

GULF STATES UTILITIES COMPANY

RIVER BEND STATION POST OFFICE BOX 220 ST FRANCISVILLE, LOUISIANA 70775
AREA CODE 504 635-6094 346-8851

October 11, 1990
RBG-33767
File No. G9.5, G15.4.1

U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

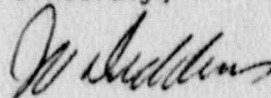
Gentlemen:

River Bend Station - Unit 1
Refer to : Region IV
Docket No. 50-458/90-16

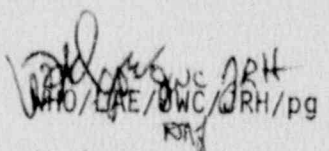
Pursuant to 10CFR2.201, this letter revises Gulf States Utilities Company's (GSU) response dated August 30, 1990 to the Notice of Deviation for NRC Inspection Report No. 50-458/90-16. The inspection was conducted by Messrs. Paulk and Wagner during the period July 9 - 19, 1990, of activities authorized by NRC Operating License NPF-47 for River Bend Station - Unit 1. GSU's revised response to the deviation is provided in Enclosure 1. Enclosure 2 is GSU's response to comments on pages 7 and 12 of the inspection report regarding suppression pool water level.

Should you have any questions, please contact Mr. L. A. Englar at (504) 381-4145.

Sincerely,



J. C. Deddens
Senior Vice President
River Bend Nuclear Group


Enclosure

cc: U. S. Nuclear Regulatory Commission
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

STATE OF LOUISIANA)

PARISH OF WEST FELICIANA)

In the Matter of)

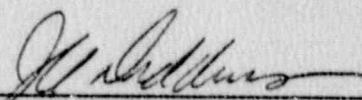
GULF STATES UTILITIES COMPANY)

Docket No. 50-458

(River Bend Station - Unit 1)

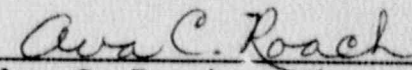
AFFIDAVIT

J. C. Deddens, being duly sworn, states that he is Senior Vice President, for Gulf States Utilities Company; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information and belief.



J. C. Deddens

Subscribed and sworn to before me, a Notary Public in and for the State and Parish above named, this 11th day of October, 1990. My commission expires with Life.



Ava C. Roach
Notary Public in and for
East Feliciana Parish, Louisiana
empowered to act in West Feliciana
Parish, Louisiana

ENCLOSURE 1

RESPONSE TO NOTICE OF DEVIATION 50-458/9016-01

REFERENCES

Response to Notice of Deviation - Letter from J. C. Deddens to NRC, dated August 30, 1990.

Notice of Deviation - Letter from S. J. Collins to J. C. Deddens, dated July 30, 1990.

River Bend Station Unit 1, Regulatory Guide 1.97 Revision 3 Compliance Report (RG 1.97 compliance report) - Letter from J. E. Booker to H. R. Denton, dated June 24, 1985.

DEVIATION FROM COMMITMENT TO THE PROVISIONS OF REGULATORY GUIDE 1.97

By letter dated June 24, 1985, GSU committed to comply with the requirements concerning RG 1.97.

Regulatory Position 1.4 of Revision 3 of RG 1.97, lists the design and qualification criteria in Table 1 for the variables listed in Tables 2 and 3.

The following conditions are considered to be a deviation from the GSU commitment:

- A. Requirement: Item 8, "Equipment Identification," of Table 1 states, "Types A, B, and C instruments designated as Categories 1 and 2 should be specifically identified with a common designation on the control panels so that the operator can easily discern that they are intended for use under accident conditions."

Deviation: The instrument displays on the control panels did not contain a specific common designation, nor was it apparent that consistent training was conducted to inform the operators of which instrumentation was intended for use under accident conditions.

- B. Requirement: Item 10, "Servicing, Testing, and Calibration," of Table 1 states, in part, "Periodic checking testing, calibration, and calibration verification should be in accordance with the applicable portions of Regulatory Guide 1.118, "Periodic Testing of Electric Power and Protection Systems," pertaining to testing of instrument channels.

Deviation: The hydrogen monitoring instrumentation was not being calibrated on the higher scale of the two scale instrument.

- C. Requirement: Table 2 specifies that the range for the Suppression Pool Water Level monitoring instrumentation be from the "Bottom of ECCS suction line to 5 feet above normal water level." GSU requested and received relief to allow the monitoring range to extend from approximately -18 to +4 feet.

Deviation: The ranges of the installed suppression pool water level instruments were different from those presented in the GSU June 24, 1985, compliance report which had been previously approved by the NRC.

