

The Light company

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October 31, 1985
ST-HL-AE-1502
File No.: G9.17

Mr. George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

South Texas Project
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Responses to DSER/FSAR Items
On Chapter 3

Dear Mr. Knighton:

The attachment enclosed provides STP's response to Draft Safety Evaluation Report (DSER) or Final Safety Analysis Report (FSAR) items.

The item numbers listed below correspond to those assigned on STP's internal list of items for completion which includes open and confirmatory DSER items, STP FSAR open items and open NRC questions. This list was given to your Mr. N. Prasad Kadambi on October 8, 1985 by our Mr. M. E. Powell.

The attachment includes mark-ups of FSAR pages which will be incorporated in a future FSAR amendment unless otherwise noted below.

The items which are attached to this letter are:

<u>Attachment</u>	<u>Item No.*</u>	<u>Subject</u>
1	Q10.002-1	Flood Protection

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* Legend

D - DSER Open Item
F - FSAR Open Item

C - DSER Confirmatory Item
Q - FSAR Question Response Item

L1/DSER/al3

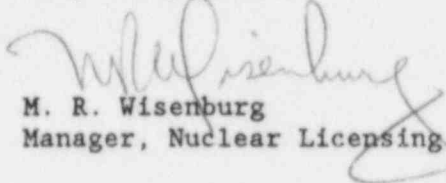
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If you should have any questions concerning this matter, please
contact Mr. Powell at (713) 993-1328.

Very truly yours,



M. R. Wisenburg
Manager, Nuclear Licensing

REP/vmq

Attachments: See above

L1/DSER/a13.

cc:

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Revised 9/25/85

Question 010.2

Expand Section 3.4.1 to include the following:

1. Identify the safety-related systems and components that should be protected against floods, and show their relation to design flood levels and conditions.
2. Describe the structures that house safety-related equipment, including an identification of exterior or access openings and penetrations that are below the design flood levels.
3. Discuss the means of providing flood protection (e.g., pumping systems, stopplugs, water tight doors, and drainage systems) for safety related equipment that may be vulnerable to floods because of its location and the protection provided to cope with potential inleakage from such occurrences as cracks in structure walls, leaking water stops, and effects of wind wave action.

Response: See revised FSAR Section 3.4.1.

1. All safety-related systems and components listed in Table 3.5-1 under heading "System, Component, or Structure" are protected against the effects of external flooding by:

- 1) Being designed to withstand the maximum flood level and remain functional (such as Seismic Category I Structures and Condensate Storage Tanks) or
- 2) Being housed within Seismic Category I Structures which are designed as in 1 above.

Table 3.4.1 shows the flood loads under various loading conditions on all the Category I structures.

2. Refer to Section 3.8 for the description of all Category I Structures that house safety-related equipment.

Refer to Figure 3.4.2 which shows all the major openings and penetrations and the maximum flow profile during flooding. The figure also indicates the type of doors provided for these openings to make it watertight during flooding.

3. The means of providing flood protection for safety-related equipment that may be vulnerable to flooding has been discussed in the response to NRC acceptance review question 010.10.

Response (Continued)

The potential inleakage from such occurrences as cracks in structural walls, leaking water stops, and effects of wind wave action is highly improbable because of the following preventive measures:

- 1) All construction joints in exterior walls and slabs are provided with water stops to el. 60 ft. and can withstand hydrostatic effects. All Seismic Joints between Category I Structures contain dual 9" water stops capable of withstanding potential seismic and hydrostatic effects.
- 2) Cracks in concrete will be minimized by imposing strict QA and QC procedures on the quality of concrete and construction techniques.
- 3) The effects of wind wave action has been taken into consideration when designing walls and construction joints.