



**GULF STATES UTILITIES COMPANY**

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February 7, 1984  
RBG-16,986  
File No. G9.5, G9.8.6.2

Mr. Harold R. Denton, Director  
Office of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Dear Mr. Denton:

River Bend Station - Units 1 & 2  
Docket Nos. 50-458/50-459

Enclosed is Gulf States Utilities Company's (GSU) response to Question 231.15 from reviewers in the Geosciences Branch (GSB). This response (see Enclosure) further clarifies the information submitted to the NRC (docketed letter from Mr. Booker to Mr. Denton) on January 20, 1984 and will be incorporated into the next amendment of the Final Safety Analysis Report.

Sincerely,

*William J. E. Booker*  
for J. E. Booker

Manager - Engineering  
Nuclear Fuels & Licensing  
River Bend Nuclear Group

*JEB*  
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Enclosure

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## Enclosure

### QUESTION 231.15 (2.5.1)

As noted on Draft FSAR Figure 2.5-95 which was transmitted to the NRC staff on October 5, 1983, there are 41 seismic reflection profile lines within about five miles of the site which had not been previously identified to the staff. In order to assess the safety significance, if any, of the information which may become available as a result of the analysis and interpretation of these recently identified geophysical investigations, provide the following:

- (1) Present a discussion of the new lines including information such as:
  - (a) when the lines were shot
  - (b) when GSU became aware of the existence of these lines
  - (c) the status of the availability of any of these lines
  - (d) if available, whether GSU has reviewed and interpreted any of the lines.
- (2) In the event that GSU has not reviewed and interpreted at least a representative sampling of the 41 newly-identified seismic reflection lines, provide a substantive discussion as to why, considering the presence of faulting identified elsewhere within five miles of the site, such interpretation need not be performed by GSU. The above discussion is to include, but is not to be limited to, the result of GSU's detailed structural and stratigraphic analyses of the available electric well logs shown on FSAR Figure 2.5-18.
- (3) GSU is to provide its bases for concluding that additional faults, even if present within the area represented by the 41 newly-identified lines, constitute no safety significance to the River Bend Station.

### RESPONSES

- (1) Seismic brokers have identified a total of 59 seismic lines as available in the general site area. These lines are in addition to the lines already evaluated in the FSAR (2.5.1.2.3.4). Although specific dates for these surveys have not been obtained, it is presumed that most or all of them were shot during the interest in the Tuscaloosa trend petroleum play beginning in the early to mid-seventies.

GSU obtained this list following the June, 1983 conference with NRC personnel in Bethesda, Maryland. The brokers have listed only lines that are available for purchase, most presumably placed on the market now that drilling in the trend has abated. GSU has interpreted the lines shown on Figure 2.5-18, but has not examined any of the 59 lines recently identified as available.

- (2) All of the available electric well logs from the area depicted on Figure 2.5-18 have been correlated and examined for missing sections that might be indicative of fault displacement, and no faults have been identified outside the immediate Port Hudson structure except for the Zachary fault. Seismic data shown on Figure 2.5-18 (Amoco lines) interpreted in the site area depicts no faulting except the two faults that terminate upwards in the Cretaceous-Midway sequence at depths below 13,500 feet in beds older than 60 million years.

Faults other than the Zachary fault have been identified on the Port Hudson salt dome. They are restricted to the Port Hudson structure and the shallowest such fault identified occurs in well No. 38 at a depth of 9,400 feet in the Claiborne sequence of Eocene age.

Elsewhere in the area, any unidentified faulting also would expectedly terminate upward at depth.

The northernmost growth fault extending through the shallower younger beds has been identified as the Zachary fault, the surface position of which is shown on Figure 2.5-17. Surface mapping has not identified shallow faults north of this position, nor do any of the well logs or seismic lines shown on Figure 2.5-18 yield any evidence of post-Cretaceous-Midway faulting in the study area.

- (3) The foregoing discussion provides the rationale for concluding that no post-Cretaceous-Midway faults exist north of the Zachary fault. Even if such a fault were to exist, the four Amoco seismic lines (277 to 280) indicate that its surface position would not be at the site. In addition, evidence is presented in Section 2.5.1.1.5.3.2 that such faults do not present seismic risk even though actively undergoing surface displacement.