



ATOMIC POWER COMPANY •

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March 9, 1981
FMY-81-37



United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Office of Nuclear Reactor Regulation

Reference: (a) License No. DPR-36 (Docket No. 50-309)

Subject: LWR Primary Coolant System Pressure Isolation Valves

Dear Sir:

Maine Yankee has carefully evaluated the V Event Interfacing Systems LOCA. This LOCA is caused by the failure of two in-series check valves that isolate the low pressure injection system from the reactor coolant system. The probability of this event has been calculated in WASH 1400 to be 4×10^{-6} per year, with a failure mechanism based on the undetected failure of one in-series check valve, and the rupture of the second check valve upon pressurization. We have considered the likelihood of this event in conjunction with the normally closed LPSI isolation MOV at Maine Yankee, which is cycled monthly pursuant to surveillance Technical Specifications.

As a result of our examination of WASH 1400, from which this concern originated, and the recent confirmation via testing that the check valve downstream of the MOV is intact and leak tight, Maine Yankee has concluded that with the MOV in its normally closed position, there is sufficient assurance that an interfacing systems LOCA is unlikely.

To reduce the likelihood of the V Event Interfacing Systems LOCA the staff will impose new leak rate criteria on the LPSI check valves through impending orders to modify the Technical Specifications. Unfortunately the new leak rate criteria is beyond the design characteristics of the 14" check valve closest to the reactor coolant loop. This check valve was originally designed as a thermal barrier to protect the upstream check, and to prevent gross reactor coolant backflow (in the event of an accident) rather than be leak tight.

In lieu of an impending order Maine Yankee would prefer to commit to improving the reliability and leak tightness of the LPSI check valves by installing an additional check valve between the two existing checks during the Spring 1981 refueling outage. This new check valve will be designed and installed as a leak tight check with leak testing capabilities, and accordingly will eliminate any leak testing or related requirements of the 14" hard seat check. Furthermore, Maine Yankee will benefit in its ALARA responsibility by reducing personnel exposure which would result if the 14" check valve had to be maintained within the leak rates imposed by the staff.

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As a means of verifying the integrity of the downstream check valve, a pressure gauge installed between the MOV and downstream check will be monitored on a monthly basis until the shutdown at which time the additional check valves will be installed. If pressure build-up should occur, means are available to relieve the pressure and assure the check valve has not ruptured. These pressure gauges presently confirm that the downstream check valve is (1) intact, (2) leak tight, and (3) able to withstand the main coolant pressure without rupture.

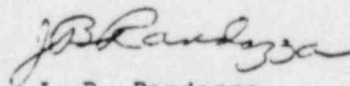
In the interim, Maine Yankee recognizes the benefits of maintaining two barriers between interfacing systems during plant operation. We therefore, request interim relief from the monthly performance testing of LSI-M-11, 21, and 31 until the plant shuts down for its Spring 1981 refueling. Prior to returning to power following this refueling Maine Yankee will implement technical specifications to perform periodic surveillance and verify the integrity of the LPSI check valves.

Once granted relief from the MOV performance testing Maine Yankee shall take the necessary steps to assure the MOV will remain in its normally closed position during power operation until the new check valves have been installed; i.e., modify existing surveillance procedures, attach a CAUTION tag to each valve switch, and provide instruction to the operators relative to the reason for this modification.

We trust you will find these actions acceptable; however, if you have any questions, please contact us immediately.

Very truly yours,

MAINE YANKEE ATOMIC POWER COMPANY



J. B. Randazza
Vice President, Operations

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