



**GULF STATES UTILITIES COMPANY**

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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

The attached information is being provided as requested by the Nuclear Regulatory Commission (NRC) Human Factors Engineering Branch (HFEB) for its review and development of Safety Evaluation Report (SER) Section 18.

Information provided herein will be incorporated into a future supplement of the DCRDR Summary Report currently scheduled for submittal prior to fuel load.

Sincerely,

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

JEB/RJK/je

Attachment

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## SIMULATOR/MAIN CONTROL ROOM COMPARISON STUDY

IMPLEMENTATION OF FINDINGS

As outlined in Section 1.5 of the DCRDR Summary Report, GSU contracted General Physics Corporation (GP) to perform a detailed comparison of the main control room to the simulator.

The documentation used in performing this comparison study was the latest revision to the main control room panel layout drawings. Due to the construction status of RBS at the time of this study, there were many issued E&DCRs that were incorporated into these drawings that had not yet been implemented in the main control room. Since GP was not supplied with these E&DCRs, discrepancies noted in Section 1.5 were identified between the documentation and both the main control room and the simulator, therefore, GP was not able to identify the correct design. In all of these cases, the latest revision of the drawings combined with issued E&DCRs represent the correct main control room design. Therefore, the discrepancies noted in Section 1.5 documented the fact that there were issued design changes to the Main Control Room that had not been implemented at the time of the study.

SPDS Implementation

Those HED resolutions that recommend modifying the SPDS prior to fuel load will be implemented to that schedule. However, in GSU's letter to H. R. Denton from J. E. Booker dated April 15, 1983 a response was provided on Generic Letter 82-33, "NUREG-0737 - Supplement 1 - Emergency Response Capability", item I.D.2, which identified a SPDS fully functional date of February 1986. Fully functional is defined as designed, installed, and tested, with approved operating procedures in existence, and training performed.

DCRDR HED RESOLUTIONS

To finalize and implement the DCRDR HED Resolutions, GSU established an on-site organization of engineering and operations personnel dedicated to this effort. The core personnel of this group are the Startup Engineering Coordinator, the Operations Coordinator, and the Design Documents Review Coordinator.

The responsibility of the Startup Engineering Coordinator is to provide the panel drawings, documentation and HEDs to the Operations Coordinator, assist the group in developing and applying human factors conventions (that do not currently exist), review completed drawing markups to ensure that all HED resolutions were included and that human factors principles were consistently applied, and provide overall coordination for the group.

The Operations Coordinator is responsible for coordinating the receipt of required design information from operations and engineering, proposing human factors conventions and marking-up design drawings to reflect HED resolutions.

The Design Documents Review Coordinator assists the Operations Coordinator in his duties, develops specifications for new enhancement features, and prepares the HED resolutions for submittal to the labeling vendor and GSU design organization.

Human factors conventions that do not presently exist are developed by a group effort. The Operations Coordinator and Design Documents Review Coordinator identify the need for a convention. Using NUREG-0700, the RBS Maintenance Plan, and input from the simulator training instructors and RBS Operators, they develop a convention that is consistent with NUREG guidance and existing human factors conventions. In addition, this ensures that the type of information/enhancement that the operator requires is included. The convention is then submitted to the Startup Engineering Coordinator who reviews it to ensure consistency with human factors principles and that any HEDs relating to the convention will be adequately addressed. Donald Burgy, GP Human Factors Specialist, is available to provide expert human factors advice to the Startup Engineering Coordinator. Each convention is submitted to a Human Factors Specialist for review and concurrence. Once an approved convention is established it is documented for use throughout the main control room.

A majority of conventions developed to date pertain to labeling. For example, equipment power supply information is being added to the present label design. Since this was not a past practice, new labels had to be developed to accommodate this additional information. Another example is hierarchical labeling which had not been consistently applied in the past. Using NUREG-0700, specifications for hierarchical labeling were developed for use throughout the main control room.

A number of HEDs provided recommendations which indicated additional review and/or analysis would be performed to determine their final resolution. From this group of HEDs, those HEDs resolved as "no further action" will be submitted by the first refueling outage. This schedule is consistent with the current implementation dates described in the DCRDR Summary Report.