

SEP 09 1985

MEMORANDUM FOR: James M. Taylor, Director
Office of Inspection and Enforcement

Robert B. Minogue, Director
Office of Nuclear Regulatory Research

Thomas E. Murley, Regional Administrator, Region I

J. Nelson Grace, Regional Administrator, Region II

James G. Keppler, Regional Administrator, Region III

Robert D. Martin, Regional Administrator, Region IV

John B. Martin, Regional Administrator, Region V

FROM: C. J. Heltemes, Jr., Director
Office for Analysis and Evaluation
of Operational Data

SUBJECT: CASE STUDY REPORT -- OVERPRESSURIZATION OF EMERGENCY
CORE COOLING SYSTEMS IN BOILING WATER REACTORS

The Office for Analysis and Evaluation of Operational Data has finalized its case study of operational events involving an actual or potential overpressurization of an emergency core cooling system in boiling water reactors. The final report addresses the peer review comments provided by NRR, IE, the Regions, NSAC and INPO on our preliminary report. We have enclosed a copy of our final report for your information and use as you may deem appropriate.

A total of eight events, each entailing the failure of a testable isolation check valve on the injection line of an emergency core cooling system, are identified and evaluated in the study. Five of the eight events involved an additional failure of the second and final isolation barrier -- the inadvertent opening of a normally closed motor-operated injection valve. Four of these five events occurred during power operation, thus leading to an actual overpressurization of an emergency core cooling system. Collectively, these operational events indicate a trend with serious safety implications, that the likelihood of an interfacing loss-of-coolant accident between the reactor coolant system and an emergency core cooling system is higher by two to several orders of magnitude than had been previously assessed.

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The enclosed final case study report contains several specific recommendations aimed at addressing the root causes of the reported multiple failures. A separate memorandum is being sent to NRR requesting early consideration of these recommendations.

If you or your staff have any questions regarding this report, please contact Peter Lam of my staff. Dr. Lam can be reached at (301) 492-4438.

Original Signed by
C. J. Heltemes, Jr.

C. J. Heltemes, Jr., Director
Office for Analysis and Evaluation
of Operational Data

Enclosure:
As stated

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