



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

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AUG 11 1983

MEMORANDUM FOR: Robert W. Houston, Assistant Director for Reactor Safety,
Division of Systems Integration, NRR

FROM: L. S. Rubenstein, Assistant Director for Core and Plant
Systems, Division of Systems Integration, NRR

SUBJECT: REVIEW OF GESSAR II DESIGN IMPROVEMENT

Your memorandum of August 1, 1983 requested a list of questions, issues, studies and analyses pertaining to significant design improvements that have been pursued with GE during my staff's review of GESSAR II. Enclosed are questions from the Power Systems Branch and the Auxiliary Systems Branch. Although these issues were not all raised during the GESSAR review, they have been identified as alternatives which could improve the design from a safety viewpoint.

ASB

1. Did GE consider the use of a safety-related Condensate Storage Tank (protected from natural phenomena) which could decrease the number of situations in which it would be necessary to transfer the water source for ECCS equipment from a nonsafety-related Condensate Storage Tank to the safety-related source?
2. Did GE consider isolation condensers or a similar passive cooling concept for GESSAR II?

PSB

1. Has GE considered the possible improvement to safety of the use of more safety-related power trains (emergency diesel generators, batteries, etc.)?
2. Has GE determined the optimum configuration for onsite AC/DC safety-related distribution systems from a reliability viewpoint? Did this assessment include the use or lack of bus ties on reliability?
3. Did GE consider the use of dedicated, onsite AC and DC power supplies to dedicated (bunkered) decay heat removal systems with diversity in the AC power system?

L. S. Rubenstein, Assistant Director
for Core and Plant Systems
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