



GULF STATES UTILITIES COMPANY

RIVER BEND STATION POST OFFICE BOX 220 ST. FRANCISVILLE, LOUISIANA 70775
AREA CODE 504 635-6094 346-8651

September 17, 1986
RBG- 24405
File No. G9.5

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Denton:

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

Gulf States Utilities (GSU) hereby files an application for an amendment to the River Bend Station Unit 1 Technical Specifications, Appendix A to Facility Operating License NPF-47, pursuant to 10CFR50.90. Enclosure 1 contains the information for Staff review of this request. Enclosure 2 provides the requested revisions to the River Bend Station Technical Specifications. The revisions discussed in Enclosure 1 are required to prevent impending River Bend Station shutdown and therefore represent emergency circumstances as discussed in 10CFR50.91.

Pursuant to 10CFR170.12, GSU has enclosed a check in the amount of one-hundred and fifty dollars (\$150.00) for a license amendment application fee. Pursuant to 10CFR50.91(b)(1), the State of Louisiana, Department of Environmental Quality - Nuclear Energy Division has been notified of this amendment request. Additionally the Regional Administrator of Region IV and the Senior Resident Inspector have been provided copies of this application. Your prompt attention to this application is appreciated.

Sincerely,

J. C. Deddens
Vice President
River Bend Nuclear Group

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Enclosures

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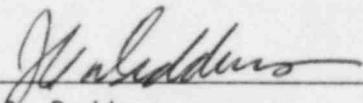
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

STATE OF LOUISIANA)
PARISH OF WEST FELICIANA)
In the Matter of) Docket No. 50-458
GULF STATES UTILITIES COMPANY) 50-459

(River Bend Station,
Unit 1)

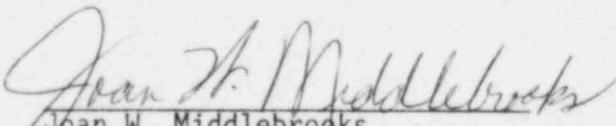
AFFIDAVIT

J. C. Deddens, being duly sworn, states that he is a 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 17th day of September, 1986.



Joan W. Middlebrooks
Notary Public in and for
West Feliciana Parish,
Louisiana

My Commission is for Life.

ENCLOSURE 1

I. Proposed Revision

Technical Specification 3.6.4, Table 3.6.4-1, Item a.1 identifies the RHR/RCIC Steam Supply Valve 1E51*MOV76 as a primary containment automatic isolation valve. The proposed change adds a one-time footnote applicable to valve 1E51*MOV76 to remove its requirements for operability through October 4, 1986.

On September 8, 1986 with the plant in mode 1 at 100% power, a functional test was performed on the "RCIC WARMUP LINE ISO VLV E51-F076 NOT FULLY CLOSED" annunciator. As the operator proceeded to stroke the valve open, the MOV76 breaker tripped. Investigation determined the valve motor to be grounded and the valve to be open. By taking the appropriate actions in the Technical Specifications the operator declared MOV76 inoperable and deactivated and secured in the isolated position the outside containment isolation valve 1E51*MOV64. This action renders the Reactor Core Isolation Cooling (RCIC) system inoperable and requires plant shutdown on September 22, 1986 per Technical Specifications 3/4.7.3.

The MOV76 is a 3/4" bypass line valve used for prewarming the RCIC steam line and currently will not close upon manual or automatic isolation. In order to isolate the 1KJB215 penetration the outboard isolation valve (MOV64) is required to be closed. The proposed technical specification change will temporarily eliminate the requirement that the 1KJB215 penetration be completely isolated and will allow the RCIC system to be functionally operable. This request would be for the time period through October 4, 1986 at which time a shutdown is scheduled and the MOV76 valve would be repaired.

Safety Evaluation

The Reactor Core Isolation Cooling (RCIC) system isolation trip setpoints are identified in Table 3.3.2-2, Item 5 of the River Bend Technical Specification. In the event of a significant leak from the RCIC steam supply system in the auxiliary building, the RCIC system would be automatically isolated due to high ambient temperature in the RCIC equipment room, high RCIC steam line flow or RCIC steam supply low pressure. These automatic isolations would initiate the closure of E51*MOV's 63, 64, and 76. For these events, only the outboard isolation valve MOV64 needs to be closed to seal off the break. In the event the MOV64 did not close and MOV63 did close, the blowdown flow rate for a complete severance of the RCIC steam line would be reduced within 10 seconds from flow through a 8" main line

to flow through a 3/4" bypass steam line corresponding to less than 4#/sec. (i.e. 30 gpm). Feedwater flow could easily provide make-up for this fluid loss. If feedwater is not available, the High Pressure Core Spray (HPCS) system could be used to provide cooling water to the vessel thereby preventing uncovering any reactor fuel. There is a manually operated 3/4" valve, V15, in the bypass steam line in the drywell just upstream of MOV76 which, upon reactor shutdown, could be manually closed to isolate the primary containment. Additionally, the automatic MOV64, located in the auxiliary building, could be manually closed depending on local conditions.

