

AUG 30 1984

Docket No. 50-458

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

Dear Mr. Cahill:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - RIVER BEND STATION  
SAFETY PARAMETER DISPLAY SYSTEM

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 the Safety Parameter Display System (SPDS). The request for information is included in the enclosure.

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

Sincerely,

A. Schwencer, Chief  
Licensing Branch No. 2  
Division of Licensing

Enclosure: As stated

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River Bend Station

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REQUEST FOR ADDITIONAL INFORMATION  
CONCERNING THE  
RIVER BEND 1  
SAFETY PARAMETER DISPLAY SYSTEM

Each operating reactor shall be provided with a Safety Parameter Display System (SPDS). The Commission approved requirements for an SPDS are defined in NUREG-0737, Supplement 1. In the Regional workshops on Generic Letter 82-33 held during March 1983, the NRC discussed these requirements and the staff's review of the SPDS.

The staff reviewed the SPDS submittal provided by Gulf States Utilities Company (Reference 1 and 2). The staff was unable to complete the review because of insufficient information. The following additional information is required to continue and complete the review:

1. HUMAN FACTORS PROGRAM

Provide a description of the display system, its human factored design, and the methods used and results from a human factors program to ensure that the displayed information can be readily perceived and comprehended so as not to mislead the operator.

2. DATA VALIDATION

Describe the specific methods used to validate data displayed in the SPDS. Also describe how invalid data is defined to the operator.

3. VERIFICATION AND VALIDATION PROGRAM

Define and discuss the Verification and Validation Program Plan which was used in the development of the SPDS. Also, describe results to date from the Verification and Validation Program, and the corrective actions taken to address identified design deficiencies.

4. UNREVIEWED SAFETY QUESTIONS

Provide conclusions regarding unreviewed safety questions or changes to technical specifications.

5. PARAMETER SELECTION

- a. The applicant has stated that General Electric (GE) is furnishing the River Bend Station SPDS. Identify the specific design (e.g., generic ERIS) being provided by GE.
- b. Concerning reactivity control monitoring, the applicant does not include Source Range Monitors (SRMs) as part of the SPDS. While the staff agrees

That the Average Power Range Monitors (APRMs) are of primary interest for flux monitors, the SRMs should also be available on SPDS to serve as a key reactivity control monitor for events at low power. Therefore, to provide a rapid, continuous reactivity status indication covering all conditions, the staff requests that the SRMs be specifically included as part of the SPDS display, or justification provided for not including this parameter.

- c. Concerning radioactivity control monitoring, the applicant does not include Primary Containment Radiation as part of the SPDS. To provide a Radioactivity Control safety function monitor under conditions when the vent stack and other monitors are not available (e.g., containment isolation), the staff requests that a containment radiation monitor be included as part of the SPDS display, or justification provided for not including this parameter.
- d. How is the status of containment isolation identified on the SPDS?
- e. Provide a Listing or Table relating the SPDS safety parameters to the five Critical Safety Functions identified in 4.1(f) of Supplement 1 to NUREG-0737 (Generic Letter No. 82-33).

#### 6. PARAMETER VALIDATION

Insufficient information is provided to evaluate the validation testing used for the SPDS system. Specifically, the identification of the transient and accident sequence test cases used for performance tests (useability) of the SPDS should be provided and justified. If a specific parameter is not testable in a fully simulated transient sequence, the source of the validation data should be identified.

REFERENCE

1. Letter from J. E. Booker (GSU) to H. R. Denton (NRC) forwarding "Safety Parameter Display System Accident Monitoring Instrumentation Database Identification Study For River Bend Station Unit 1", dated April 24, 1984.
2. Letter from J. E. Booker (GSU) to H. R. Denton (NRC) forwarding errata sheet for SAR submitted on April 24, 1984, dated May 21, 1984.