



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 23 TO FACILITY OPERATING LICENSE NO. NPF-47

GULF STATES UTILITIES COMPANY

RIVER BEND STATION, UNIT 1

DOCKET NO. 50-456

1.0 INTRODUCTION

By letter dated September 4, 1987, Gulf States Utilities Company (GSU) (the licensee) requested an amendment to Facility Operating License No. NPF-47 for the River Bend Station, Unit 1. The proposed amendment would modify Table 4.3.6-1 of the Technical Specifications (TSs) to delete the requirement to perform the daily Channel Functional Test on the Rod Pattern Control System, Low Power Setpoint (LPSP) and High Power Setpoint (HPSP). Channel Functional Tests would continue to be required prior to startup and monthly thereafter. The purpose of these surveillance requirements is to demonstrate the operability of the LPSP and the HPSP. The proposed amendment would also modify the TSs to clarify that the Surveillance for the HPSP is applicable to Operational Condition 1, greater than the LPSP.

The licensee bases the proposed deletion of the daily Channel Functional Test on demonstrated reliability of the trip units and the adequacy of the surveillance performed prior to startup and monthly to demonstrate operability. The licensee has indicated that these proposed changes would significantly reduce the manpower associated with the performance of the surveillance and will provide operational consistency, flexibility, and clarity of surveillance requirements while meeting the intent of the surveillance.

2.0 EVALUATION

The purpose of the LPSP is to initiate rod pattern control system (RPCS) interlocks on decreasing power and rod withdrawal limiter interlocks on increasing power. The purpose of the RPCS is to minimize the consequences of a postulated control rod drop accident to an acceptable level by restricting the pattern of control rods that can be established to predetermined sets. Above 20% rated thermal power (the low power setpoint), analysis shows that the need to minimize the consequences of a postulated control rod drop accident is no longer a concern and the RPCS does not place any pattern restrictions on control rod movement above the LPSP. From the LPSP on up in power, rod withdrawals are restricted to prevent excessive change in the event of erroneous rod withdrawal from locations of high power density. From the LPSP to the HPSP (70% rated thermal power), rod motion is limited to 4 notches (2 feet) and from HPSP on up in power, rod motion is limited to 2 notches (1 foot).

BB05240234 880510
PDR ADOCK 0500045B
P PDR

The current River Bend Station (RBS) TSs presently require the channel functional test to be performed prior to startup, daily or prior to control rod movement, daily as power is increased above LPSP or decreased below LPSP, and once per 31 days while operation continues above the LPSP. The licensee's September 4, 1987 letter requesting deletion of the daily channel functional test provides the following information in support of the proposed TS change.

1. These functional tests are performed on Rosemount trip units identical to trip units located throughout the plant which receive channel functional tests monthly per their applicable Technical Specification Surveillance Requirements. These trip units are subjected to a 30 fold increase in surveillance test intervals as compared to identical trip units in, for instance, the Reactor Protection System (Technical Specification 3/4.3.1) without an identified corresponding increase in reliability.
2. At RBS there are approximately 135 Surveillance Test Procedures (STPs) which perform channel functional tests on Rosemount trip units. Of these, only the LPSP and HPSP STPs require a channel functional test on a frequency less than once every 31 days. Since RBS has been performing this daily surveillance, there have been no failures of this STP related to these trip units. Additionally, a review of the National Plant Reliability Data System data base revealed no reported failures that could have been detected by this required daily Channel Functional Test. Therefore, it is concluded that the channel functional tests prior to startup and monthly thereafter will adequately ensure the reliability of this system.
3. The requirement to perform the HPSP surveillance when decreasing power below the LPSP serves no purpose. Since the HPSP is not required to be OPERABLE until greater than 70% rated thermal power, it is appropriate to change the HPSP applicability to Operational Condition 1, greater than the LPSP.

Because of the good experience with the Rosemount trip units during the first cycle of operations (completed September 14, 1987) as described in the licensee's application, it is the staff's judgement that channel functional tests prior to startup and monthly thereafter will provide adequate assurance of the reliability and operability of this system. The staff concludes that the TS change is acceptable. In addition, because the HPSP is not required to be operable until greater than 70% rated thermal power, the staff concludes that the proposed change of HPSP Surveillance applicability to Operational Condition 1, greater than the LPSP, is acceptable.

3.0 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 and/or changes to the surveillance requirements. 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.

4.0 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: May 10, 1988

Principal Contributor: W. Paulson