REASON FOR THE DEVIATION

- A. River Bend Station (RBS) control room instruments classified as types A, B, and C and designated as Categories 1 and 2 in accordance with RG 1.97 are not specifically identified with a common designation on the control room panels. GSU took exception to this requirement in Appendix D of the RG 1.97 compliance report. The compliance report states: "It is GSU's position that the RBS program of simulator and classroom training, improved control room panels, and upgraded procedures adequately address the need for operators to easily discern Category 1 and 2 instrumentation required under accident conditions."

During NRC Inspection 90-16 the inspectors questioned training and operations personnel in the control room and the simulator regarding which instruments they would use to monitor a particular variable under accident conditions. At least one of the personnel identified instruments which are utilized to monitor that variable under normal operating conditions. However, this was not the instrument designated for post accident monitoring in the RBS RG 1.97 compliance report and the RBS Safety Analysis Report (SAR). Therefore, although operators are trained as to which instruments should be used for post-accident monitoring, the current level of training is inadequate to elicit the correct response.

- B. The root cause of the deletion of the requirement to calibrate the 0 to 30% scale of the hydrogen analyzers from the applicable STP was human error. The primary contributor to this error that RBS Technical Specification 4.3.7.5 only requires testing of the analyzer within the 0 to 10% range.
- C. The discrepancy between the actual suppression pool wide range level indication capability and the range value stated in the SAR was identified via Condition Report (CR) 86-01434. The root cause of the discrepancy as determined in the CR was a lack of communication in the design change process of E&DCR C-31590. Modification Request (MR) 86-1844 was initiated as a result of the CR to correct the discrepancy between the instrument capability and the instrument scale range and associated documents, including the SAR.

The root cause of the continued discrepancy between the SAR and the actual instrument range is that SAR changes related to modifications are included with the completed modification package to ensure SAR changes are not implemented until the modification is complete. Because MR 86-1844 was open to complete the items omitted from E&DCR C-31590, the SAR change was to be included with the completed modification package.

The discrepancy between the actual suppression pool narrow range scale and the range value stated in the SAR was also due to a lack of

communication. In this instance, a design change to replace the original narrow range instruments with a more reliable instrument type was in progress at the time of the development and submittal of the RG 1.97 compliance report. Because the design change documentation was incomplete during the development of the RG 1.97 compliance report, the revised scale range was not included in the report.

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

- A. Discussion with both operations and training groups resulted in the conclusion that, although training in this area could be intensified to correct this problem, a more effective corrective action would be to specifically identify post-accident monitoring instruments on the control panels. This complies with Item 8 in Table 1 of RG 1.97 Revision 3 and would minimize the chance of an operator, in an accident situation, utilizing instruments not properly qualified for use under accident and post accident conditions.

Until these instruments are permanently identified on the control panels, bright green self-adhesive paper dots have been installed on RG 1.97 type A, B, and C instruments designated Category 1 or 2. An operator aid was issued explaining the purpose of the dots is to permit quick identification of control room instruments qualified under RG 1.97 for use in accident and post-accident conditions.

- B. Because operator action to control hydrogen concentration only requires a 0 to 10% analyzer scale, and the instrument accuracy is greatest on the 0 to 10% scale, calibration of the analyzers on the 0 to 30% scale is not required for Emergency Operating Procedure implementation or to satisfy Technical Specification requirements. Although the possibility does exist for the hydrogen concentration to exceed 10%, no operator actions can be performed unless the hydrogen concentration is within the 0 to 10% range. Therefore the additional range above 10% does not provide the operator with any useful information in determining appropriate emergency action. Based on the justification, a request for an exception from compliance with the RG 1.97 requirement of 0 to 30% scale will be provided by separate submittal.

- C. A SAR change (LCN) has been initiated to correct the stated suppression pool level instrument ranges and will be included in the next annual SAR update submittal. This will correct the discrepancy between the actual instrument ranges and the current SAR values. The wide range instrument provides adequate range to monitor suppression pool level during the applicable design basis events and the level monitoring range required for the Emergency Operating Procedures. The scale of the narrow range instruments is adequate to meet Technical Specification pool level monitoring requirements and is encompassed by the span of the wide range instrumentation. Based on this justification, a request for additional exception from the RG 1.97 suppression pool level range requirements will be requested in a separate submittal.

MR 86-1844 will revise the level instrument scale to reflect the actual instrument range and update the associated design documents.

