

May 5, 1983

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

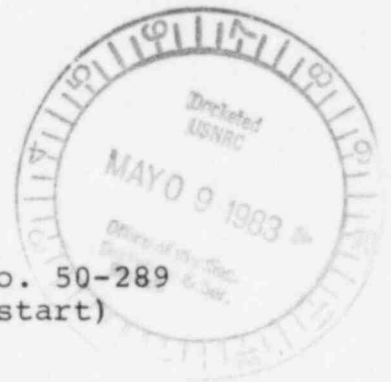
BEFORE THE COMMISSION

In the Matter of)

METROPOLITAN EDISON COMPANY)

(Three Mile Island Nuclear)
Station, Unit No. 1))

Docket No. 50-289
(Restart)



LICENSEE'S COMMENTS ON THE
APPEAL BOARD MEMORANDUM OF
APRIL 20, 1983 (ALAB-724)

I. Introduction

On April 20, 1983, the Appeal Board designated to hear appeals from the Licensing Board's Partial Initial Decision on plant design and procedures issued a Memorandum suggesting, inter alia, that the Commission should explore before restart two concerns regarding the TMI-1 pressurizer power operated relief valve (PORV). ALAB-724, 17 N.R.C. ____, slip op. at 4, 5 (April 20, 1983). The concerns raised by the Appeal Board in ALAB-724 are based upon its review of BN-83-47, "Board Notification Regarding the Need for Rapid Primary System Depressurization Capability in PWR's," dated April 4, 1982,^{1/} and two licensee event reports (LER 82-11 and LER 83-03) submitted by Licensee regarding corrosion of the PORV.

^{1/} BN-83-47 is addressed to the Commission. The transmittal memorandum indicates that a copy was provided to the Appeal Board in this proceeding.

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II. Board Notification 83-47

Board Notification 83-47 reports on recent findings, generic to all PWRs designed by Westinghouse and Babcock & Wilcox (B&W), by the Staff's Division of Systems Integration regarding the methods to mitigate the consequences of design-basis steam generator tube rupture events. DSI's review states that, in order to limit primary to secondary leakage during these events, it is necessary for PWRs to have a rapid primary system depressurization capability. DSI states that, for Westinghouse and B&W plants, assuming a loss of offsite power and therefore the reactor coolant pumps, the non-safety-grade PORVs are relied upon to provide this depressurization function.

It is this reliance on a non-safety-grade piece of equipment that has led DSI to conclude that, for operating license applicants utilizing a B&W or Westinghouse design, fully safety-grade and environmentally qualified PORVs will be required. Board Notification 83-47, Enclosure at 3. The implications of this position for operating reactors are still under consideration by the Staff,^{2/} and no decision has yet been made on the need to backfit this requirement to operating reactors.^{3/}

^{2/} Licensee believes that the Appeal Board's characterization of the Staff position, i.e., "that the PORV must meet all safety-grade criteria," is too broad here in view of the fact that the Staff states ". . . actions on this issue regarding operating reactors are under consideration." Compare ALAB-724, supra, slip op. at 2, 3 with Board Notification 83-47, cover memorandum.

^{3/} In this regard, Licensee notes that it is not apparent from the Board Notification if either the Committee to Review Generic Requirements or the ACRS have been consulted in developing a Staff position on this issue.

Board Notification 83-47 at 1 and Enclosure at 3. Further, there is no indication in the Board Notification that DSI believes this issue is of such significance as to warrant considering the suspension of operating licenses.

Based on the foregoing, Licensee believes that the issue of upgrading the PORV to safety-grade for steam generator tube rupture mitigation should not be considered by the Commission uniquely for TMI-1.^{4/} Rather, the Commission should allow the Staff to pursue the resolution of this generic concern in a consistent manner for all operating reactors. Licensee would also note, on a substantive level, that the Staff may find, upon investigation, that currently installed plant equipment is capable of providing a safety-grade method of achieving primary system depressurization.^{5/}

A second issue raised by Board Notification 83-47 deals with a potential concern, applicable to all B&W reactors, regarding the possibility of prolonged primary to secondary leakage during a steam generator tube rupture event. As noted by the Staff, by allowing the steam generator to completely

4/ As recognized by the Appeal Board, the use of the PORV in mitigation of steam generator tube rupture events is beyond the scope of the TMI-1 Restart Proceeding. ALAB-724, supra, slip op. at 2, 4 and n.4.

5/ In accordance with NUREG-0737 Item II.B.1, Licensee has installed a vent at the top of the pressurizer which can be utilized as an alternative to the PORV for depressurizing the system during a tube rupture event. The vent valve and its associated components are safety-grade. Initial calculations show that the vent is capable of depressurizing the system sufficiently to equalize the primary and secondary pressure, and terminate the leak.

fill, such leakage can be terminated; the Staff, however, did not know the capability of all B&W plants to perform this action. At TMI-1, the main steam line can be flooded, thereby allowing the leakage to be terminated.

III. PORV Corrosion

The Appeal Board has expressed its concern regarding two LERs which reported that the original and spare TMI-1 PORVs had been found to be heavily corroded, apparently due to sulfur contamination. ALAB-724, supra, slip op. at 3. As the Commission is no doubt aware, the extent of sulfur contamination of the TMI-1 reactor coolant system, evaluation of this contamination and programs to cleanup and remove the sulfur from the reactor coolant system have been the subject of extensive discussion among the Staff, the ACRS and Licensee since March 1982. In that time, there have been approximately five formal meetings between the Staff and Licensee on this subject, in addition to two presentations to the ACRS. Numerous informal information exchanges have also taken place and on March 9, 1983, Licensee submitted a safety evaluation of its proposed reactor coolant system cleanup program to the Staff. Thus, it is clear that resolution of the corrosion/sulfur contamination concerns are proceeding in a timely fashion and have not been disregarded or overlooked by the Staff or Licensee.^{6/}

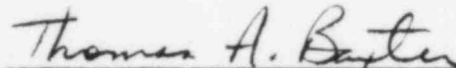
^{6/} The Appeal Board also expressed its concern that the corrosion problem may have affected the safety valves. ALAB-724, supra, slip op. at 5. The safety valves in question have been inspected and no corrosion was detected.

IV. Conclusion

The Appeal Board concluded in ALAB-724 that the issues raised by Board Notification 83-47 and by the two licensee event reports "require careful and prompt consideration," "have a direct nexus to the steam generator issues now under review by the Commission and should be explored before restart." ALAB-724, supra, slip op. at 2, 4, 5. As we discussed above, although apparently unknown to the Appeal Board, the resolution of the PORV corrosion issue is already being pursued. The concerns raised in Board Notification 83-47 need not be considered and resolved by the Commission, however, during its immediate effectiveness review. Certainly there is nothing unique about TMI-1 that would require an accelerated resolution of these issues on a schedule different than that for all other Westinghouse and B&W operating reactors.

Respectfully submitted,

SHAW, PITTMAN, POTTS & TROWBRIDGE



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CERTIFICATE OF SERVICE

I hereby certify that copies of "Licensee's Comments on the Appeal Board Memorandum of April 20, 1983 (ALAB-724)" were served this 5th day of May, 1983, by deposit in the U.S. mail, first class, postage prepaid, to the parties on the attached Service List.

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