

GULF STATES UTILITIES COMPANY

RIVER BEND STATION POST OFFICE BOX 220 ST. FRANCISVILLE, LOUISIANA 70142
AREA CODE 504 635-6084 345-8001

March 12, 1991
RBG- 34,592
File Nos. G9.5, G9.42

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

Gentlemen:

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

Gulf States Utilities Company (GSU) hereby files an application to amend the River Bend Station - Unit 1 Technical Specifications, Appendix A to Facility Operating License NPF-47, pursuant to 10CFR50.90. This application is filed to change Technical Specification 3.6.2.3, "Drywell Air Locks," and the associated bases, to allow entry into the drywell with one of the airlock doors inoperable. The Attachment to this letter and the Enclosure provide the justifications, and proposed revisions to the Technical Specifications and the associated bases, respectively.

Should you have any questions, please contact Mr. L. L. Dietrich of my staff at (504)381-4866.

Sincerely,

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

LAE/LLD/MSF

Attachment

cc: U.S. Nuclear Regulatory Commission
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Claudia Abbate
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Mr. Glenn Miller
Radiation Protection Division
Louisiana Department of Environmental Quality
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

STATE OF LOUISIANA)

PARISH OF WEST FELICIANA)

Docket No. 50-458

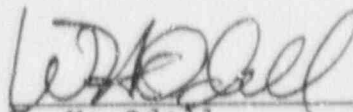
In the Matter of)

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 12th day of March, 1991. My Commission expires with Life.


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

ATTACHMENT

PROPOSED
GULF STATES UTILITIES COMPANY
RIVER BEND STATION
DOCKET 50-458/LICENSE NO. NPF-47

DRYWELL AIR LOCKS
(91-02)

LICENSING DOCUMENT INVOLVED:

TECHNICAL SPECIFICATIONS

ITEMS:

3.6.2.3, B 3/4.6.2.3

REASON FOR REQUEST:

In accordance with 10CFR50.90, Gulf States Utilities Company (GSU) is requesting a change to Technical Specification (TS) 3.6.2.3, "Drywell Air Locks," to allow entry into the drywell during Operational Condition 3 with one of the airlock doors inoperable. GSU has submitted two Waivers of Compliance, dated February 17, 1989 (RBG-30095) and December 12, 1990 (RBG-34144), requesting temporary relief from Action 'a' of TS 3.6.2.3. Both of these requests were granted by the staff; the latter with the stipulation that GSU would pursue submission of a TS amendment similar to the provisions of Action 'a.3' of TS 3.6.1.4 for the containment air lock. GSU has evaluated the safety impact of leaving the unit in Operational Condition 3, with one air lock door inoperable, while passing through the operable airlock door and has determined that the total equivalent drywell bypass flow would still remain within the safety analysis assumptions.

DISCUSSION:

Currently, Technical Specification 3.6.2.3, "Drywell Air Locks," Action 'a' if one airlock inoperable requires that within 24 hours the operable door be locked closed and that operation may continue providing the operable door is verified to be locked closed once every 31 days. It was necessary for GSU to request Waivers of Compliance on two prior occasions to allow plant personnel access to the drywell while the reactor was at rated pressure when one of the drywell air lock doors was inoperable. This license amendment request would allow the use of the drywell air lock in Operational Condition 3 with one of the doors inoperable by requiring that the operable air lock door be verified to be locked closed after each use and that there is a person dedicated to assuring that the two doors in the air lock are not opened simultaneously. The most prominent reasons for access to the drywell at pressure would be to facilitate the identification of steam leaks and repair of an inoperable inner air lock door.

GSU has determined that such an entry would not pose any significant hazard to the health and safety of the public and may avoid an unnecessary thermal transient on the plant (i.e., shutdown, repair the

leaks and discover after a subsequent startup and pressurization that additional leaks still exist). Because of this, it is desirable to avoid placing the plant into cold shutdown prior to the drywell entry. During cold shutdown, leakage from the primary system may not be identifiable. If the leakage could not be identified in cold shutdown, the inoperable air lock door seal must be repaired and the plant restarted to pressurize the primary system. The drywell could then be entered to identify the source of leakage. These actions would place an unnecessary thermal transient on the plant, in addition to causing hardship and delay in returning to power operation.

To accomplish a drywell entry, the operable air lock door must be unlocked and opened for a short period of time for each essential passage through the airlock. For the period of time the operable door is open, TS 3.6.2.1, "Drywell Integrity," will not be met due to non-compliance with Surveillance Requirement 4.6.2.1.b which requires compliance with TS 3.6.2.3. GSU has evaluated the impact on safety of leaving the unit in Operational Condition 3 while passing through the operable drywell air lock door. Access through the operable air lock door after it is unlocked will be administratively controlled by placing a dedicated person outside the door to assure that it is open for only the period of time needed for essential passage and that both doors are not opened simultaneously. While the operable door is open, drywell integrity depends upon the inoperable door seal.

The basis for the drywell bypass leakage safety analysis is 1.0 ft^2 (A/1K) for a small break LOCA in the drywell at a pressure differential of 3 psid. A 1.0 ft^2 opening would result in a flow rate of approximately 40,110 SCFM. The allowable drywell bypass leakage limit of TS 3.6.2.2, "Drywell Bypass Leakage," (10% of 1.0 ft^2) is 4011 SCFM.

