



**GULF STATES UTILITIES COMPANY**

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AREA CODE 504 635-8094 346-8651

January 22, 1992  
RBG- 36280  
File Nos. G9.5, G15.4.1

U.S. Nuclear Regulatory Commission  
Region IV - Regional Administrator  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011

Gentlemen:

River Bend Station - Unit 1  
Docket No. 50-458/91-27

Pursuant to 10CFR2.201, this letter provides Gulf States Utilities Company's (GSU) response to the Notice of Violation for NRC Inspection Report No. 50-458/91-27. The inspection was conducted by Messrs. E.J. Ford and D.P. Loveless on October 23 through December 3, 1991, of activities authorized by NRC Operating License NPF-47 for River Bend Station - Unit 1 (RBS). GSU's reply to the violation is provided in the attachment.

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

Sincerely,

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

  
WHO/LAE/PDG/GAB/JHM/CRM/kvm

Attachment

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

NRC Resident Inspector  
P.O. Box 1051  
St. Francisville, LA 70775

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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 a Senior Vice President of 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 22<sup>nd</sup> day of January, 1992. My Commission expires with Life.

  
\_\_\_\_\_  
Claudia F. Hurst  
Notary Public in and for  
West Feliciana Parish, Louisiana

## ATTACHMENT

### REPLY TO NOTICE OF VIOLATION 50-458/91-27 LEVEL IV

#### REFERENCE

Notice of Violation - Letter from A.B. Beach to J.C. Deddens, dated December 23, 1991

#### VIOLATION

Technical Specification 4.6.6.3 states, in part, that the primary containment/drywell hydrogen ignition system shall be demonstrated operable, at least once per 18 months, by energizing each igniter assembly and verifying a surface temperature of at least 1700°F for each accessible igniter.

Contrary to the above, the licensee failed to perform a surveillance test required by the Technical Specifications in that igniters that were accessible were not tested to verify a surface temperature of at least 1700°F.

#### REASON FOR THE VIOLATION

At 0800 hours on October 24, 1991, with the reactor in Operational Condition 1 (Power Operation), while performing a review of Technical Specification Section 3/4.6.6.3 "Primary Containment/Drywell Hydrogen Ignition System", a discrepancy was found between the Technical Specifications (TS) and surveillance test procedure (STP)-254-1600 Revision 5, "Hydrogen Igniter 18 Month Current/Voltage and Temperature Check." The TS Bases provides a unique definition of "inaccessible areas." This definition is based on "areas that have high radiation levels during the entire refueling outage period." The STP has been non-conservative with respect to this definition since July 25, 1985. In addition, igniters that were properly classified as "inaccessible" in the STP were not being tested properly per the TS surveillance requirements. Sixty-Two hydrogen igniters were declared inoperable and the reactor was shutdown pursuant to TS Section 3.0.3. Pursuant to 10CFR50.73(a)(2)(i)(A) (plant shutdown required by the TS) and 10CFR50.73(a)(2)(i)(B) (operation prohibited by the TS), this incident was reported to the NRC in LER 91-020 (RBG-36,009) dated November 25, 1991. A plant shutdown was commenced on 10/24/91 at 1449 hours as required by Technical Specification 3.0.3.

On 11/23/90, Temporary Change Notice (TCN) 90-1270 was initiated against STP-254-1600 Rev 5. The purpose of this TCN was to change the classification of igniters 1A through 10B from "accessible" to "inaccessible." These igniters are located on the containment dome which makes it potentially hazardous to personnel and extremely difficult to conduct testing due to their location. The TCN was withdrawn based on the physical location of these igniters; it then went through the review process and was permanently approved on 12/6/90. No one in the review

process realized that a unique definition for "inaccessible" existed in the TS. Administrative procedure (ADM)-0003, "Development, Control and Use of Procedures" specifically prohibits the use of the TCN process when a change to the TS is required.

Further review of STP-254-1600 revealed that the procedure had not conformed to the TS since the issuance of Rev 4 dated 8/03/85. GSU's investigation revealed three failures that led to the violation of the Technical Specifications, as follows:

- 1) Revision 4 to STP-254-1600 was issued without incorporation of changes to TS Section 3/4.6.6.3 and the associated Bases. The draft for Technical Specification Table 3.6.6.3-1 showed the igniter locations and accessibility classifications. This Table was removed and a definition of "inaccessible" was placed in the TS bases during initial TS development. In addition, for those igniters that were classified as "inaccessible", the TS were changed to require current/voltage measurements for each igniter assembly.