Operator aids have been developed to inform control room operators of the actual instrument range. The operator aids will be utilized as an interim measure until MR 86-1844 is implemented.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO PREVENT FURTHER DEVIATIONS

- A. Methods set forth in procedure ADM-0037, "Equipment Identification and Labeling" will be utilized to specifically identify instruments for post accident monitoring use. A uniquely colored permanently engraved tag will be affixed to each instrument or mounted adjacent to each instrument or group of instruments to clearly identify them for use in post-accident monitoring events.
- B. This is an isolated occurrence in that the Technical Specification range requirement and the available instrument range do not directly correspond, ie. the instrument range is significantly greater than that needed to satisfy Technical Specification requirements. No further corrective action is required.
- C. The practice of including SAR changes with the associated modification package is appropriate to ensure the SAR is not revised prior to the modification field work being completed. In this instance, the physical configuration was revised under a previous design change document (E&DCR C-31590) and an open design change document to revise the control room instrument scale also existed (MR 86-1844). In this instance, an SAR change should have been initiated independently of MR 86-1844 because the design change affecting the instrument range was implemented in the field under the E&DCR.

In conclusion, the discrepancy between the SAR and the actual instrument range is an isolated occurrence and no generic corrective action is required. The existing design change program includes provisions for updating the SAR to reflect actual as-built configuration for modifications which have been partially implemented.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

- A. Labeling of post-accident monitoring instruments will be completed by March 31, 1991.
- B. A request to the NRC for an exception from compliance with the RG 1.97 requirement for hydrogen monitor higher scale will be submitted by March 31, 1991.
- C. A request to the NRC for an exception from compliance with the RG 1.97 suppression pool level requirements will be submitted by March 31, 1991. MR 86-1844 will be implemented by the end of cycle 4.

ENCLOSURE 2

RESPONSE TO COMMENTS REGARDING SUPPRESSION POOL WATER LEVEL

REFERENCES

River Bend Station Unit 1, Regulatory Guide 1.97 Revision 3 Compliance Report (RG 1.97 compliance report) - Letter from J. E. Booker to H. R. Denton dated June 24, 1985.

NRC Safety Evaluation Report (SER) - Letter from W. R. Butler to W. J. Cahill, Jr. dated June 30, 1986.

NRC Inspection Report No. 90-16 - Letter from S. J. Collins to J.C. Deddens, dated July 30, 1990, pgs. 7, 12.

GSU RESPONSE

Due to human error in compiling the referenced RBS RG 1.97 compliance report the suppression pool water level was erroneously listed as a type A variable in the index of the report although it was not identified as a type A in the contents of the report. As a result, NRC's SER which used the compliance report as a reference, incorrectly identified this variable as a type A variable.

Reg. Guide 1.97 defines a type A variable as one to be monitored that provides the primary information required to permit the control room operator to take specific manually controlled actions for which no automatic control is provided and that is required for safety systems to accomplish their safety functions for design basis accident events.

During and following a design basis event which requires the suppression pool to perform its design safety function (ie. loss of coolant accident), energy in the form of steam, water and gases is released into the drywell and vented into the suppression pool via the weir vents or safety relief valves. The suppression pool then acts as a heat sink by absorbing the released energy and maintaining the containment and drywell pressures within design limits. Following the primary system breach, the level of the water in the drywell reaches the level of the weirwall and flows into the suppression pool. This results in a water circulation flow path from the suppression pool, through the emergency core coolant system (ECCS) (which automatically initiate during a LOCA) to the reactor, from the primary system breach to the drywell, then over the weirwall and back into the suppression pool.

The primary source of suction for the high pressure core spray subsystem of the ECCS is the condensate storage tank. If the water level in the suppression pool rises to a high level this suction is automatically transferred to the suppression pool, thereby causing the flow path described above to be a closed loop operation and maintaining a constant suppression pool water level. The primary suction source for the other ECCS subsystems is the suppression pool.

Therefore during and following a design basis event the suppression pool water level is dynamically and automatically controlled through RBS structural design (ex. weirwall) and the automatic transfer of the ECCS suction source, to maintain the necessary suppression pool water level essential in meeting the suppression pool's safety function. No specific manually controlled action based on suppression pool water level are required by the control room operator to allow for safety systems to accomplish their safety function for a design basis accident event. Therefore suppression pool water level does not meet the criteria set forth in RG 1.97 as a type A variable. In conclusion, the existing SAR designation of suppression pool level as Type C and D variables is appropriate and in accordance with the criteria described in RG 1.97.

RBS's updated SAR, which supersedes the compliance report, was compared to the SER to determine if any other discrepancies of this nature occurred. No such discrepancies were identified.