

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of)
METROPOLITAN EDISON COMPANY, ET AL.)
(Three Mile Island Nuclear Station,)
Unit No. 1))

Docket No. 50-289
(Restart - Design Issues)

NRC STAFF TESTIMONY OF JARED S. WERMIEL
IN RESPONSE TO APPEAL BOARD QUESTION 8

- Q.1 State your name and position with the NRC.
- A. My name is Jared S. Wermiel. My position is Senior Mechanical Engineer (Auxiliary Systems) in the Auxiliary Systems Branch, Division of Systems Integration, Office of Nuclear Reactor Regulation. A statement of my professional qualifications appears in the transcript of the Restart Hearing following page 6035.
- Q.2 What is the purpose of your testimony?
- A. The purpose of this testimony is to address Appeal Board Question 8 (Memorandum and Order dated December 29, 1982) which reads as follows:
- "8. Clarification of the apparent inconsistencies and confusion concerning the safety grade status of components in the EFW system."
- Q.3 Of the emergency feedwater (EFW) system functions necessary to cope with design basis events for which EFW system function is required, which will not be fully safety grade at the time of restart?
- A. 1. The flow control valve function is not fully safety grade because:

- a. Each EFW supply line contains a single flow control valve, and therefore does not satisfy the single failure criterion for high energy (main steam and main feedwater) line breaks in the intermediate building.
 - b. A postulated failure of the integrated control system (ICS) could leave both flow control valves closed thus requiring either local or remote manual operator action to reopen at least one valve.
2. The condensate storage tank level indication function is not safety grade as it is not seismic Category I, does not satisfy the single failure criterion and is not Class 1E.
 3. EFW system function following a safe shutdown earthquake has not been demonstrated as portions of the system piping and controls are not seismic Category I.

Q.4 What additional actions will be necessary to upgrade the EFW functions that are not safety grade at the time of restart to fully safety grade?

A. The following response corresponds to the items identified in Q.3 above.

1. The flow control valve function will be fully safety grade when the following modifications are made:
 - a. Installation of redundant safety grade flow control valves.
 - b. Installation of safety grade automatic EFW flow control valve circuitry.
2. The condensate storage tank level indication function will be safety grade with the installation of safety grade level instrumentation.
3. EFW system function following a safe shutdown earthquake will be assured following modification of certain seismic Category I piping and controls as necessary.

Q.5 When will the above additional necessary actions be completed?

A. The licensee has committed to complete the necessary actions by startup from the first refueling outage after restart.

Q.6 Of the EFW functions that are necessary to cope with design basis events for which EFW system function is required and that will not be safety grade at the time of restart, which are necessary to cope with loss of main feedwater (LOMF) and small break loss of coolant accidents (SBLOCA)?

A. The flow control valve function is required for SBLOCAs and LOMF and may be adversely affected by failure of ICS (Item 1.b under Q.3 above). Therefore, manual action to open a flow control valve would be necessary to restore EFW flow in the event of a failure of ICS that leaves both control valves closed. Sufficient instrumentation (indication of loss of EFW flow) and time (20 minutes) is available for the operator to take manual action either remotely from the control room or locally at the valves.

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CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF TESTIMONY IN REOPENED HEARING" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class, or, as indicated by an asterisk, by deposit in the Nuclear Regulatory Commission's internal mail system, or, as indicated by double asterisks, by hand-delivery, this 16th day of February, 1983:

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