

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of
METROPOLITAN EDISON COMPANY,
et al.
(Three Mile Island Nuclear
Station, Unit 1

DUCKET No. 50-289

NRC STAFF TESTIMONY OF WALTON L. JENSEN, JR.
REGARDING TRANSIENT AND ACCIDENT ANALYSIS AND PROCEDURES
BOARD QUESTION 11

BOARD QUESTION

"The board is not satisfied with the staff findings in the SER with respect to Recommendation 2.1.9.C (transients and accidents) of NUREG-0578. The staff concludes that satisfactory progress has been made and the item is complete. SER, pp. B-10, C8-49. According to Table 8-2, the analyses and procedures were scheduled for completion by early 1980. We observe that in May of this year, it was reported that "the Staff is performing a generic review of transients and other accidents in accordance with Recommendation 2.1.9 of NUREG-0578 (NUREG-0667, p. 5-26).

We expect the licensee and the staff to present evidence that the requirements on p. A-45 of NUREG-0578 will be met and to explain the schedule for meeting those requirements. The board, as well as the staff, must have sufficient information to decide whether satisfactory progress is being made."

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Response:

The TMI-2 Lessons Learned Task Force recommended in Section 2.1.9 of NUREG-0578 that plant emergency procedures be developed based on plant analyses of small break LOCA, inadequate core cooling and transient and accidents. The transients and accidents to be considered should include the design basis events of Section 15 of each FSAR and should include the effect of single failure of each system required to function and the effect of operator error. Using event trees and computer analyses, operator guidelines are to be developed which will be developed into plant emergency procedures and utilized in operator training.

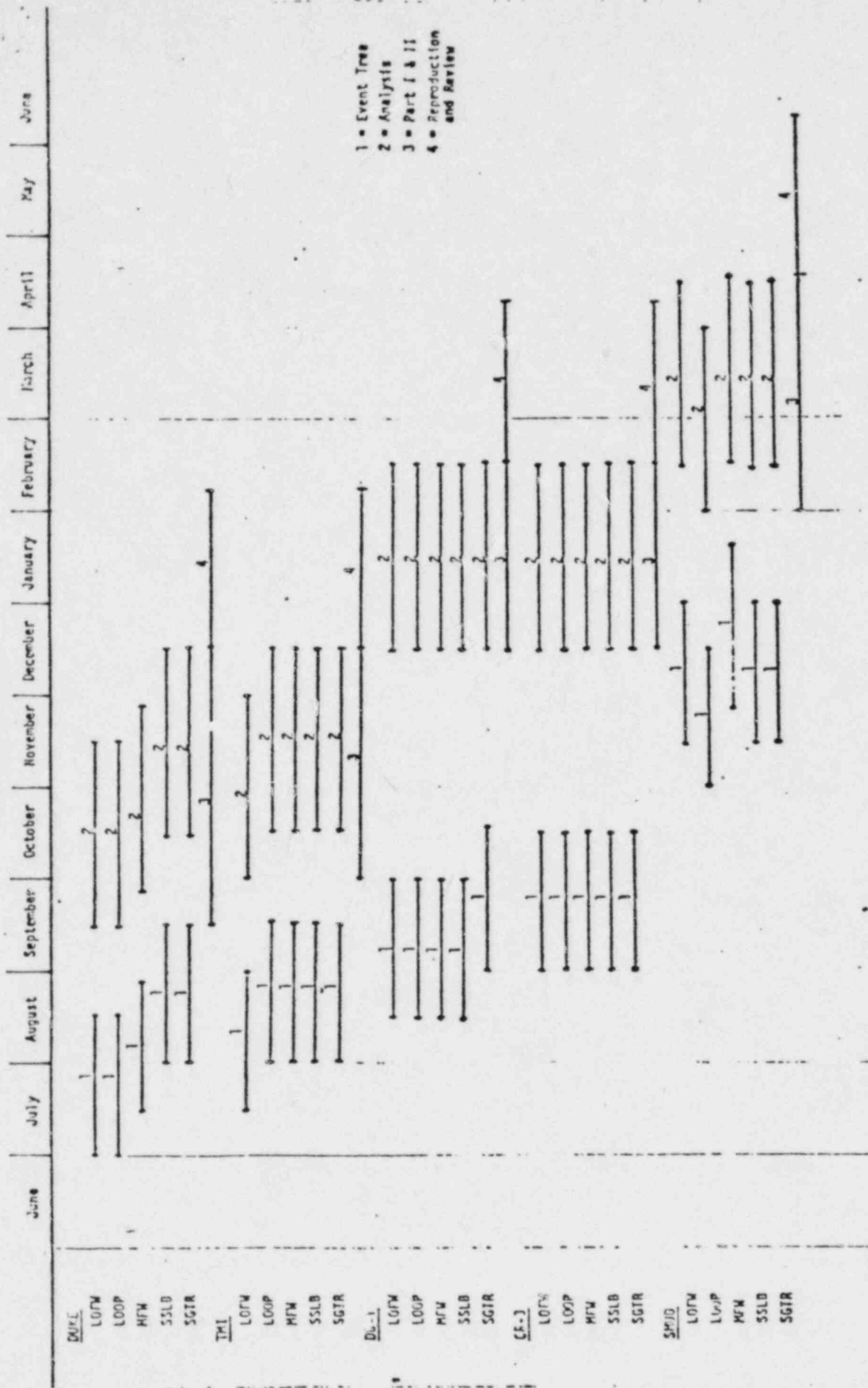
The requirements of Section 2.1.9 of NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations" have been incorporated in Task I.C.1 of the TMI-2 Action Plan. The NRC staff proposed a schedule for completion of this task in "Letter to All Licensees of Operating Plants and Applicants for Operating Licenses and Holders of Construction Permits" dated September 5, 1980. This schedule has not yet been approved by the NRC Commissioners. The schedule proposed by the staff required that guidelines for development of plant procedures be submitted to the NRC by January 1, 1981 and that the procedures be revised by January 1, 1982.

