



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

FOR REVIEW

TOLEDO EDISON COMPANY

DAVIS-BESSE NUCLEAR POWER STATION, UNIT NO. 1

DOCKET NO. 50-346

INTRODUCTION

On March 28, 1979 the Three Mile Island Nuclear Power Plant, Unit 2 (TMI-2) experienced core damage which resulted from a series of events which were initiated by a loss of feedwater transient. Several aspects of the accident have generic applicability at other operating Babcock & Wilcox (B&W) reactors. On April 1, 1979, IE Bulletin 79-05 was sent to all B&W operating plant licensees. The purpose of the Bulletin was to provide information concerning the accident at TMI-2 and to request certain actions be taken by licensees to preclude a similar occurrence at their facilities. This bulletin was superseded and expanded by IE Bulletin 79-05A dated April 5, 1979, and by IE Bulletin 79-05B dated April 21, 1979. By letters dated April 11 and 16, and May 4, 15, 18 and 21, 1979, the Toledo Edison Company (TECo) provided responses in conformance with the requirements of the Bulletins.

EVALUATION

In the two year period since the Bulletins have been implemented we have observed, in addition to our review of the responses enumerated above, that the licensee has complied with all the following provisions of the Bulletins:

- Understanding of the TMI-2 sequence of events.
- Review of Davis-Besse transient.
- Review Plant Procedures for coping with accidents and transients.
- By review of procedures and training instructions:
  - (1) to avoid overriding automatic action of ESF,
  - (2) to keep high pressure injection (HPI) system in operation for at least 20 minutes and to maintain 50 F subcooling margin,
  - (3) to correlate HPI initiation with reactor coolant pump (RCP) operation, and
  - (4) to train operators not to rely on pressurizer level only, to determine primary coolant inventory.
- Verification of emergency feedwater (EFW) valve positions and all safety-related valve positions to ensure proper operation of EFW and ESF.

810611 166

- By review of containment isolation initiation and design for avoidance of isolating lines that are needed to avoid degraded core cooling capability.
- By preparing and implementing procedures for all valves which could defeat or compromise flow of EFW.
- By preparing and implementing procedures to ensure that two independent steam generator EFW flow paths, each with 100% flow capacity, are operable when heat removal is through steam generators.
- By reviewing operating modes and procedures to prevent inadvertent pumping of radioactive gasses and liquids out of the primary containment.
- By reviewing procedures related to maintenance and test of safety-related systems to:
  - (1) verify operability of redundant system prior to removal of any system from service,
  - (2) verify operability of all systems following maintenance or testing, and
  - (3) verification to operating personnel whenever a system is removed from or returned to service.
- By developing procedures and training operators to establish and maintain natural circulation.
- By training operators to take into account reactor vessel integrity considerations during any accident or transient.
- By performing analyses and design modifications to reduce the likelihood of automatic PORV actuation during anticipated transients.
- By providing procedures and training operators for a prompt manual reactor trip for transients that result in a pressure increase in the reactor coolant system.
- By providing for prompt reporting within one hour of the time the reactor is not in a controlled or expected condition of operation.
- By proposing any needed Technical Specification changes to implement any of the above parts of the Bulletins.

### CONCLUSIONS

Based on our review of the information provided by TECo in response to IE Bulletins 79-05A and 79-05B, we conclude that TECo has acceptably responded to these Bulletins. The actions taken by TECo demonstrate its understanding of the concerns and implications of the TMI-2 accident as they relate to the Davis-Besse Nuclear Power Station. These actions have resulted in added assurance for the continued protection of the public health and safety during plant operation.

Dated: June 3, 1981