

SAFETY EVALUATION REPORT

NUREG-0737 ITEM II.K.3.17

Position

II.K.3.17 REPORT ON OUTAGES OF EMERGENCY CORE-COOLING SYSTEMS LICENSEE REPORT AND PROPOSED TECHNICAL SPECIFICATION CHANGES

Several components of the emergency core-cooling (ECC) systems are permitted by Technical Specifications to have substantial outage times (e.g., 72 hours for one diesel-generator; 14 days for the HPCI system). In addition, there are no cumulative outage time limitations for ECC systems. Licensees should submit a report detailing outage dates and lengths of outages for all ECC systems for the last 5 years of operation. The report should also include the causes of the outages (i.e., controller failure, spurious isolation).

Discussion and Evaluation

The present Technical Specifications contain limits on allowable outage times for ECC systems and components. However, there are no cumulative outage time limitations on these same systems. It is possible that ECC equipment could meet present Technical Specification requirements but have a high unavailability because of frequent outages within the allowable Technical Specifications.

In response to the requirements in NUREG-0737, Item II.K.3.17, the licensee submitted a report by letter dated September 4, 1981, which covered outage dates, lengths of outages, and causes of the outages for all ECC systems for the last five years. The report was based on a review of Licensee Event Reports (LER) and ECCS surveillances for the five year period dating from January 1976 to December 1980. The report provided the outage times for those ECCS components which were repaired within the time intervals allowed by the Technical Specifications to maintain system operability, the outage times for ECC systems in which redundant components were available or not needed during outages, and the average outage times for surveillance testing of ECC systems.

The staff reviewed the licensee's report on ECCS outages in conjunction with a computer printout of all TMI-1 outages for the past five years. The staff noted that the cumulative outage times while the plant was at power for those ECC systems needed for system operability did not exceed approximately three days per year from 1976 to 1979. Furthermore, there seems to be no unusual repetitive occurrences of ECCS outages due to the same causes.

Conclusion

We conclude that the requirements of NUREG-0737, Item II.K.3.17 are met, and there is no need for cumulative ECCS outage requirements in TMI-1 Technical Specifications, because of the small outage time observed over the past five years.

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