While the changes to the TS were appropriate, the revision (Rev 4) to the STP was issued on 8/3/85 without incorporating these changes.

- 2) Reviews during the revision and TCN processes for STP-254-1600 were not adequate. Errors and/or inconsistencies with TS were not detected. Note that when Rev 3 of the STP was issued, igniter 11B was dropped from the data sheet. This igniter was not tested for 6 years and 56 days. This error, as well as the failure to incorporate the TS changes into the STP, went undetected during revisions to the STP and during the preparation of TCNs to the STP.
- 3) The 10CFR50.59 review for TCN 90-1270 was inadequate. The review did not detect the failure to incorporate the previous TS changes into the STP and review by the Facility Review Committee (FRC) was not recognized as required.

Three root causes have been identified for this event. Each root cause corresponds to the three failures identified in the investigation section, as follows:

- 1) The engineer responsible for the TS review did not realize that the definition of "inaccessible", added to the TS bases, constituted a change in the intent of the TS. Section 3/4.6.6.3 of the TS was changed to remove the hydrogen igniter location/classification table from the body of the TS and add the definition of "inaccessible" to the bases. This change was made in the month preceding the issuance of the low power operating license on 8/29/85. The engineer responsible for GSU technical staff reviews of the TS was also responsible for disseminating TS changes to contractors. A contractor was responsible for the development of plant procedures during this time. The Technical Staff engineer would determine if a TS change was a change of intent. If there was no change of intent, he would

make a subjective decision whether or not to notify applicable groups of the change. Interviews with this engineer revealed that he remembers there were many discussions with the NRC Staff concerning accessible/inaccessible igniters, the industry position, and how to determine operability.

To eliminate future revisions to TS as plant conditions changed, a determination was made between GSU and the NRC Staff to remove the location/classification tables from TS, provide a definition for inaccessibility, and include the location/classification tables in the procedure. As far as the engineer recalls, he felt that this change to TS did not change the intent of the specification and did not warrant the issuance of a change notice. He did not realize that the restrictive definition for "inaccessible", added to the Bases, did not match the accessibility classifications that were removed from the TS body which still remained in the STP. Based on this determination, the contractor responsible for plant procedure development was not notified of the change to Specification 3/4.6.6.3 and therefore, did not evaluate applicability of the changes to STP-254-1600.

- 2) The procedural review and TCN processes did not assure an adequate technical review. This was due to a lack of procedural guidance for reviewers and insufficient training. Errors and inconsistencies went undetected in the following:

Revision 5 issued on 10/28/87

Revision 5 biannual review performed on 8/22/89

TCN 90-1270 issued on 11/23/90

Typically, the content of previous revisions of procedures are considered to be technically correct and the review focuses on the changes being made between the last revision and the proposed revision. STP-254-1600 was able to be performed as written. The problem was that igniters were tested based on the accessibility classification of the particular igniter, which was in error. In addition, the absence of igniter 11B from the data sheet was not discovered until the investigation resulting from this event. Furthermore, TCN 90-1270 introduced an additional error into the procedure by reclassifying igniters 1A through 10B as inaccessible based on physical accessibility rather than the TS definition.

- 3) The 10CFR50.59 review was inadequate for TCN 90-1270. Changing the classification of igniters 1A through 10B from "accessible" to "inaccessible" constituted a change to TS. The STP revision process should have been used in this instance as well as a required review by the Facility Review Committee (FRC) to determine 50.59 applicability.

Administrative procedure (ADM)-0003 "Development, Control and Use of Procedures", requires that a series of eight questions be answered during the

review/TCN process. These questions are used to flag those procedures that require a 10CFR50.59 review and safety evaluation by the FRC. The TCN process cannot be used if the answer to any of these questions is "YES." TCN 90-1270, which changed the classification of igniters 1A through 10B, was a change to Technical Specifications based on the definition of "inaccessible" given in the bases section of the TS. The question, "Change to the Tech Specs or Operating License?" was marked "NO" by the TCN initiator and reviewed and approved by three maintenance and one operations reviewers.

The maintenance foreman that prepared TCN 90-1270 had not received any training on the content or use of TS and was not aware that there was a Bases Section in the TS. There has been great reliance on the Shift Supervisor/Control Operating Foreman (SS/COF) during their review of TCNs to assure accuracy with regards to impact of the change on TS, the USAR and other licensing documents. A secondary contributor is that unique TS definitions are not normally placed in the Bases of TS. The operators interviewed during this investigation stated that they only review the Bases of TS when there is a question of interpretation. The condition of the location/accessibility tables in STP-254-1600, Rev 5 reinforced the perceived definition of inaccessible as one dealing with physical inaccessibility. Based on the condition of the STP, the information provided in the body of the TS, and the request for the change of accessibility classification (TCN 90-1270), there was no question of interpretation and therefore, the Bases were not reviewed.

### CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

A summary of immediate corrective actions follows:

- 1) The plant was shut down in accordance with TS 3.0.3.
- 2) An Engineering review was performed to determine where to take current/voltage readings for each "inaccessible" igniter in accordance with the TS.
- 3) TCN 91-0938 was written against STP-254-1600 Rev 5 to change the classification of igniters 1A through 10B from "inaccessible" back to "accessible" and igniter testing commenced.
- 4) TCN 91-0940 was written against STP-254-1600, Rev 5 to change the igniter location/accessibility tables to agree with the definition of "inaccessible" in the TS Bases. In addition, igniter 11B was restored to the data sheet.
- 5) All igniters in question were tested and the surveillance requirements of TS 4.6.6.3.b were met prior to plant startup. Note that one hydrogen igniter was inoperable prior to discovery of this event. One additional igniter was found to be inoperable as a result of

the performance of the surveillance requirements after plant shutdown; however, the hydrogen igniter system operability requirements were satisfied.

### CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

The following corrective actions are in the process of being implemented:

A steering committee has been developed at the manager/director level to coordinate and evaluate corrective actions. This committee is chaired by the plant manager and has met twice to review the implementation of corrective actions.

- 1) GSU is revising STP-254-1600 (Rev 6). This revision places the TS definition of "inaccessible" in the STP and provides a reference to the condition report documenting this event and evaluation. The review process for this draft is complete. Final comments by Design Engineering are being incorporated prior to approval and issuance of the procedure. The procedure will be effective by January 31, 1992.
- 2) Administrative procedure (ADM)-0003, "Development, Use and Control of Procedures," has been revised to incorporate additional requirements for the performance of 10CFR50.59 applicability reviews, independent reviews and the review process in general. This revision to ADM-0003 restricts the 10CFR50.59 and independent review process to those personnel who have authority to perform those reviews. Final comments are currently being incorporated into the draft procedure which will be effective by March 15, 1992.
- 3) Enhanced training for 10CFR50.59 reviewers and independent reviewers will be developed by RBS Training Department that is applicable to ADM-0003. Once this training is fully implemented, a qualification process will be established to control these reviews. This training is applicable to the revision/review of all procedures governed by ADM-0003 that require a 10CFR50.59 review or independent review. This training will be completed by August 31, 1992.
- 4) During licensed operator requalification training, training will be provided on the importance of reviewing the TS Bases as appropriate when TS are consulted/used. This training will be provided during Module 7 which begins January 20 and continues through February 21, 1992.
- 5) Samples of 1991 STP revisions and 1991 TCNs will be selected for a review for 10CFR50.59 applicability. The purpose of this review is to determine if those procedure changes requiring 10CFR50.59 reviews were correctly identified by the procedure review process. The sample sizes will be established using Military Standard 105-E. These reviews will be completed by April 1, 1992.

- 6) A sample of eighty STPs is in the process of being reviewed against TS to assure that they adequately implemented the TS requirements, e.g. STPs are reviewed for purpose, applicability, frequency, limiting conditions for operations, setpoints and Bases. This sample size was established from Military Standard 105-E using the total number of STPs as the overall population. Three people are performing the review (one operations SRO, the STP Coordinator, and one system engineer). These reviews will be completed by April 1, 1992.
- 7) Personnel safety issues concerning the testing of hydrogen igniters in the containment dome have been investigated jointly by the Safety and Human Performance Enhancement System departments. Four parallel actions are currently being considered.
  - a. The use of thermography to measure the igniter temperature.
  - b. The design and installation of a lift that is permanently mounted on the polar crane to facilitate access to the igniters and other equipment located on the dome interior.
  - c. The use of a portable lift that can be lifted to the refueling floor during outages to facilitate access to the igniters from the refuel floor.
  - d. As a last resort, requesting TS relief for those igniters located on the containment dome.

This evaluation will be completed by August 31, 1992.

- 8) GSU will evaluate the ongoing need for developing additional procedural guidance concerning the STP procedure and section level procedure review and revision processes in accordance with guidance provided by the INPO writers guide (85-026). This evaluation will be completed by March 15, 1992.

**DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED**

All corrective action items will be completed as indicated above.