



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

MAY 29 1979

MEMORANDUM FOR: P. Check, Chief, Reactor Safety Branch, Division of
Operating Reactors

FROM: G. Lainas, Chief, Plant Systems Branch, Division of
Operating Reactors

SUBJECT: REQUIRING PRESSURIZER HEATERS AND CONTROLS TO BE
SAFETY GRADE

In response to a note from V. Stello concerning the issue of safety system classification for pressurizer heaters, we contacted the Project Manager for the licensing of the Midland Nuclear Plant who informed us that the applicant, Consumers Power Company, will require that two of the six banks of pressurizer heaters be qualified as safety grade equipment. The design basis for the Midland Plant requires that following an anticipated transient, i.e., loss of offsite power, the plant achieve and maintain indefinitely hot shutdown condition. The Midland design does not incorporate the ability to take the plant to a cold shutdown condition using only safety grade equipment.

Qualifying two banks of pressurizer heaters as safety grade will require that the: (1) heaters be seismically qualified, (2) heater banks have a redundant Class IE control systems, (3) heater bank controls are energized from Class IE power sources, and (4) design satisfy the requirements of IEEE Std. 279-1971 and heaters be energized from a Class IE power system that satisfies the requirements of IEEE Std. 308-1974.

The DSS position at this time is to require that the Midland design satisfy the above cited requirements for safety grade equipment. In view of the fact that this issue is a recent development, DSS has not extended this position, at this time, to all future plants to be licensed.

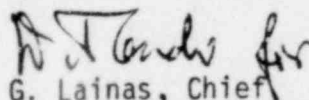
It is concluded from correspondence between the Midland applicant and the NSSS manufacturer (B&W) that B&W does not believe that the pressurizer heaters are components of a safety system; and therefore, do not have to satisfy Class IE qualification requirements. A cursory review of the other two PWR manufacturers, indicates that the pressurizer heaters are normally used to bring the plant to safe shutdown following an anticipated transient, but no credit is taken for these units and they are not presently considered as safety grade equipment.

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The issue of requiring a selected number of banks of pressurizer heaters along with their controls, certain instrumentation and power supplies to be upgraded to the status of safety grade equipment is brought to your attention to consider its application to operating plants. Therefore, it is requested that you review the issue and determine whether or not certain banks of pressurizer heaters be classified as safety systems.



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