Docket No. 50-458 JUL 12 1985

Mr. William J. Cahill, Jr.
Senior Vice President
River Bend Nuclear Group
Gulf States Utilities Company
Post Office Box 2951
Beaumont, Texas 77704
Attention Mr. J. E. Booker

Dear Mr. Cahill:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION

As a part of the NRC staff's review of your application for an operating license for River Bend Station, the staff has determined the need for additional information in the area of auxiliary systems. This request for information is provided in the enclosure as eleven questions numbered 410.01- to 410-11.

The majority of these questions are the result of staff review of Amendment #20 to the River Bend FSAR. Your prompt response to this request is essential for closure of open SER issues.

Please inform NRC Project Manager Stephen Stern, of your schedule for response and for clarification or further discussion on this topic.

Sincerely,

Walter R. Butler, Chief
Licensing Branch No. 2
Division of Licensing

Enclosure: As stated

cc: w/enclosure
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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AUXILIARY SYSTEMS BRANCH

REQUEST FOR ADDITIONAL INFORMATION

RIVER BEND STATION

410.01 (9.2.5) In Amendment 20, you stated that you were providing a hypochlorite feeding system in the ultimate heat sink (UHS). This system recirculates the water in the UHS within each compartment of the basin in order to control the organic growth. By Amendment 16 you proposed to have manual initiation of the UHS fans inorder to reduce to loads on the TDI diesel generators. As part of the justification for manual intiation of the fans, you provided the results of an analysis concerning the heat up of the basin water without the fans and without short-circuiting of the hot water back to the pump suction. Your analysis assumed that the water in the basin was stratified and that there would be no mixing of the heated water to disrupt the stratification. Provide the results of a revised basin water temperature and short circuiting analysis with consideration being given to the mixing from the hypochlorite system.

410.02 (9.2.5) Specify the total residual chlorine level to be maintained in the UHS basin and the frequency of the water analysis to determine that the water is maintained at this level. Provide a P&ID FSAR Figure which shows this system and it components. Verify that failure of none of the components of the hypochloite feeding system which are inside the UHS as the result of a safe shutdown earthquake will adversely effect the standby service water system.

410.03 (9.2.5) In accordance with Regulatory Guide 1.27 Position C.2.d, provide a discussion of plant shutdown and cooldown resulting from a loss of offsite power with a single failure of the UHS. In addition, the following two different failure scenarios should be discussed: 1) where the failure maximizes the flooding in the pipe tunnel and 2) where the flooding maximizes the flooding of the site. Verify that no safety parameters are exceeded.

410.04 (9.2.5) (9.2.7) The standby service water system (SSWS) returns the heated water to the UHS for cooling. One loop of the returning water is returned to the north and south sides of the UHS while the other loop returns the water to the east and west sides of the UHS. Prior to powering the "C" SSWS pump from the Division III diesel generator, the fan cells which were powered from the Division I diesel generator provided the cooling for the water that was being returned by the Division I powered SSWS pumps. Similiarly the Divi-

sion II fan cells provided cooling for the water provided by the Division II SSWS pumps. There is a cross connect between the discharge of the SSWS pumps in the two loops such that the Division I powered SSWS pumps could cool the Division II equipment, in lieu of the Division I equipment, and return the water to the Division II powered fan cells. With the powering of the C SSWS pump from the Division III diesel generator, the potential exists for one loop of SSWS pumps to be inoperative with the opposite loop's fan cells inoperative. In this configuration there would theoretically be sufficient SSWS and UHS capacity to remove 100% of the required heat but in actuality the SSWS water would not be adequately cooled and could result in higher UHS basin water temperatures than have previously been evaluated. For this condition, prepare a procedure to align the operable SSWS to the loop with the operable UHS fan cells.

410.05 (9.3.1) By Amendment 20 you provided the missing FSAR Table 9.3-4 which identifies the "maximum allowable particle size" with particle sizes ranging from 5 microns to 175 microns. The FSAR commits to providing an air quality which has a maximum particle size of 3 microns. Provide clarification as to the purpose of this table and verify your commitment to maintaining the maximum particle size for the compressed air systems at 3 microns. The table also identifies the "scram discharge volume tanks" as requiring air with a maximum particle size of 5 microns. What is a "scram discharge volume tank"? Why does a tank need 5 micron quality compressed air?

