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U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Responses to I&C Audit Items

Reference: A. Wisenburg, M. R., HL&P; Additional Information Concerning Electrical Isolation Devices and Class 1E/Non-Class 1E Control Circuit Interfaces; Letter to NRC, dated February 19, 1987; ST-HL-AE-1917

B. Wisenburg, M. R., HL&P; Notes from Review Meeting with ICSB; Letter to George W. Knighton, NRC, dated May 13, 1985; ST-HL-AE-1239

During the period of January 28-30, 1987, the NRC staff held audits in the areas of Instrumentation & Control (I&C) Systems, Electrical Systems, Control Room Design Review (CRDR), and the Safety Parameter Display System (SPDS) at the South Texas Project site. An exit meeting was held at the conclusion of each audit to summarize the concerns which had been identified.

Responses to the concerns identified during the I&C audit are provided in the attachment.

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

M. R. Wisenburg
Deputy Project Manager

THC/yd

Attachment: 1. Response to I&C Audit Items

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1. Concern: RG 1.75 separation criteria are not met in several places in the Main Control Panels and Auxiliary Shutdown Panel.

   Response: Nonconformance reports (NCRs) were written to ensure the correction of the violations. All panels containing more than one separation group will be walked down to ensure any other RG 1.75 separation problems are identified and corrected.

   Although a final analysis has not been completed, we have a high degree of confidence that these violations do not constitute a safety concern because they involve low energy circuits. However, it is not the intent of the STP Low Energy Circuit Analysis Program to justify exceptions to the requirements of RG 1.75. These circuits will be retrained to meet RG 1.75 criteria. STP will only use low energy circuit analysis when the cables cannot be practically retrained to meet the requirements of RG 1.75.

2. Concern: Cable separation color coding is not visible in all cases. One specific example was noted in the Channel D Inverter Room.

   Response: In the "D" train inverter room, 5 cables (4 black and 1 white) exited some conduits and entered a panel. The black cables were being used as "D" train (white) cables, but they were not visibly marked. (Shining a light into the open end of the conduits did show that at least one of the black cables had been wrapped with white tape for marking purposes.) The NRC reviewer stated that the cables should be properly marked as they enter and exit panels and asked STP to address this concern.

   STP procedures allow Class 1E qualified, black jacketed cable to be used as Class 1E separation group colored cable, provided the black cables are properly color coded. Color coding is achieved by applying the proper color ink or tape to the full circumference of the cable at intervals not to exceed 5 feet.

Section 5.12 of IEEE 384-1974, Criteria for Independence of Class 1E Equipment, requires cables to be marked to facilitate initial verification that the installation is in conformance with the separation criteria. STP is in compliance with this requirement and no corrective action is necessary.

Section 5.12 of IEEE 384-1974 also requires Class 1E cables to be identified by a permanent marker at each end in accordance with the design drawings or cable schedule. The cables addressed by this concern will be checked to verify they are so marked.

3. Concern: RG 1.75 cable separation is not maintained for demultiplexer (DEMUX) and time synchronization cables entering the Westinghouse Solid State Protection System Logic Cabinets.

Response: This issue will be addressed separately.

4. Concern: Struthers-Dunn relays and Magnetics current transformers are used as isolation devices in main control panel CP-003. Qualification of those devices relative to fault isolation capability has not been reviewed by the NRC staff.

Response: Information on the qualification testing of the Struthers-Dunn relays was provided in Reference A, our recent submittal on isolation devices.

The application of current transformers as isolation devices was addressed during the March 1985 ICSB meeting at our engineering offices in Houston. No unresolved concerns were identified. Refer to agenda item 5 and the corresponding handout in Reference B. Current transformers used as isolation devices are discussed in FSAR Section 8.3.1.4.4.13 and are identified as acceptable in SER Section 8.3.3.3.4.

5. Concern: Provide additional information regarding the program for installation of "Siltemp" material for RG 1.75 separation requirements.

Response: The installation and inspection procedures for the "Siltemp" material are discussed on project drawings (5E03-0-E0100 Sheet 6B series). As noted in these drawings, the "Siltemp" material is to be used only when required by a dispositioned Nonconformance Report (NCR), Non-Work Authorized Field Change Request (FCR), or a line

item on the Standard Site Procedure-45 walkdown deficiency report, which is to be followed by a dispositioned NCR. Thus, no "Siltemp" material can be installed without the architect engineer's approval. Also, in these drawings, the inspection criteria are delineated to insure proper installation of the "Siltemp". "Siltemp" material used at STP for RG 1.75 separation requirements has been installed using the procedures in these drawings.

6. Concern: In the relay room, SSPS logic train R input cabinet (ZRR-001) was found containing cables that required wrapping with Siltemp to meet separation criteria; however, the cables were not wrapped. In this same panel, a bundle of cables wrapped in Siltemp was not separated 1" from other cables as required by STP procedures.

Response: This cabinet will be included in the walkdown discussed in the response to item 1 of this attachment.