



GULF STATES UTILITIES COMPANY

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AREA CODE 504 639-6094 346-8851

January 28, 1991
RBC- 34386
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
Refer to : Region IV
Docket No. 50-458/90-29

Pursuant to 10CFR2.201, this letter provides Gulf States Utilities Company's (GSU) response to the Notice of Violations for NRC Inspection Report No. 50-458/90-29. The inspection was conducted October 17 to November 27, 1990, of activities authorized by NRC Operating License NPF-47 for River Bend Station - Unit 1 (RBS). GSU's reply to the violations are provided in the attachments. GSU is concerned with these events and is aggressively pursuing corrective actions.

Should you have any questions or care to discuss these matters, please contact Mr. L. A. England at (504) 381-4145.

Sincerely,

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

LAE/PDG/FRC/DNL/EMC/GSY/JWC/pg

Attachments

cc: U. S. Nuclear Regulatory Commission
Region IV
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Arlington, TX 76011

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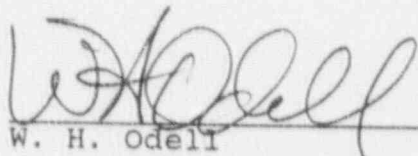
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

STATE OF LOUISIANA)
PARISH OF WEST FELICIANA)
In the Matter of)
GULF STATES UTILITIES COMPANY)
(River Bend Station - Unit 1)


Docket No. 50-458

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 January, 1991. My Commission expires with Life.


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

ATTACHMENT 1

REPLY TO NOTICE OF VIOLATION 50-458/9029-02
LEVEL IV

REFERENCE

Notice of Violation - Letter from S. J. Collins to J. C. Deddens, dated December 27, 1990.

VIOLATION

Technical Specification 6.12.2 states, in part, that, "For accessible areas that are located within large areas, such as the containment, . . . and within which radiation levels are such that a major portion of the body could receive in 1 hour a dose in excess of 1000 mrem, then that area shall be roped off and conspicuously posted, and a flashing light shall be activated as a warning device."

Contrary to the above, on November 14, 1990, a barrier was found to be down at the entrance to an accessible area on the 85-foot elevation of the drywell with which radiation levels were such that a major portion of the body could receive, in 1 hour, a dose in excess of 1000 mrem. This resulted in a failure by the licensee to maintain the area roped off and conspicuously posted.

REASON FOR THE VIOLATION

Personnel error was determined to be the cause in that the unknown individual who entered/exited the area failed to properly restore the rope boundary.

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The radiation protection technician (RPT) immediately restored the rope boundary upon notification. The RPT also verified that all individuals in the area were authorized and met Technical Specification requirements for entry. No discrepancies were found. RPTs verified that all high radiation postings in the drywell were properly restored and that all red flashing lights were operable.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

To address the concern of an apparent lack of regard to radiation barriers at RBS, GSU has performed the following:

- (1) On December 7, 1990, the Plant Manager issued a memo to all River Bend Station personnel highlighting high radiation problems.

- (2) On December 17, 1990, a task force was established to make further recommendations to the Plant Manager with regard to the causal factors.
- (3) Radiation Protection management toured the plant to review all high radiation and very high radiation zones and inspected them for the effectiveness of posting.
- (4) A daily check of high radiation postings has been initiated.
- (5) A memo was issued to RPTs requiring improved professionalism in postings.
- (6) Radiation Protection management will inspect and approve all new high radiation postings.
- (7) On January 9, 1991, task force recommendations were given to the Plant Manager:
 - a. All personnel requiring access to high radiation and very high radiation areas will be retrained and will complete a written examination. (Target Date February 15, 1991)
 - b. All personnel requiring unrestricted access to the radiologically controlled area will be retrained and will complete a written examination. (Target Date March 1, 1991)
 - c. General Employee Training classes conducted after March 1, 1991 will require specific written examinations addressing high radiation boundaries.
- (8) On an interim basis, Radiation Protection is checking high radiation areas during the last two hours of each shift to attempt to determine which shift may be responsible for not restoring ropes.
- (9) On January 14, 1991, the Plant Manager issued a memo to all managers and supervisors highlighting supervisory role in resolving this problem.
- (10) A monthly operability check will be conducted on high radiation doors.
- (11) Additional actions to be implemented include the following:
 - a. RBS will change its philosophy with regard to radiation barriers in that personnel will not be allowed to cross under or over radiation barriers. Only approved entrances/exits set up by Radiation Protection may be used.
 - b. Radiation Protection is evaluating new stanchion designs and fasteners for posting high radiation areas.