As discussed on page C8-49 of the TMI-1 Restart SER NUREG-0680, the Babcock & Wilcox Plant Owners Group of which Metropolitan Edison is a member has committed to accomplish the requirements of Recommendation 2.1.9 as part of

the ATOG program. This program is designed to develop emergency procedures for treating the symptoms of transients and accidents rather than requiring that the operators identify the plant failure which occurred in order to select the correct procedure. Any accident or transient including LOCA which produces abnormal plant conditions should be covered by the revised emergency procedures. Because of plant differences each of the B&W plants will require different guidelines and emergency procedures. These will be completed in a sequential schedule developed by the Owners Group. The lead plant in the sequence is ANO-1. A draft of the operational guidelines and supporting analyses for ANO-1 was completed in July 1980 and copies were provided to the NRC staff in a meeting with the Owners Group August 21, 1980. The Owners Group also presented a schedule for development of Event Tree's, Analysis and guidelines for the other B&W plants. A copy is attached to this testimony. The schedule indicates that guidelines for TMI will be completed in February of 1981.

For the interim period before emergency procedures based on ATOG are completed, the NRC is reviewing the current Emergency Procedures for TMI-1. This review is described on pages C1-15, C1-16, C2-4, C2-5, C6-15 and C6-16 of NUREG-0680. This review will be completed before restart. The operators at TMI-1 are also being retrained to deal with events similar to those which occurred at TMI-2. This training is discussed on pages C1-6, C2-4 and C2-16 of NUREG-0680.

DRAFT GUIDELINE COMPLETION SCHEDULE



WALTON L. JENSEN, JR.

PROFESSIONAL QUALIFICATIONS

I am a Senior Nuclear Engineer in the Reactor Systems Branch of the Nuclear Regulatory Commission. In this position I am responsible for the technical analysis and evaluation of the public health and safety aspects of reactor systems.

From June 1979 to December 1979, I was assigned to the Bulletins and Orders Task Force of the Nuclear Regulatory Commission. I participated in the preparation of NUREG-0565, "Generic Evaluation of Small Break Loss-of-Coolant Accident Behavior in Babcock & Wilcox Designed 177-FA Operating Plants."

From 1972 to 1976, I was assigned to the Containment Systems Branch of the NRC/AEC, and from 1976 to 1979, I was assigned to the Analysis Branch of the NRC. In these positions I was responsible for the development and evaluation of computer programs and techniques to calculate the reactor system and containment system response to postulated loss-of-coolant accidents.

From 1967 to 1972, I was employed by the Babcock and Wilcox Company at Lynchburg, Virginia. There I was lead engineer for the development of loss-of-coolant computer programs and the qualification of these programs by comparison with experimental data.

From 1963 to 1967, I was employed by the Atomic Energy Commission in the Division of Reactor Licensing. I assisted in the safety reviews of large power reactors, and I led the reviews of several small research reactors.

I received an M.S. degree in Nuclear Engineering at the Catholic University of America in 1968 and a B.S. degree in Nuclear Engineering at Mississippi State University in 1963.

I am a graduate of the Oak Ridge School for Reactor Technology, 1963-1964.

I am a member of the American Nuclear Society.

I am the author of three scientific papers dealing with the response of B&W reactors to Loss-of-Coolant Accidents and have authored one scientific paper dealing with containment analysis.