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File No.: G9.17

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U. S. Nuclear Regulatory Commission
Washington, DC 20555

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Revisions to FSAR
Chapter 7A, Items II.E.3.1 and II.G.1

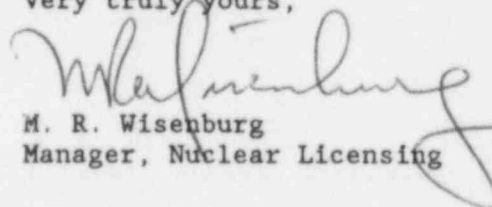
Dear Mr. Knighton:

The attachment enclosed provides information to support the NRC review of the South Texas Projects (STP's) response to TMI Action Plan Items.

The attachments include mark-ups of FSAR pages which will be incorporated in a future FSAR amendment.

If you should have any questions concerning this matter, please contact Mr. Powell at (713) 993-1328.

Very truly yours,


M. R. Wisenburg
Manager, Nuclear Licensing

CAA/b1

Attachments: Annotated FSAR pages to Respond to TMI Items II.E.3.1 and II.G.1

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II.E.3.1 EMERGENCY POWER SUPPLY FOR PRESSURIZER HEATERS

Position

Consistent with satisfying the requirements of General Design Criteria 10, 14, 15, 17, and 20 of Appendix A to 10CFR Part 50 for the event of loss of offsite power, the following positions shall be implemented:

- (1) The pressurizer heater power supply design shall provide the capability to supply, from either the offsite power source or the emergency power source (when offsite power is not available), a predetermined number of pressurizer heaters and associated controls necessary to establish and maintain natural circulation at hot standby conditions. The required heaters and their controls shall be connected to the emergency buses in a manner that will provide redundant power supply capability.
- (2) Procedures and training shall be established to make the operator aware of when and how the required pressurizer heaters shall be connected to the emergency buses. If required, the procedures shall identify under what conditions selected emergency loads can be shed from the emergency power source to provide sufficient capacity for the connection of the pressurizer heaters.
- (3) The time required to accomplish the connection of the preselected pressurizer heater to the emergency buses shall be consistent with the timely initiation and maintenance of natural circulation conditions.
- (4) Pressurizer heater motive and control power interfaces with the emergency buses shall be accomplished through devices that have been qualified in accordance with safety-grade requirements.

Clarification

- (1) Redundant heater capacity must be provided, and each redundant heater or group of heaters should have access to only one Class 1E division power supply.
- (2) The number of heaters required to have access to each emergency power source is that number required to maintain natural circulation in the hot standby condition.
- (3) The power sources need not necessarily have the capacity to provide power to the heaters concurrently with the loads required for loss-of-coolant accident.

- (4) Any changeover of the heaters from normal offsite power to emergency onsite power is to be accomplished manually in the control room.
- (5) In establishing procedures to manually load the pressurizer heaters onto the emergency power sources, careful consideration must be given to:
 - (a) which (ESF) loads may be appropriately shed for a given situation;
 - (b) reset of the safety injection actuation signal to permit the operation of the heaters; and
 - (c) instrumentation and criteria for operator use to prevent overloading a diesel generator.
- (6) The class 1E interfaces for main power and control power are to be protected by safety-grade circuit breakers (see also Regulatory Guide 1.75).
- (7) Being non-Class 1E loads, the pressurizer heaters must be automatically shed from the emergency power sources upon the occurrence of a safety injection actuation signal (see item 5.b. above).

STP RESPONSE

The STP response to Item II.E.3.1 is provided by the response to Question 430.34N.

II.G.1 EMERGENCY POWER FOR PRESSURIZER EQUIPMENT

Position

Consistent with satisfying the requirements of General Design Criteria 10, 14, 15, 17, and 20 of Appendix A to 10 CFR Part 50 for the event of loss-of-offsite power, the following positions shall be implemented:

Power Supply for Pressurizer Relief and Block Valves and Pressurizer Level Indicators

- (1) Motive and control components of the power-operated relief valves (PORV) shall be capable of being supplied from either the offsite power source or the emergency power source when the offsite power is not available.
- (2) Motive and control components associated with the PORV block valves shall be capable of being supplied from either the offsite power source or the emergency power source when the offsite power is not available.
- (3) Motive and control power connections to the emergency buses for the PORVs and their associated block valves shall be through devices that have been qualified in accordance with safety-grade requirements.
- (4) The pressurizer level indication instrument channels shall be powered from the vital instrument buses. The buses shall have the capability of being supplied from either the offsite power source or the emergency power source when offsite power is not available.

Clarification

- (1) Although the primary concern resulting from lessons learned from the accident at TMI is that the PORV block valves must be closable, the design should retain, to the extent practical, the capability to also open these valves.
- (2) The motive and control power for the block-valve should be supplied from an emergency power bus different from the source supplying the PORV.
- (3) Any changeover of the PORV and block-valve motive and control power from the normal offsite power to the emergency onsite power is to be accomplished manually in the control room.
- (4) For those designs in which instrument air is needed for operation, the electrical power supply should be required to have the capability to be manually connected to the emergency power sources.

STP RESPONSE

The STP response to Item II.G.1 is provided by the response to Question 430.34 N.