

The Light company

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October 31, 1985
ST-HL-AE-1474
File No.: G 9.17

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 & 2
Docket Nos. STN 50-498, STN 50-499
Response to DSER Open Items
Flood Protection/Ultimate Heat Sink

Dear Mr. Knighton:

The attachments enclosed provide STP's response to Draft Safety Evaluation Report (DSER) 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 attachments include mark-ups of FSAR pages which will be incorporated in a future FSAR amendment unless otherwise noted below.

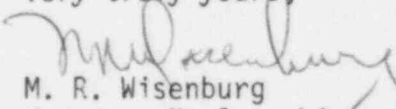
The items which are attached to this letter are:

<u>Attachment</u>	<u>Item No.*</u>	<u>Subject</u>
1	D 2.4-4	Section 2.4.14 Ultimate Heat Sink
2	D 2.4-5	Section 2.4.14 Flood Protection

If you should have any questions on this matter, please contact Mr. Mark A. McBurnett at (512)972-8530.

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Very truly yours,


M. R. Wisenburg
Manager, Nuclear Licensing

MAM/bjf

Attachment: See Above

* Legend

D - DSER Open Item

F - FSAR Open Item

C - DSER Confirmatory Item

Q - FSAR Question Response Item

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cc:

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DSER Open Item 2.4-4

A Technical Specification will be required to define actions to be taken in the event the ECP water level drops below 25.5 feet Mean Sea Level (2.4.14).

Response

This is provided by STPEGS Technical Specification 3/4.7.5.
The STPEGS Technical Specifications were submitted to NRC by letter dated June 17, 1985 (ST-HL-AE-1271).

DSER Open Item 2.4-5

Provide a procedure to require that water proof doors and water proof knockout panels be in a secured position under normal conditions.

Response

All necessary flood proof doors providing access from an uncontrolled area to a vital area are monitored by the plant security system. The security system will verify that the doors are always closed except as required for personnel passage. A statement will be added to FSAR section 3.4.1.2 that states:

"Additionally, any flood proof door that could provide access from an uncontrolled area to a vital area that is below the flood line, is monitored by the site security system. This will ensure that the doors are closed during normal operation." Removal of a knockout panel will be controlled by administrative procedures under the following conditions.

- 1) The knockout panels on the east side of the MAB below the floodline providing access to the CCW heat exchangers will be removed only when the waterproof door providing access to the MAB is closed.
- 2) Only 1 Diesel Generator Building knockout panel may be removed at one time.

An advance copy of the revised page is attached.

in Section 2.4.4, is, in general, the controlling phenomenon in determining the maximum water level along the north face of the plant structures and along the north embankment of the ECP. The maximum stillwater level caused by the Colorado River dam breach at the plant site area is El. 34.1 ft MSL. The maximum nonhurricane-wind setup and wind-wave runup on the vertical face at the north end of the plant structures is 8.1 ft above El. 34.1 ft MSL. Therefore, the maximum water level realized on the north face of plant structures is El. 42.2 ft MSL. The corresponding setup and runup for the north ECP embankment and the north face of the ECW Intake Structure results in a maximum water level of 46.9 ft MSL. As demonstrated in this section, the plant and all safety-related facilities are designed to withstand or are protected from the effects of these flood conditions and still remain operational to permit a safe shutdown of the plant.

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Table 3.4-1 shows the water depths which were used in the force and buoyancy calculations. These depths were developed based on the values shown for depths presented in Table 2.4.4-3.

3.4.1.2 Design Provisions for Flood Protection. All safety-related systems and components, except the auxiliary feedwater storage tank (AFST), are protected against the effects of external flooding by being housed within seismic Category I structures which are designed to withstand the maximum flood levels and remain functional. The AFST is a seismic Category I structure and is designed to withstand these maximum flood levels and associated effects ~~INSERT~~

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Seismic Category I structures are designed to withstand the maximum flood levels and associated effects by:

1. Having external walls and slabs of structures designed to resist the hydrostatic and hydrodynamic forces associated with surge-wave runup and steady-state water level.
2. Ensuring the overall stability of the total structure against overturning and sliding due to the hydrostatic and hydrodynamic forces associated with surge-wave runup and steady-state water level.
3. Ensuring that the total structure will not float due to buoyancy forces.

An investigation of seismic Category I structures has been made for the flood levels and associated effects as previously described. The design for gross effects upon the structure, as mentioned in subparagraphs 2 and 3 above, incorporates safety factors greater than 1.1. All exterior seismic Category I building openings are located above the maximum steady-state flood level or are equipped with watertight doors when located below this profile, except as stated below.

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Exceptions to the above-stated design basis for exterior building openings in seismic Category I structures are: (1) the opening for the truck in the radwaste loading area of the Mechanical-Electrical Auxiliaries Building (MEAB); (2) the opening for the rail car in the spent fuel cask loading area of the FHB, and (3) Tendon Gallery Access Shaft cover. These areas are not protected from flooding because they do not have any safety-related systems and components. In addition, the first two areas are separated from the remainder of the building by walls which do not contain openings below the

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INSERT PAGE 3.4.2

Additionally, any flood proof door that could provide access from an uncontrolled area to a vital area that is below the flood line, is monitored by the site security system.