

GULF STATES UTILITIES COMPANY



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September 14, 1992
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U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Gentlemen:

River Bend Station - Unit 1
Docket No. 50-458

Please find enclosed Revision 2 to Licensee Event Report No. 91-020 for River Bend Station - Unit 1. This revision is submitted to clarify training requirements for 10CFR50.59 reviewers.

Sincerely,

W.H. Odell

for W.H. Odell
Manager - Oversight
River Bend Nuclear Group

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FEAR

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) RIVER BEND STATION DOCKET NUMBER (2) 0 5 0 0 0 4 5 8 1 OF 0 7 PAGE (3)

TITLE (4) HYDROGEN IGNITERS DECLARED INOPERABLE DUE TO DISCREPANCIES BETWEEN THE SURVEILLANCE PROCEDURE AND THE TECHNICAL SPECIFICATIONS

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)												
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES		DOCKET NUMBER(S)										
1	0	2	4	9	1	9	1	0	2	0	9	1	4	9	2		0	5	0	0	0
																	0	5	0	0	0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)

OPERATING MODE (9) 1	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 1 0 0	20.405(a)(1)(ii)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(iii)	50.36(c)(2)	50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iv)	X 50.73(a)(2)(i)	50.73(a)(2)(vii)(A)	
	20.405(a)(1)(v)	50.73(a)(2)(ii)	50.73(a)(2)(vii)(B)	
	20.405(a)(1)(vi)	50.73(a)(2)(iii)	50.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME L.A. ENGLAND, DIRECTOR - NUCLEAR LICENSING TELEPHONE NUMBER 5 0 4 3 8 1 4 1 4 5

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC'S	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC'S

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If so, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

At 0800 hours on October 24, 1991, with the reactor in Operational Condition 1 (Power Operation), while performing a review of Technical Specification (TS) Section 3/4.6.6.3 "Primary Containment/Drywell Hydrogen Ignition System", a discrepancy was found between the TS and the applicable surveillance test procedure (STP). The STP has been non-conservative with respect to the TS. Sixty-Two hydrogen igniters were declared inoperable and the reactor was shutdown pursuant to TS Section 3.0.3. Therefore, this report is submitted 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).

Corrective actions included revision of the STP to restore consistency with the TS, additional training, and a review of a sample of STP revisions and temporary change notices for 10CFR50.59 applicability, and a verification of a sample of STPs against the TS.

The reactor was shutdown in accordance with TS 3.0.3. Subsequently, hydrogen igniter system operability was verified pursuant to TS 4.6.6.3.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-830), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (If more space is required, use additional NRC Form 386A's) (17)

REPORTED CONDITION

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. Therefore, this report is submitted 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).

INVESTIGATION

On 10/24/91 at 0800 hours, Design Engineering discovered that STP 254-1600 Revision 5 "Hydrogen Igniter 18 Month Current/Voltage and Temperature Check" did not conform with the definition of "inaccessible" as defined in the Bases of the Technical Specifications. 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 written based on the physical location of these igniters, 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 08/03/85. GSU's investigation has 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.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

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.

ROOT CAUSE

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.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATIONESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS
INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD
COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS
AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR
REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO
THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE
OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

- 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.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-536), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

A review of previous LERs has revealed five similar events, in that STPs were inadequate, as follows:

- 1) LER 86-013: As a result of an STP deficiency, concerning the main steam line temperature detector, personnel did not enter the appropriate TS Action Statement. The STP was revised and reviewed for similar errors.
- 2) LER 86-059: The STP to verify that low pressure coolant injection (LPCI) system piping was full of water was found to be in error. The STP was not properly revised following plant modifications and thus did not reflect TS requirements regarding the location of the high point vents.
- 3) LER 88-010: The secondary containment STP did not adequately reflect TS 3.6.5 for all required doors and equipment hatch covers. GSU revised the applicable STPs and conducted a procedure history sampling review to address the lack of administrative controls during the period of time that STPs were being turned over.
- 4) LER 89-003: The TS surveillance for AC circuits inside containment had not been properly performed for all required AC circuits due to inadequate original procedure development. As corrective action GSU began reviewing all STPs against the TS during the STP biennial reviews. This process is continuing, and will proceed until all STPs have had this review.
- 5) LER 91-0.0: Containment isolation valves 1CPP*MOV104,105 and 1CPP*SOV140 were not being verified as closed and secured every 31 days per TS 4.6.1.1.b. This was caused by an omission in the original STP development. GSU revised the STP accordingly and performed a review of design verification commitments to identify those associated with actions requiring procedural control.

CORRECTIVE ACTION

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.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20585, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (if more space is required, use additional NRC Form 365A's) (17)

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.

The following corrective actions have been implemented:

- 1) GSU has revised STP-254-1600 (Rev 6). This revision placed the TS definition of "inaccessible" in the STP, and provided a reference to the condition report documenting this event and evaluation. This will act as the first barrier in preventing someone from preparing a TCN to change accessibility classifications on igniters based on physical location.
- 2) Administrative procedure (ADM)-0003, "Development, Use and Control of Procedures," has been extensively revised as follows:
 - a) Guidance on what areas to review in the USAR, TS, Operating License, Environmental Protection Plan, Security or Safeguards Contingency Plans and the Emergency Plan when responding to the safety evaluation applicability questions during procedure revisions or changes is now provided. This includes guidance on when such reference documents need to be reviewed and direction for the preparer through the evaluation process. Formal training has been developed for personnel with these responsibilities.
 - b) A continuation sheet is now provided for preparers to include documentation of the reference documents reviewed and to provide applicable discussion.
- 3) The upgraded 10CFR50.59 reviewer training requirements in the revision to ADM-0003 encompasses all station operating manual (SOM) procedures, which includes STPs. The extent of the training required includes trained and qualified reviewers in lieu of training all plant staff personnel. Training and qualification requirements have been developed for personnel who will be authorized to sign as independent reviewer of the 50.59 evaluation. This review process will be applicable to all SOM procedures and not limited to STPs.
- 4) During licensed operator requalification training, module 7 (January 20 - February 21, 1992) training was provided on the importance of reviewing the TS Bases when the TS are used.

**LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION**

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 60.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-63D), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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TEXT (If more space is required, use additional NRC Form 366A a) (17)

- 5) The Nuclear Safety Assessment Group (NSAG) performed a review of a sample of the STP revisions and TCNs generated in 1991. The purpose of this review was to determine if those procedure changes requiring 10CFR50.59 reviews were correctly identified by the procedure review process. A sample of twenty STPs and eighty TCNs was established based on Military Standard 105E (general inspection level of II). This review has been completed.
- 6) A sample of STPs was reviewed against the TS to assure that they adequately implemented the TS requirements. This review was based on a sample population of eighty STPs as determined by Military Standard 1 (general inspection level of II). A review group was tasked with establishing what TS were applicable for each STP and if the TS and their bases were met by the procedure. No generic issues were identified as a result of this review. This review resulted in several STP enhancements.
- 7) Personnel safety issues concerning hydrogen igniter testing have been evaluated and GSU has decided not to make any modifications to the method for testing igniters at this time.
- 8) The revision to ADM-0003 provides detailed guidance for procedure preparers.

SAFETY ASSESSMENT

The reactor was shutdown in accordance with TS 3.0.3. Subsequently, the hydrogen igniter system operability was verified pursuant to TS 4.6.6.3.