



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 63 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 May 14, 1991, 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 revise Technical Specification 4.8.1.1 to adjust the maximum starting time for the high pressure core spray (HPCS) diesel generator (DG) from 10 seconds to 13. In addition, the required speed that the HPCS diesel must achieve within 10 seconds of starting would be changed from 900 revolutions per minute (rpm) to 882 rpm for the test which is run at 10-year intervals.

The HPCS system consists of a single DG powered motor-driven pump and associated piping, valves, and instrumentation. The system is designed to inject water into the reactor in an accident situation over the entire range of operating pressures. In the event of a design basis LOCA concurrent with a loss of offsite power, the system is designed to deliver rated flow and pressure to the vessel within 27 seconds after receiving the LOCA signal. The time limit includes starting the DG, starting the pump, and opening the injection valve. The December 2, 1991, submittal provided additional clarifying information and did not alter the action or change the initial no significant hazards consideration determination.

2.0 EVALUATION

The Technical Specification action statement requires that if there is more than one failure of the DG within the last 20 tests or more than 4 failures in the last 100 tests, the test must be performed once every 7 days rather than once every 31 days. A test in which the diesel does not accelerate to rated speed and frequency within 10 seconds is considered a failure. River Bend has incurred a number of DG starts which are in excess of the 10 second limit but less than 13 seconds. The added tests that result increase the stress and wear on the DG.

Allowing 13 seconds for the DG to come to rated speed does not affect the safety function of the HPCS system since water will still be injected into the core within the time allowed in the design analysis which takes no credit for HPCS injection until 30 seconds after a LOCA. The HPCS system is activated three seconds after the break by a low water level in the reactor. After the DG starts, the injection valve opens as the HPCS pump comes to rated speed. These two actions require 12 seconds which leaves 15 seconds for

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the DG to come to rated speed. Increasing the maximum allowed time to 13 seconds still leaves a margin of 2 seconds. The original 5 second margin was not required to support any analysis or affect any required function assumed in the SAR. Therefore, the safety analysis is not affected and remains as originally accepted by the NRC in Supplement 2 to the Safety Evaluation Report. In addition, the 13 second start time is consistent with the requirement for a plant with a DG identical to River Bend.

The second change, which affects the minimum speed requirement of the HPCS, DC, is made to correct an inconsistency between the monthly surveillance and the 10-year surveillance. Technical Specification 4.8.1.1.2.h currently states that at least once per 10 years all three diesels must be started simultaneously and DG 1c (the HPCS diesel) must accelerate to 900 rpm in less than or equal to 10 seconds. The monthly surveillances require DG 1c to accelerate to 882 rpm in 10 seconds. For this diesel, 882 rpm is equivalent to 58.8 Hz which is the minimum frequency required when starting the diesels according to TS surveillance requirements. Nine hundred rpm corresponds to 60 Hz which is the median frequency which must be maintained during the test. Since 882 rpm is equivalent to a frequency which is within the approved range for this type of test (60 ± 1.2 Hz), a minimum speed of 882 rpm would not affect the ability of the diesel to perform its safety function.

The NRC staff has reviewed the licensee's submittal and has found that increasing the required start time for the HPCS diesel to 13 seconds and decreasing the speed to 882 rpm for the 10-year test as described above does not pose a safety hazard. Based on its evaluation, the staff also finds that the proposed change is in accordance with the Standard Review Plan Sections 6.3 and 15.6.5. Therefore, the proposed changes to the Surveillance Requirements of TS 4.8.1.1 are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Louisiana State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and surveillance requirements. The NRC 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 exposure. 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 (56 FR 41584). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 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 Commission 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: January 13, 1992