During the last drywell bypass leakage test performed on November 30, 1990, the bypass leakage was found to be 346 SCFM (0.0086 ft^2). As a limiting analysis, GSU has conservatively calculated the resulting flow rate through the inoperable air lock door in the event of a total failure of the seals. This was conservatively calculated assuming the operable door is open, a 3 psid pressure exists between the drywell and containment, and both inoperable door seals are deflated. This results in a flow rate of 12,530 SCFM (equivalent to 0.33 ft^2). This range of flow added to the latest drywell bypass test data of 346 SCFM (0.0086 ft^2) results in a total of 12,876 SCFM (0.3386 ft^2). This value is less than the safety analysis assumption of 40,110 SCFM (1.0 ft^2). Since the total equivalent drywell bypass flow would still remain within the safety analysis assumptions and the containment integrity is maintained by continued compliance with TS 3.6.1.1, the containment and offsite analysis would be unaffected.

The probability of a small break LOCA during a three minute interval is on the order of 1.7×10^{-8} . This is based on NUREG/CR-4550 generic values for small LOCA frequency. It should be noted that this probability is higher than that obtained from other PDA and safety studies cited in the NUREG. The frequency of having core damage and

offsite dose releases exceeding 10CFR100 would be even smaller. This results in an insignificant risk in comparison to the NRC safety goal of 10-6/yr for serious radiological releases. This proposed amendment would only be used after the reactor is subcritical, as opposed to the safety analysis assumption in which the reactor is in normal operation and must first scram as a result of high drywell pressure. Thus, the stored energy would be less and reactor depressurization would occur sooner than that assumed in the safety analysis. Finally, the drywell unit coolers, although not safety related, would be in operation during entries into the drywell. This additional cooling, which was not taken credit for in the safety analysis, will significantly reduce drywell pressure and thus drywell bypass leakage. The probability of the drywell unit coolers being unavailable during this period, concurrent with a small break LOCA, subsequent core damage, and radiological releases exceeding 10CFR100 is exceedingly small.

Drywell entries would be made in accordance with approved procedures. Whenever there are no personnel in the drywell, the outer door will be locked, restoring compliance with the Technical Specifications. The time personnel will remain in the drywell will be limited. Entries will be limited to those essential to perform maintenance in the drywell. In the event of an emergency requiring immediate personnel evacuation, the personnel door on the equipment hatch will be available for use.

SIGNIFICANT HAZARDS CONSIDERATION:

In accordance with the requirements of 10CFR50.92, the following discussions are provided in support of the determination that no significant hazards are created or increased by the change proposed by this submittal.

1. The proposed change would not increase the probability or consequences of a previously evaluated accident because:

This amendment request does not involve a significant increase in the probability or consequences of an accident because the operation of the plant will remain as previously analyzed and the response of the plant is within the limits of the safety analysis.

2. The proposed change would not create the possibility of a new or different kind of accident from any previously evaluated because:

The probability of a different kind of accident from previously evaluated is not increased because the operation of the plant remains as previously evaluated and response is within approved limits.

3. The proposed change would not involve a significant reduction in the margin of safety because:

Margins of safety are not significantly reduced by this change because the results of the event are within the approved analysis and the probability of the event is below the NRC safety goal.

Based on the above, it is determined that the proposed change does not (1) involve significant increase in the probability or consequences of an accident previously evaluated, (2) create the probability of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety and therefore, does not involve a significant hazard consideration.

REVISED TECHNICAL SPECIFICATION:

The requested revision is provided in the Enclosure.

SCHEDULE FOR ATTAINING COMPLIANCE:

GSU is currently in full compliance with the applicable Technical Specification requirements.

NOTIFICATION OF STATE PERSONNEL:

A copy of this amendment request has been provided to the State of Louisiana, Department of Environmental Quality - Radiation Protection Division.

ENVIRONMENTAL IMPACT APPRAISAL:

GSU has reviewed the proposed license amendment against the criteria of 10CFR51.22 for environmental considerations. The proposed changes do not involve a significant hazards consideration, nor increase the types and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, GSU concludes that the proposed change meets the criteria given in 10CFR51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.

ENCLOSURE

INSERT 'A'

1. Maintain at least the OPERABLE air lock door closed and either restore the inoperable air lock door to OPERABLE status within 24 hours, or lock the OPERABLE air lock door closed and verify that the OPERABLE air lock door remains locked closed every 31 days, except as provided in a.2.
2. With one air lock door inoperable in OPERATIONAL CONDITION 3, operation may then continue with entry and exit permitted for up to 7 days** provided that an OPERABLE air lock door is verified to be locked closed after each entry and subsequent exit, and an individual is dedicated to assure that both doors in the air lock are not opened simultaneously.
3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

INSERT 'B'

Additionally, the specification makes allowances for the use of the airlock when one of the doors is inoperable. Although use of the drywell airlock with one door inoperable would result in drywell bypass leakage in excess of the 10% of A/\sqrt{k} limit as specified in TS 3.6.2.2, analytic results indicate that the drywell bypass leakage, for the short duration that the OPERABLE door would be open, would be less than the safety analysis requirement of A/\sqrt{k} .