GULF STATES UTILITIES COMPANY

RIVER BEND STATION POST OFFICE BOX 220 ST. FRANCISVILLE, LOUISIANA 70775

AREA CODE 504 635-6094 348-8651

May 28, 1992
RBG- 36895
File Nos. G9.5, G15.4.1

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

Gentlemen:

River Bend Station - Unit 1
Docket No. 50-458/92-08

Pursuant to 10CFR2.201, this letter provides Gulf States Utilities Company's (GSU) response to the Notice of Violation for NRC Inspection Report No. 50-458/92-08. The inspection was conducted by Messrs. E . Ford and D.P. Loveless on March 1 through April 11, 1992, 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,

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

WHO/LAE/PDG/FRC/JWC/kvm

Enclosure

cc: U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, TX 77011

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

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

STATE OF LOUISIANA )

PARISH OF WEST FELICIANA )

In the Matter of ) Docket No. 50-458

GULF STATES UTILITIES COMPANY )

(River Bend Station - Unit 1)

**AFFIDAVIT**

W. H. Odell, being duly sworn, states that he is a Manager-Oversight 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.

W. H. Odell

Subscribed and sworn to before me, a Notary Public in and for the State and Parish above named, this 28th day of May, 1992. My Commission expires with Life.

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

ATTACHMENT

REPLY TO NOTICE OF VIOLATION 50-458/9208-02
LEVEL IV

**REFERENCE**

Notice of Violation - Letter from A.B. Beach to J.C. Deddens, dated April 28, 1992

**VIOLATION**

Technical Specification 6.8.1 requires that "Written procedures shall be established, implemented, and maintained covering...surveillance and test activities of safety-related equipment and refueling operations."

A. Contrary to the above, written procedures were not properly established in that Surveillance Test Procedures STP-055-0702, "Refuel Platform Hoist Operability," and STP-055-0705, "Fuel Handling Platform Operability Test," did not fully implement Technical Specification Surveillance Requirements 4.9.6.1.c and 4.9.6.2.d.

B. Also contrary to the above, written procedures were not properly implemented in that during the performance of Maintenance Lifting Procedures MLP-7506, "Refueling Platform Inspection and Operations," and MLP-7504, "Fuel Handling Platform Inspection and Operation," a licensee contractor incorrectly signed that the grapple head was at least 8'2" under water when, in fact, the grapple head was more shallow.

**REASON FOR THE VIOLATION**

A. The root cause of the finding identified was procedural errors due partly to a misinterpretation of Technical Specification requirements on the part of the procedure writer and reviewers.

The River Bend Technical Specification-Surveillance Test Procedure Cross Reference Matrix is not fully correct in that it only identifies STP-055-0702 as the procedure satisfying Technical Specification 4.9.6.1 and STP-055-0705 as satisfying Technical Specification 4.9.6.2. These STPs are not stand alone procedures with respect to completely demonstrating compliance with the Technical Specification Surveillance Requirements. In order to fully satisfy Technical Specifications 4.9.6.1 and 4.9.6.2, procedures MLP-7504 and MLP-7506 must also be performed. Note that the requirement to perform these procedures is included in the System Startup section of procedures FHP-0002, "Fuel Handling Platform Operation" and FHP-0003, "Refueling Platform Operation".

Although the MLP procedures are not listed in the Cross Reference Matrix, the procedures were established to show

compliance with the surveillance requirements of Technical Specifications 4.9.6.1.c and 4.9.6.2.d. The fact that they were not listed in the matrix is a deviation from the requirements of ADM-0015 which is a procedural error. However, they were listed on the printout of irradiated fuel handling surveillance requirements generated by the Surveillance Test Procedure coordinator and transmitted to Operations as a condition to satisfying the Technical Specifications. This, along with the listing in procedures FHP-0002 and FHP-0003 mentioned previously, ensures that these procedures are performed prior to fuel movement.

Additionally, a second procedure error existed in that, even though they were performed, the MLP procedures as written did not fully comply with the Technical Specification requirements to demonstrate operation of the normal uptravel stop interlock limit switches of the main hoist to maintain at least 8'2" of water coverage above the top of the active irradiated fuel (TAF). The failure to meet this requirement was due to a misinterpretation by the procedure writer and reviewers of the Technical Specification requirements. Once the limit switch settings were established, it was felt that there was not a need to reverify its position each time, but only to verify that the normal uptravel limit switch would stop the hoist. The normal uptravel stop interlock limit switches were permanently positioned at 8'2" inches of water coverage over TAF per MRs 88-0321 and 86-0746. The mounting configuration of the switch is rigidly mounted with torqued and locktighted bolts, dowel pins, and lockwires such that it cannot move from its preset position. The procedure was written with the assumption that to verify proper operation of the limit switch (i.e. a simple go-no go test) was sufficient to satisfy the Technical Specification since the limit switch had not been moved from its preset position.

Another contributing factor to the procedural error is the previous wording of the Technical Specifications for this surveillance requirement. Previous revisions of Technical Specifications 4.9.6.1.c and 4.9.6.2.d stated the following, "Demonstrating operation of the uptravel interlock when uptravel brings the top of the active irradiated fuel or control rod to 8"6" below the water level." This wording implies that the limit switch operation is the critical factor to be verified rather than the distance below the water level. This concept was likely carried over in the surveillance tests after the Technical Specification revisions in Amendment 32 (Licensing Amendment Request 88-08) and Amendment 48 (Licensing Amendment Request 90-03) which changed the minimum coverage dimension and made it clearer that the 8'2" dimension (changed from the previous 8'6") also must be demonstrated in addition to proper operation of the normal uptravel limit switch.

