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MEMORANDUM FOR: Harold R. Denton, Director
Office of Nuclear Reactor Regulation

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

AEOD/E313

SUBJECT: POTENTIAL CONTAMINATION OF THE SPENT FUEL POOL AND
PRIMARY REACTOR SYSTEM

A recently completed Engineering Evaluation Report on the above subject is enclosed. Our evaluation concluded that two separate events at the same plant site, which involved cracking of fuel assembly nozzles in the spent fuel pool and in piping from the boric acid storage tank to the safety injection system, are indicative of degradation that resulted from contamination of the systems. Since the postulated sources of contamination were a contaminated batch of boric acid or resin intrusion due to the recycling system, the issue is potentially generic to PWR's.

Some important aspects are that: (1) this type of contamination was not anticipated, (2) the water chemistry monitoring programs for the spent fuel pool and the primary reactor system do not analyze for sulfates, and (3) an unsuspecting licensee could inadvertently place a plant in a condition that may result in significant degradation of safety related equipment. We believe it would be prudent for NRR to consider establishment of requirements to include monitoring for sulfur contaminants in the water chemistry programs for the primary reactor system and the spent fuel pool.

Original Signed by
C. J. Heltemes, Jr.

C. J. Heltemes, Jr., Director
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