



**GULF STATES UTILITIES COMPANY**

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June 4, 1985  
RBG- 21191  
File No. G9.5

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-Unit 1  
Docket No. 50-458

As identified in the letter from Mr. J. E. Booker (Gulf States Utilities Company-GSU) to Mr. E. R. Denton (Nuclear Regulatory Commission-NRC) dated February 1, 1985 (GSU Letter No. RBG-20062), Gulf States Utilities Company continues to be actively involved in a program to resolve the degraded core hydrogen control issue through both generic activities conducted by the Hydrogen Control Owners Group (HCOG) and plant specific activities. Past efforts by GSU have been directed towards compliance with requirements of the then proposed hydrogen control rulemaking; however, since amendments to Title 10, Part 50 of the Code of Federal Regulations (10CFR50) have recently been finalized (Federal Register reference 50 FR 3498 dated January 25, 1985), Gulf States Utilities Company is presenting our program for demonstrating compliance with the new rule. The new rule requires that a hydrogen control system, supported by preliminary analysis, be installed and operational prior to operation above 5% power and the submittal of a schedule for demonstrating full compliance with the hydrogen control rule.

Gulf States Utilities Company has installed a distributed ignitor system at River Bend Station (RBS) (see Sections 6.2.5.2.5 and 6.2.5.5.5 of the Final Safety Analysis Report, FSAR, as contained in Amendment 19). This system will be fully operational prior to fuel load. Additional plant specific information on hydrogen control has been or will be submitted to support a full power operating license in accordance with Attachment 1.

The scope of the RBS Preliminary Analysis for Hydrogen Control is listed in Attachment 1. This analysis includes a detailed description of the RBS hydrogen igniter system, the RBS drywell and containment ultimate capacity analyses, and a preliminary containment response analysis. As a whole these three areas provide the preliminary analysis required by the rule. This latter conclusion is reached since the Staff has determined for a similar plant, Grand Gulf Nuclear

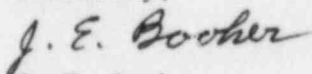
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Station (GGNS), that similar analyses provide a satisfactory basis to support interim operation at full power until the final analysis required by the rule is completed. While not within the scope of the required preliminary analysis, but because of containment design differences between RBS and GGNS, GSU will also conduct a limited equipment survivability analysis. The equipment survivability analysis will include a listing of the equipment required to survive a hydrogen burn event and a preliminary evaluation of the equipment's thermal response to hydrogen combustion.

With respect to the final analysis required by the rule, the HCOG submitted the Hydrogen Control Program Plan on December 14, 1984 as an attachment to the letter from S. H. Hobbs (Chairman, HCOG) to H. R. Denton referenced as HGN-024. GSU believes the approach set forth in the Plan is a suitable program of research and analysis to demonstrate full compliance with the hydrogen control rule. As the results of specific subtasks, activities and reports become available, GSU will address their individual applicability as necessary. The final RBS analysis will be completed on a schedule consistent with the HCOG Program Plan. GSU is also actively involved in the BWR Owner's Group Emergency Procedures Committee efforts to develop a generic Hydrogen Control Emergency Procedure Guideline (EPG). When the generic EPG is finalized, GSU will incorporate the procedure into a RBS Emergency Operating Procedure (EOP). Finally, a GSU schedule for demonstrating full compliance with the final rule will be provided to the Staff by June 25, 1985.

In summary, GSU believes the installation of a hydrogen igniter system, supported by the preliminary analysis detailed in Attachment 1, provides a satisfactory basis for the Staff determination to support interim full power operation until the final analysis has been completed.

Sincerely,



J. E. Booker  
Manager-Engineering,  
Nuclear Fuels & Licensing  
River Bend Nuclear Group

JEB/WJR/JWL/MAM/kt

Attachment

ATTACHMENT 1

Scope of the River Bend Station  
Preliminary Analysis  
for  
Hydrogen Control

<u>Item</u>	<u>Submittal Schedule or Reference</u>
1. Hydrogen Control System Design	
A. Hydrogen Control System Design Criteria	FSAR Section 6.2.5.2.5, AM. 19
B. Hydrogen Ignitor Locations	FSAR Table 6.2-53, AM. 19
C. Hydrogen Ignitor Power Supplies	FSAR Section 7.3.1.1.5, AM. 19
D. Hydrogen Ignitor Mounting Details	RBG-20062 dated February 1, 1985 (Tab IV)
E. Hydrogen Ignitor Environmental Qualification	RBG-20062 dated February 1, 1985 (Att. 1, Items 2, 7, 10)
F. Hydrogen Ignitor Pre-Operational Testing Requirements	RBG-20062 dated February 1, 1985 (Att. 1, Item 4)
G. Hydrogen Control System Actuation Criteria	June 10, 1985
2. Ultimate Capacity Analysis	
A. Containment & Drywell Ultimate Positive Pressure	RBG-16085 dated September 30, 1983
B. Containment & Drywell Ultimate Negative Pressure	RBG-18089 dated June 25, 1984
3. Preliminary Containment Response Analysis	
A. RBS Containment Response to Hydrogen Combustion using the CLASIX-3 Computer Code	June 7, 1985

NOTE: All letter references (i.e. RBG numbers) are from J.E. Booker (GSU) to H.R. Denton (NRC) except RBG-16085 which is to T.M. Novak (NRC)