410.06 (9.3.7) By Amendment 20 you provided a new water system entitled the "suppression pool pumpback system" (SPPS). This system is shown, in part, on FSAR Figure 9.3-7p which references Figure 9.3-7I which does not exist. Provide FSAR Figure 9.3-7I. This figure also refers to FSAR Figure 6.3-1 without any grid coordinates and Figure 6.3-1 does not reference Figure 9.3-7p. Provide the grid coordinates on Figure 9.3-7p and revise Figure 6.3-1 to show the connection to the SPPS. Referring to Figure 9.3-7p, the line beginning in grid coordinates D-12 has neither a connection to another line nor a reference to another drawing. Submit a revised figure which identifies where this line goes. Verify that valve AOV-144 is a fail closed valve or verify that this valve has a Seismic Category I air supply which is Class 1E powered. Again refering to Figure 9.3-7p, verify 1) that valve V-182 is drawn correctly and provide a discussion of the water flow path from sump DFR-TK5B to the suppression pool and 2) verify that the piping safety class change is correctly shown on the proper side of the valve and provide a discussion of the means used to provide redundent

seismic Category I isolation valves to isolate the suppression pool in the event of an earthquake.

410.07 (9.3.7) By Amendment 20 you identified a new system, the SPPS, to provide a means of removing water from ECCS piping areas in the event of a pipe failure and returning the water to the suppression pool. On the FSAR figures which have been identified for this system, no ECCS equipment has been identified which would provide water to the SPPS. Either identify the appropriate systems or provide a revised Section 9.3.7.

410.08 (9.4.5) By Amendment 20 you deleted the automatic initiation feature of the diesel ventilation system and the associated alarms in the control room. The ventilation system is now started only by a temperature sensor. Considering the maximum instrumentation drift in the high temperature direction, specify the maximum ambient temperature and verify that this temperature is less than the equipment qualification temperature. Assume the failure of the circuitry to operate the ventilation system and provide 1) the time until the diesel generator fails, 2) the time available for repairs to be made to prevent diesel failure, and 3) the maximum temperature in the room and verification that this temperature will not have any adverse effect on the operation or life of the diesel generator. Since the same procedure will be used for all of the diesel generators and potentially the same people may be performing the maintainance on this equipment, all diesels should be considered to have the same problem concurrently with the initiating event being a LOCA with the resulting loss of offsite power with the highest ambient temperature. Since the three diesels could potentially failure at the same time, either 1) specify the minimum personnel required to repair the diesel ventilation systems concurrently and provide a commitment to maintain this minimum staff level at all times, or 2) specify the order inwhich the diesel ventilation systems will be repaired, provide justification for the order of repair, specify the maximum temperature for each diesel, and for each diesel whose temperature exceeds the qualification temperature, include that diesel's failure and resulting loss of equipment to the accident scenario and verify that no safety limits are exceeded for the duration of the accident.

410.09 (9.4.7) By Amendment 20 you has identified eight new ventilation systems. Of these eight new systems, no information has been provided concerning the circulating water pump house, the cooling tower switchgear house, the clarifier area switchgear house and the blowdown pit with respect to the physical location of these buildings and equipment layout within the buildings. Provide FSAR figures which show this information. The auxiliary building ventilation system

is discussed in FSAR Section 9.4.3 and is identified as safety-related. The auxiliary control building ventilation system is discussed in FSAR Section 9.4.7 and is identified as non-safety related. The FSAR is not clear as to the difference between these two systems. Provide clarification of these two systems in terms of 1) areas and equipment serviced, protection of the safety-related system from the non-safety related system (Regulatory Guide 1.29, Position C.2), and 3) a figure showing the non-safety related system and its relationship, if any, to the safety-related system.

410.10 (4.6) (9.3.5) By Amendment 20 you revised FSAR Figure 9.3-14 to conform to the proposed Technical Specifications. This figure graphically defines the upper and lower bounds of the allowable sodium pentaborate concentrations and SLCS tank volume combinations. This figure identifies the minimum concentration level to be approximately 9.3%. Based on our independent analysis of this figure and in comparison to other similar figures, we find the 9.3% concentration to be non-conservative. Provide a revised FSAR and related Technical Specification figure with a lower bound which conforms to those of other BWRs.

410.11 (9.2.5) In a submittal dated May 20, 1985 (RBS-21052), you stated that design of the system to monitor the UHS basin water temperature and to determine the average water temperature had been submitted for our review. You have <u>not</u> submitted any design for such a system for our review. Provide a system discription, P&ID, and revised FSAR layout figure(s) to show the proposed UHS water basin monitoring system.