Fuel storage pool and refueling cavity pool water level is monitored locally by Operations during fuel movement. A white line 6" wide with a 1" wide black line in the center of it was painted around the walls of the pools per Modification Request 86-0746. Water level is maintained within the band of the white line at all times. Although this requirement was not proceduralized, it was standard operating practice as confirmed by discussions with Operations personnel. Maintaining water level within the band of the white line assures greater than 8'2" of water above TAF. Additionally, an annunciator actuated by a level switch is set to alarm prior to reaching the process safety limit and therefore prior to reaching the pool water level which could result in less than minimum coverage.

Based on the fixed, preset location of the normal uptravel limit switch, the control of pool water level by visual observation by Operations personnel and annunciators and the demonstration that the normal uptravel limit switch stops the hoist per MLP-7504 and MLP-7506, GSU believed that the intent of the Technical Specifications was satisfied.

B. The reasons for this finding was a procedural error compounded by a personnel error. Previous revisions of procedure MLP-7506 had a requirement to operate the normal up limit switch main hoist auto stop with information tying this function to minimum water level of 8'2" over TAF. Previous revisions of procedure MLP-7504 had only a requirement to operate the normal up limit switch main hoist auto stop. MLP-7504 was updated to include new requirements per MR 89-0171 and MR 90-0132. This update added provisions to the procedure to incorporate new maximum lift limit switch setting for use on the trolley mounted auxiliary hoist and monorail mounted hoist. These new settings only permitted use of the new control rod blade hangers in the fuel building pools. Measurements were added to the procedure to set these limit switches. Verification for the new settings was a requirement to verify the grapple head is at least 8'2" underwater. Inadvertently, the verification requirement was also incorporated for the main mast hoist. In the next revision, the error remained undetected due to its close resemblance to the 8'2" minimum water coverage over TAF. Not only did this error remain undetected, but the error was copied into the closely paralleled revision of MLP-7506. With the limit switch properly set for minimum water level coverage over TAF, the grapple head would be shallower than 8'2". This requirement is an obvious procedural error in that the Technical Specification requirement applies to TAF, not to the grapple head.

The contractor involved in improperly signing off this step as having been performed is very familiar with the refueling equipment at River Bend Station. The contractor knew that the procedures intent was to verify the functional operation of the normal up limit switch as the verification of at least

8'2" of water over the TAF. The contractor misread the words in the MLP as the words were very close to the expected wording. The contractor signed the step after performing what he expected was the usual functional normal up limit switch check. He performed what he believed to be the correct requirement. However, the procedure was in error. Due to the closeness in the wording, the contractor missed the procedural error and compounded the problem with a personnel error.

**CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:**

As stated previously, GSU does agree that the MLP-7504 and MLP-7506 procedures were in error in that they did not ensure by actual physical measurement that the limit switches had not moved or that the pool water levels were maintained above the minimum required point. Change Notices (TCN 92-0481 and 92-0480) were written to demonstrate compliance with Technical Specifications 4.9.6.1.c and 4.9.6.2.d by physical measurement. It should be understood however, that it is not physically possible to measure the actual 8'2" dimension for several reasons. First, the top of irradiated fuel is not marked on the fuel rods, but is determined by design drawings to be 1'- 6 3/4" below the top of the bale handle. Also, since pool water level may vary slightly, a conservative assumption was made that pool water level could reach the process safety limit. As mentioned previously, this scenario is not likely due to the continuous observation of pool level by Operations personnel during fuel movement and the low level annunciators which would alarm prior to reaching this point. The measurement to be taken must be based on some actual physical points which are easily identified and easily measured. Therefore, the bottom of the fuel grapple and the fixed white line on the wall of the pools were selected. Verification of the dimension calculated based on these two points will ensure that the limit switch has not moved. Also, Operations has revised Alarm Response Procedure ARP-870-56 to ensure that, should the low level alarm setpoint be reached, fuel or control rod movement would immediately be stopped.

Change notices to STP-055-0705 and STP-055-0702 were initiated to require the appropriate sections of the MLPs be completed prior to performing the STPs. Utilizing change notices to MLP-7504 and MLP-7506, the physical measurements were taken which verified that adequate water coverage existed over the pools at the existing pool water levels. However, to ensure adequate coverage at minimum pool water level, additional changes were made to FHP-0002 and FHP-0003 to require the operator to switch to slow hoist speed for the final 2' of the uptravel. This minimizes the over travel after the hoist is raised and allows additional margin below the minimum pool water level.

**CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER FINDINGS:**

As additional assurance of minimum water coverage over irradiated fuel or control blades per Technical Specifications 4.9.6.1.c and 4.9.6.2.d, STP's 055-0702 and 055-0705 will be revised to require water level to be verified to be within the white bands painted

along the sides of the pool walls and FHP-0001 will be revised to add a requirement to ensure that the pool water levels are maintained in this band during fuel and control blade movements. These changes, combined with the procedural changes previously discussed are adequate to ensure compliance with Technical Specifications 4.9.6.1 and 4.9.6.2. An STP Matrix Data Base change request has been submitted to list MLP-7504 and MLP-7506 as also required to satisfy these Technical Specifications.

Additionally, this Notice of Violation and corrective actions will be discussed in shift briefings for all licensed Operators to familiarize them with the past problems and the corrective actions taken. No further action is required.

**DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:**

The necessary procedure changes will be completed prior to resuming movement of irradiated fuel for core reload during the current refueling outage. The shift briefings will be conducted by August 1, 1992.