- c. Those high radiation areas whose boundaries can be slightly expanded to permanent structures will be reposted and locked.
- d. High radiation areas caused by hot spots in drains/piping which can be hydrolazed will be deconned to reduce the high radiation levels.
- e. Signs resembling STOP signs indicating that Technical Specification monitoring is required will be posted at high radiation and very high radiation area entrances.
- f. Evaluate the use of temporary barricades and permanent structures to replace ropes.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved upon the immediate restoration of the rope boundary by the RPT. Further corrective actions will be completed as indicated above.

ATTACHMENT 2

REPLY TO NOTICE OF VIOLATION 50-458/9029-04
LEVEL IV

REFERENCE

Notice of Violation - Letter from S. J. Collins to J. C. Deddens, dated December 27, 1990.

VIOLATION

Technical Specification 6.8.1.c states, in part, that "Written procedures shall be established, implemented, and maintained covering refueling operations."

REP-0010, "Special Nuclear Material (SNM) Movement Control and Accounting," Revision 7, dated July 20, 1990, was implemented to provide instructions for reactor engineering activities during refueling operations. Attachment 8 of REP-0010 required that each fuel bundle that has been transferred be placed in the specified location and with the specified orientation.

Contrary to the above, licensee personnel failure to implement the requirements of REP-0010 in that five bundles (LYP408, LYV206, LYV283, LYV281, and LY9685), transferred to the specified location, were discovered by the licensee to be misoriented.

REASON FOR THE VIOLATION

Five fuel assemblies were misrotated as a direct result of refueling floor personnel error. The misrotation errors occurred during performance of fuel movement plans SMP-COR-4-02 and SMP-COR-4-03. These plans were developed as Attachment 8 of procedure REP-0010 and specify the order, location and orientation requirements for each fuel assembly moved. Two signatures are required to document performance completion of each step of these fuel movement plans. An independent review and verification of correct fuel loading is thoroughly performed by remote underwater TV camera equipment upon completion of core loading during the final core verification process as governed by REP-0010. VCR tapes of the core loading verification are obtained in accordance with the provisions of REP-0010.

Additional instructions included with the fuel movement plans provided guidelines and requirements for actions to be taken should any fuel movement errors be discovered by refueling personnel during implementation.

of the respective fuel movement plans. One of these instructions stated that misrotated bundles were not considered fuel loading errors and that should any misrotated bundle be discovered it could be corrected at the discretion of the SRO and Reactor Engineer. This rule was not intended and was not utilized to allow misrotated bundles to remain uncorrected when discovered by refueling floor personnel. The potential for a mislocated bundle to affect shutdown margin (SDM) was recognized by GSU and was a major concern in the development of the fuel movement plans and rules. The movement plans were formulated and designed to minimize the potential for a mislocated bundle to affect SDM. Orientation of fuel bundles in a uniform lattice reactor such as River Bend has no impact on SDM during refueling. As a result, major emphasis is placed on shutdown margin and mislocation of bundles while discretion is allowed for correction of misrotated bundles when discovered. The misrotation discretion rule was not clear in its intent. A misrotated bundle was not clearly required to be documented and corrected prior to initiation of the independent core loading verification process. This omission could have allowed direct challenges to the independent reviewers.

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

The misrotated bundles identified during the core verification were repositioned and verified correct by movement plan SMP-COR-4-04, as well as the final core verification utilizing underwater television camera/VCR equipment.

CORRECTIVE STEPS WHICH WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

REP-0010 will be revised to clarify and reduce any potential for direct challenges to the core loading verification independent review process. A fuel movement discrepancy form will be added such that any misrotated bundle discovered during fuel movement in the reactor core must be documented and corrected prior to beginning the independent core verification process. Training of refueling personnel will stress compliance with all fuel movement instructions and requirements of REP-0010. These corrective actions will be completed prior to the start of fuel movement in the reactor vessel during refueling outage No. 4.

Installation of a mast mounted camera to visually aid refuel floor personnel is being evaluated on a cost benefit basis along with other refueling equipment upgrades.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved upon completion of the core verification process prior to startup after refueling outage No. 3.