reliability. Therefore, we do not believe any changes to the existing Maine Yankee Technical Specifications are warranted.

NRC Requested Action B-3:

The staff concludes that the LTOP system performs a safety-related function and inoperable LTOP equipment should be restored to an operable status in a shorter period of time. The current 7-day AOT for a single channel is considered to be too long under certain conditions. The staff has concluded that the AOT for a single channel should be reduced to 24 hours when operating in MODE 5 or 6 when the potential for an overpressure transient is highest. The operating reactor experiences indicate that these events occur during planned heatup (restart of an idle reactor coolant pump) or as a result of maintenance and testing errors while in MODE 5. The reduced AOT for a single channel in MODES 5 and 6 will help to emphasize the importance of the LTOP system in mitigating overpressure transients and provide additional assurance that plant operation is consistent with design basis transient analyses.

Based on the foregoing concerns, added assurance of LTOP availability is to be provided by revising the current Technical Specification for Overpressure Protection to reduce the AOT for a single channel from 7 days to 24 hours when the plant is operating in MODES 5 or 6. Attachment B-1 is provided for guidance for Westinghouse and CE plants. The guidance provided is also applicable to plants that rely on both PORVs and RHR SRVs or that rely on RHR SRVs only. Attachment B-2 provides the staff bases for the Overpressure Protection Technical Specification.

In performing the studies for GI-94, the staff has assumed that the administrative controls and procedures identified in Section 1 have been implemented to ensure that the plant is being operated within the design base. If it is determined that the design base was developed based on restricted safety injection pump operability and/or differential temperature restrictions for RCP restart and that these restrictions have not been implemented as part of USI A-26, then these restrictions should be implemented now. This is not a new requirement. Attachment B-3 is provided for guidance.

Maine Yankee Response:

Maine Yankee addressed USI A-26 in response to Generic Letter 88-11 with Reference (d). The Maine Yankee system for mitigating an overpressure transient relies on a high pressure safety injection pump flow restrictor, reactor coolant pump operating restrictions and operable system vents. Maine Yankee added this equipment and

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appropriate limiting conditions for operation to Technical Specifications which were approved by the NRC by Reference (e). In accordance with Attachment B-2 of Reference (b), the only required changes are to restrict the applicability of ACTION a. to Mode 4 and to incorporate ACTION b. of the modified standard CE Technical Specification [Attachment B-1 of Reference (b)]. A comparison of Maine Yankee Specifications versus the modified standard CE Technical Specifications (ACTION a. and ACTION b.) indicates the Maine Yankee Specifications presently encompass the proposed Specifications. Specifically,

- a. For ACTION a., the present Maine Yankee Specification 3.3.B.4, which is applicable to all modes of reactor operations, requires that if either PORV or its associated block valves becomes inoperable, within six hours:

1. Restore the valve to operable status, or
2. Close and remove power from the associated block valve.

As the period of time the plant is in this mode (cooldown or heat-up) is relatively short, the present remedial action time is both more realistic and more conservative than that of the modified standard CE Technical Specifications.

- b. For ACTION b., the present Maine Yankee Specification 3.4.D, Reactor Coolant System Low Temperature Overpressure Protection, specifies requirements whenever the reactor coolant system is less than the minimum pressurization temperature plus margin and not vented. These requirements include:

1. Prohibition on making the reactor critical
2. Prohibitions on starting of reactor coolant pumps
3. Overpressure protection requirements based on the pressurizer level. These requirements provide for PORV(s) and RHR spring relief(s) to be operable.
4. Alignment of the HPSI pumps.

The Maine Yankee remedial action time is 6 hours to restore the required condition or station a dedicated operator to prevent RCS overpressurization and within 72 hours place the plant in a condition where LTOP protection is not required. The 6 hours is more conservative than the 24 hours of the modified standard CE Technical Specifications.


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

Very truly yours,



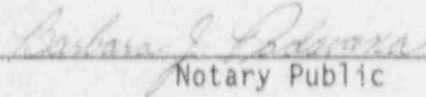
Charles D. Frizzle
President

CDF/sjj

c: Mr. Thomas T. Martin
Mr. E. H. Trottier
Mr. Charles S. Marschall

STATE OF MAINE

Then personally appeared before me, Charles D. Frizzle, who being duly sworn did state that he is President of Maine Yankee Atomic Power Company, that he is duly authorized to execute and file the foregoing response in the name and on behalf of Maine Yankee Atomic Power Company, and that the statements therein are true to the best of his knowledge and belief.


Notary Public

BARBARA J. PADAVANA
NOTARY PUBLIC, MAINE
MY COMMISSION EXPIRES JUNE 20, 1996