



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20565

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 37 AND 28 TO

FACILITY OPERATING LICENSE NOS. NPF-76 AND NPF-80

HOUSTON LIGHTING & POWER COMPANY

CITY PUBLIC SERVICE BOARD OF SAN ANTONIO

CENTRAL POWER AND LIGHT COMPANY

CITY OF AUSTIN, TEXAS

DOCKET NOS. 50-498 AND 50-499

SOUTH TEXAS PROJECT, UNITS 1 AND 2

1.0 INTRODUCTION

By application dated May 20, 1992, Houston Lighting & Power Company, et. al., (the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License Nos. NPF-76 and NPF-80) for the South Texas Project, Units 1 and 2. The proposed changes would add a footnote to Note 14 of Table 4.3-1 which states that the complete verification of the operability of the shunt trip relay circuitry shall be implemented for each unit prior to the affected unit's startup from the first planned or unplanned shutdown occurring after May 19, 1992. The change was required due to the discovery that the existing surveillance procedure does not adequately verify the operability of the shunt trip contacts associated with the manual reactor trip function. However, since the surveillance procedure can be performed only during shutdown conditions, it was requested that the amendment allow continued operation of each unit until the next planned or unplanned shutdown.

2.0 EVALUATION

The design of the South Texas Project manual trip function includes both undervoltage and shunt trip actuating devices to provide redundant mechanisms to open the reactor trip breakers. The shunt trip contacts which result in energizing the shunt trip coil and opening of the reactor trip breaker include those closed by the reactor trip and safety injection handswitches and an additional contact which closes when the auto shunt trip relay "STA" is de-energized by the opening of the undervoltage contacts. The existing surveillance procedure utilized at the South Texas Project included the measurement of voltage across the shunt trip coil but did not include re-opening of the contact closed by the "STA" relay. With the "STA" contact closed, it was not possible to verify that the contacts associated with the handswitches had also closed and therefore the procedure failed to adequately

verify the shunt trip feature as required by Technical Specification 4.3.1.1. This discrepancy was discovered during a biennial review of the surveillance procedure.

The proposed Technical Specification change would allow continued operation of each South Texas Project unit until a revised surveillance procedure is performed during the next planned or unplanned shutdown. The revised procedure would individually verify the operability of the manual trip function shunt trip contacts by opening of the "STA" contact. Generic Letter 85-09 describes the precautions which are applicable to testing of the manual shunt trip contacts and which will be incorporated into the licensee's revised procedure.

The South Texas Project reactor protection system is highly reliable and it is unlikely that a manual trip would be required to mitigate an anticipated or design basis event. In addition, although the surveillance procedure has been incomplete, there is no reason to believe that any element of the manual trip function is inoperable. The manual shunt trip circuitry tested satisfactorily during pre-operational testing for each unit. Additional confidence is provided by the fact that the manual trip functions have performed as expected when utilized on several occasions during operation. The redundancy of the reactor trip system also ensures that a failure of any single manual shunt trip contact would not prevent a successful manual trip resulting from the undervoltage relays or manual shunt trip associated with the second manual trip handswitch.

Based upon its review, the staff finds the proposed change to the surveillance requirements for testing of the manual shunt trip circuitry does not have a significant safety impact and is therefore acceptable.

3.0 EMERGENCY CIRCUMSTANCES

In the letter dated May 20, 1992, the licensee requested that this amendment application be treated as an emergency because unless approved, the Technical Specifications would require a shutdown of both units. Operation from May 19, 1992, until the completion of the NRC review of this proposed amendment was covered by a Temporary Waiver of Compliance.

Regarding the timeliness of the licensee's submittal, the discrepancy between the Technical Specification surveillance requirements and the existing surveillance procedure was determined to render the manual trip function inoperable on May 19, 1992. Upon determining that the surveillance procedure was inadequate to satisfy the Technical Specifications, the licensee requested and received a Temporary Waiver of Compliance and requested a Technical Specification change on an emergency basis by letter dated May 20, 1992.

Accordingly, pursuant to 10 CFR 50.91(a)(5), the Commission has determined that there are emergency circumstances warranting prompt approval of the proposed change.

4.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations in 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards considerations if operation of that facility in accordance with the amendment would not:

1. Involve a significant increase in the probability or consequences of an accident previously evaluated; or
2. Create the possibility of a new or different kind of accident from any accident previously evaluated; or
3. Involve a significant reduction in a margin of safety.

This amendment has been evaluated against the standards in 10 CFR 50.92. It does not involve a significant hazards consideration because:

1. The change would not involve a significant increase in the probability or consequences of an accident previously evaluated. Delaying the implementation of the surveillance requirement involves no physical modification of the facility, nor does it affect any operational parameters. The accident analyses in Chapter 15 of the Updated Final Safety Analysis Report (UFSAR) do not take credit for the manual trip function and are therefore not affected by the proposed change. An evaluation of the core damage frequency contribution from the anticipated transient without scram (ATWS) event determined that the assumed unavailability of the shunt trip function did not have a significant impact on the results.
2. The change would not create the possibility of a new or different kind of accident from any accident previously evaluated. No physical changes to the plant or changes to operating parameters are proposed. Those accidents which might involve failure of the manual shunt trip function are bounded by those performed to evaluate the failure of the reactor protection system.
3. The change would not involve a significant reduction in a margin of safety. It is likely that the manual shunt trip function would perform and there is no adverse safety impact involved in delaying the performance of the required surveillance. In the case where the manual shunt trip function is assumed to be inoperable, the calculated change in core damage frequency was not significant.

5.0 STATE CONSULTATION

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

6.0 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. 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 made a final no significant hazards consideration finding with respect to this amendment. 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: June 1, 1992