UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 19 TO FACILITY OPERATING LICENSE NO. NPF-47

GULF STATES UTILITIES COMPANY

RIVER BEND STATION, UNIT 1

DOCKET NO. 50-458

1.0 INTRODUCTION

By letter dated June 18, 1987, the Gulf States Utilities Company, the licensee for the River Bend Station, Unit 1, proposed to change the plant Technical Specifications (TS) Table 3.3.2-2 for leak detection setpoints for the reactor water cleanup area temperatures (items 4.c.1 and 4.d.1), and the RCIC/RHR steam line high flow isolation (item 5.1). The licensee provided additional clarification in a letter dated March 11, 1988. The March 11, 1988 letter was in response to a request from the staff to document the clarification and did not influence or change the basis for the proposed no significant hazards consideration issued on August 12, 1987.

The specific changes are as follows:

Reactor Water Cleanup (RWCU) Area Temperature - The licensee proposed to change the RWCU heat exchanger room ambient high temperature trip setpoint for RWCU isolation, Item 4.c.1 from ≦ 98.5°F to ≦ 104.5°F and the allowable value from ≦ 101.5°F to ≦ 107.5°F. The licensee also proposed to change the differential temperature trip setpoint in the above area, Item 4.d.1, from ≦ 33°F to ≦ 39°F and the allowable value from ≦ 36.5°F to ≦ 42.5°F. The licensee stated that the proposed changes are required to avoid unnecessary engineered safety feature (ESF) isolation signals due to restricting RWCU heat-exchanger room ambient and differential temperature setpoints.

RCIC/RHR Steam Line High Flow Isolation - The licensee proposed to change the RCIC/RHR steam line high flow isolation initial trip setpoint, Item 5.1, from ≦ 156" H_2O to ≦ 60.7" H_2O and the allowable value from ≦ 164.5" H_2O to ≦ 64.2" H_2O. The licensee stated that the above change is necessary as a result of the review of the RCIC/RHR steam line high flow setpoint.

2.0 EVALUATION

Reactor Water Cleanup Area Temperature - The licensee stated that the original leak detection temperature setpoints were based on a predicted temperature in the containment area and assuming a steam leakage rate of 25 gpm. The proposed setpoints have the same analytical basis as the original setpoints with the exception that the initial temperature is based on actual temperature data rather than the predicted value. The applied setpoint methodology, utilizing the actual temperature data,

accounts for instrument inaccuracies and drift to ensure the margin of safety is maintained. The licensee also stated that a review was performed to ensure that the existing design of the equipment and structures enveloped the higher normal operating temperature and that the qualified life of the equipments were revised as necessary.

The Office for Analysis and Evaluation of Operational Data (AEOD) issued a report numbered AEOD/E705 on March 31, 1987, entitled "RWCU System Automatic Isolation and Safety Consideration." This report documents a review of the Licensee Event Reports (LERs) from January 1984 through October 1986 concerning RWCU isolations and has made the following conclusions. Of all of the RWCU isolations; 74% were due to spurious signals. Slightly less than half of the isolations were initiated by temperature signals. Of the isolations where there was actual leakage from the RWCU pressure boundary, the usual initiating isolation signal was related to flow not to area temperatures. Thus, a significant factor for RWCU pressure boundary leakage detection is flow monitoring. The licensee has not proposed any change in the flow monitoring instrumentation.

RCIC/RHR Steam Line High Flow Actuation - The licensee stated that the originally specified initial setpoint of ≤ 156" H_2O for flow measuring instrumentation to isolate the RCIC/RHR steam line on high flow is below the break flow for an 8" RHR steam line break but may not have been low enough to isolate on a 4" RCIC steam line break. This is due to errors in the original flow calculation which resulted in the overestimation of total steam flow. The errors resulted from the multiple operating modes of the RHR system. The proposed initial setpoint of ≤ 60.7" H_2O will isolate down stream piping on both the 4" and 8" steam line break and is based on steam flow to both loops of the RHR system in the steam condensing mode and to the RCIC taking suction from the condensate storage tank. Since the setpoint is being lowered in the conservative direction there will be an increase rather than a decrease in the margin of safety associated with this change. No change to the applicable note in the TS, Table 3.3.2-2 is proposed which states that the final setpoint is to be determined during testing prior to operation in the steam condensing mode following the NRC approval to operate in that mode.

3.0 SUMMARY

Based on the above, the staff concludes that the proposed change to the plant TS, Table 3.2.2-2 for leak detection setpoints for the RWCU heat exchanger room ambient high temperature, Item 4.c.1, and differential temperature, Item 4.c.1 are acceptable since the margin of safety as defined in the technical bases is maintained and all the equipment in the area is qualified for the environment to which it would be exposed.

The staff finds that the proposed changes to plant TS, Table 3.2.2-2, leak detection initial setpoint for RCIC/RHR steam line high flow is acceptable since the proposed change is more conservative than the original initial setpoint.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposures. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: April 5, 1988

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