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MEMORANDUM FOR: Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

FROM: Thomas M. Novak, Director
Division of Safety Programs
Office for Analysis and Evaluation
of Operational Data

SUBJECT: INADEQUATE NPSH FOR HIGH PRESSURE SAFETY INJECTION
SYSTEMS IN PWRs

Enclosed is an Engineering Evaluation report on inadequate NPSH for high pressure safety injection systems in PWRs. This issue is similar to an earlier AEOD report on NPSH problems in low head safety systems. In this case, it appears that the problem is limited to those PWRs that "piggyback" the HPSI pumps off the low head pumps in the recirculation phase following a LOCA. This issue is important because the HPSI is needed to mitigate small LOCAs and in some plants it is used for hot leg recirculation even for large LOCAs.

We have also enclosed a draft supplement to the information notice (87-63) on the low pressure safety system NPSH problem. We recommend that this supplement be sent to all PWR licensees and construction permittees to alert them to this potential problem. Preoperational and postoperational testing are not likely to detect this problem. For further information regarding this study, please contact S. Israel (X24437) of my staff. We shall be pleased to meet with you or your staff to discuss this report.

Original signed by

Thomas M. Novak, Director
Division of Safety Programs
Office for Analysis and Evaluation
of Operational Data

Enclosure: As stated

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