A potentially more serious postulated loss-of-coolant accident requiring RCIC system isolation would be the Design Basis Accident where the reactor core is uncovered and fuel rod failures occur, thereby releasing fission products. For this event the airborne fission products could be transported through a closed system via the main steam line, the RCIC steam line, the RCIC bypass steam line, the RCIC steam line to the RCIC turbine and back to the suppression pool. Any leakage occurring through valve packing and would be minimal and processed via the Standby Gas Treatment System.

However, in order for the fission products to even get out of the primary containment into the auxiliary building through the RCIC system piping it would require first that the Design Basis Accident event occur. Based on WASH 1400 table III 4-1 the probability of the Design Basis Accident event is 1.0×10^{-10} per hour of reactor operation. Considering that the reactor will be operated for less than 15 days with MOV76, open and using an additional conservatism of a factor of 30, would result in the possibility of a Design Basis Accident event to occur during those 15 days to be 1.08×10^{-6} .

Then, for any fission products to get past MOV64, it would require that MOV64 failed to close. Based on IEEE Standard 500-1977 there would be 2.5 failures of the valve in 10^6 actuations. Assuming a conservative estimate of 50 isolation actuations of MOV64 per calendar year and an additional conservatism of a factor of 10 resulted in a probability of the failure of MOV64 to close in the 15 day time period to be 5.14×10^{-5} . Therefore, the overall probability of unisolated fission product release in conjunction with a Design Basis Analysis into the RCIC steam piping outside the primary containment would be the product of the Design Basis Accident event to occur and the MOV64 failure to close during the 15 day time period or 5.55×10^{-11} . This probability is more than an order of magnitude lower than 10^{-9} which is assumed incredible. Therefore, leaving the MOV76 valve stuck in an open position

while isolation valve MOV63 and MOV64 are open during a 15 day period is considered to be at an acceptable level of risk for continued plant operation and the LCO for the failure of MOV76 to isolate may remove operability requirements through October 4, 1986.

No Significant Hazards Evaluation

- a. The proposed amendment to the Technical Specifications would not involve a significant increase in the probability or consequences of an accident previously evaluated because the potentially unisolated penetration is limited to a 3/4" line discharging to a closed system that returns to the containment.

Thus, there is no increase in the probability or consequences of any accident previously evaluated.

- b. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated because no new modes of operation are introduced and no change to the plant design has been made.

Thus, there are no new or different kinds of accident from any accident previously evaluated.

- c. The proposed change does not involve a significant reduction in the margin of safety because this event is expected to have a probability that is non-credible. Because the unisolated penetration is limited to a 3/4" line that discharges to a closed system, the potential increase in offsite dose is insignificant.

Thus, there is no significant reduction in the margin of safety.

II. Revised Technical Specifications

The requested revision is provided as Enclosure 2.

III. Interim Compensatory Measures

River Bend Station currently meets the requirements of Technical Specifications. Therefore, no interim compensatory measures are required.

IV. Bases for Emergency Circumstances

With the RCIC system inoperable as the result of MOV64 being closed, River Bend Station will be required to shutdown on September 22, 1986. The closure of the MOV64 valve

precludes the use of the RCIC system as a means of maintaining reactor water level since the use of RCIC requires the prewarming of the RCIC steam line to prevent water hammer in that line. To operate past September 22, 1986 under the current Technical Specifications would require the MOV76 isolation valve to be manually closed and MOV63 and MOV64 to be opened. In order to isolate MOV76 the RCIC system would have to initially be placed in standby and a drywell entry at reduced reactor power (approximately 1% - mode 2). It is expected that three (3) workers would be inside the drywell for approximately 30 minutes at extreme temperatures (approximately 135°F) and would receive about 0.2 MAN-REM. The extreme conditions with an estimated 12 hour unit unavailability or the resulting plant shutdown justify these emergency circumstances.

V. Schedule for Attaining Compliance

As indicated in Item III above, River Bend Station is currently in compliance with the applicable Technical Specifications.

VI. Notification of State Personnel

A copy of this amendment application is being provided to the State of Louisiana, Department of Environmental Quality - Nuclear Energy Division. The State has been verbally notified of this request.

VII. Environmental Impact Appraisal

In the event that the RCIC outboard isolation valve MOV64 did not close upon its isolation signal there would be a potential pathway for fission products to exit the primary containment via the RCIC steam supply line. This pathway would be through the inoperable and open MOV76 isolation valve all the way to the RCIC turbine control valve MOV45. However, these fission products would still be contained within a closed system. Furthermore, leakage from the RCIC closed system within the Auxiliary Building would be minimal (i.e. valve packing) and would be diluted and filtered through the Standby Gas Treatment System. Therefore, the overall change to the total Design Basis Accident fission produce release is insignificant. The current FSAR thyroid dose for the exclusion area from the Design Basis Accident is 29 Rem (FSAR table 15.6-7) which is below the 30 Rem regulatory allowable dose.