

UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D.C. 20666

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION RELATED TO AMENDMENT NO. 11 TO FACILITY OPERATING LICENSE NO. NPF-87 TEXAS UTILITIES ELECTRIC COMPANY, ET AL.

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 1

DOCKET NO. 50-445

1.0 INTRODUCTION

On June 25, 1990, the staff issued Generic Letter (GL) 90-06, "Resolution of Generic Issue 70, 'Power-Operated Relief Valve and Block Valve Reliability,' and Generic Issue 94, 'Additional Low-Temperature Overpressure Protection for Light-Water Reactors,' Pursuant to 10 CFR 50.54(f)." The GL requested that licensees adopt the staff positions and appropriate technical specifications for their facilities.

Generic Issue 70, "Power-Operated Relief Valve and Block Valve Reliability," involves the evaluation of the reliability of power-operated relief valves (PORVs) and block valves and their safety significance in PWR plants. The GL discussed how PORVs are increasingly being relied on to perform safety-related functions and the corresponding need to improve the reliability of both PORVs and their associated block valves. Briefly stated, the GL required the following actions to improve PORV and block valve reliability:

- a. Include PORVs and block valves within the scope of an operational quality assurance program that is in compliance with 10 CFR Part 50, Appendix B.
- b. Include PORVs and block valves within the scope of a program covered by subsection IWV, "Inservice Testing of Valves in Nuclear Power Plants," of Section XI of the ASME Boiler and Pressure Vessel Code. Also, stroke testing of PORVs should only be performed in Modes 3 or 4 and in all cases prior to establishing conditions where the PORVs are used for lowtemperature overpressure protection (LTOP).
- c. Include technical specifications (TS) for PORVs and block valves for operational Modes 1, 2, and 3 to incorporate the new staff position. Included in the staff position is a requirement that plants that run with block valves closed (e.g., due to leaking PORVs) maintain electrical power to the block valves so they can readily be opened from the control room upon demand.

Generic Issue 94, "Additional Low-Temperature Overpressure Protection for Light-Water Reactors," addresses concerns with the implementation of the requirements set forth in the resolution of Unresolved Safety Issue (USI) A-26, "Reactor Vessel Pressure Transient Protection (Overpressure Protection)."

207090328 920629 DR ADOCK 05000443 PDR GL 90-06 discussed the continuing occurrence of overpressure events and the need to further restrict the allowed outage time for a low-temperature overpressure protection channel in operating Modes 4, 5, and 6.

By letter dated December 20, 1990, Texas Utilities Electric Company (TU Electric) responded to GL 90-06 by addressing requirements 1 and 2 discussed above. By letter dated November 27, 1991, as supplemented by letters dated May 4 and May 27, 1992, TU Electric proposed changes to the Comanche Peak Steam Electric Station (CPSES) Unit 1 Technical Specifications in response to GL 90-06. The May 4 and May 27, 1992, letters were clarifying in nature and thus, within the scope of the initial notice and did not affect the NRC staff's proposed no significant hazards considerations determination.

The licensee will incorporate all of the Unit 1 TS changes to the combined TS for Unit 1 and Unit 2. Therefore, all of the changes to Unit 1 TS in response to GL 90-06 will be applicable to Unit 2 upon the receipt of the Unit 2 license.

2.0 EVALUATION

2.1 Evaluation of Generic Issue 70

In the December 20, 1990, letter TU Electric stated that: (1) CPSES currently includes the pressurizer PORVs and block valves in their quality assurance program; and (2) the pressurizer PORVs and block valves are included within the scope of their Inservice Testing (IST) program. However, TU Electric stated that stroke testing the PORVs during Mode 5 (COLD SHUTDOWN) was preferred over the staff's position to test the PORVs in Mode 3 (HOT STANDBY) or Mode 4 (HOT SHUTDOWN).

The staff's basis for preferring PORV testing in Modes 3 or 4 was that these conditions would better simulate the temperature and pressure environment that PORVs are subjected to under normal plant operating conditions. By letter dated May 27, 1992, TU Electric provided additional plant specific information to justify the acceptability of testing in Mode 5. The piping run between the pressurizer and PORVs minimizes the effect of pressurizer steam space temperature on PORV body temperature. Therefore, any differences in steam space temperature between Modes 3 and 4, and Mode 5 is not expected to affect PORV operability. The PORVs are tested with the associated block valve closed, effectively isolating the PORVs from pressurizer pressure. The PORVs are flow assisted valves; thus testing with no (block valve closed) flow through the PORV is the most conservative approach.

The staff had a separate concern related to testing in Mode 5. As stated a ove, the staff required the stroke test to be performed prior to establishing conditions where the PORVs are used for LTOP protection. CPSES can be in LTOP conditions without using the PORVs for LTOP protection. The existing TS allow the use of the Residual Heat Removal (RHR) suction relief valves for LTOP protection. This allows additional flexibility because the PORVs can be tested when the unit is in an LTOP condition. The staff has reviewed the CPSES plant specific information and has determined that PORV testing in Mode 5 at CPSES is acceptable.

The proposed changes to the CPSES Unit 1 Technical Specifications included in the licensee's letter of November 27, 1991, are consistent with those proposed in the staff's generic letter. The proposed changes to TS 3/4.4.4 include the following:

- 1. Several grammatical corrections for clarification of the LCO.
- A change to action statement (a) that requires the power supplied to the block valves be maintained in the event that one or both PORVs are declared inoperable due to excessive seat leakage.
- A change to action statement (c) that requires at least one PORV be restored to operable status within one hour in the event both PORV are inoperable due to causes other than excessive seat leakage.
- A change to action statement (d) that requires the control of the PORV to switch to manual when one or both of the block valves are inoperable.

The staff has reviewed the licensee's proposed modifications to the CPSES Unit 1 Technical Specifications. Since the proposed modifications are consistent with the staff's position previously stated in the GL and found to be justified in NUREG-1316, "Technical and Regulatory Analysis Related to Generic Issue 70 - Evaluation of Power-Operated Relief Valve Reliability in PWR Nuclear Power Plants," the staff finds the proposed modifications to be acceptable.

2.2 Evaluation of Generic Issue 94

The actions proposed by the NRC staff to improve the availability of the lowtemperature overpressure protection (LTOP) system represents a substantial increase in the overall protection of the public health and safety and a determination has been made that the attendant costs are justified in view of this increased protection. The technical findings and the regulatory analysis related to Generic Issue 94 are discussed in NUREG-1326, "Regulatory Analysis for the Resolution of Generic Issue 94, Additional Low-Temperature Overpressure Protection for Light-Water Reactors."

The proposed changes to the Comanche Peak Electric Station (CPSES) Unit 1 Technical Specifications included in the licensee's letter of November 27, 1991, are consistent with those proposed in the staff's generic letter. The proposed changes to TS 3.4.8.3 include the addition of one RHR suction relief valve and one PORV as an acceptable group of overpressure protection devices. The licensee also adopted the staff's position of limiting plant operations with one LTOP channel inoperable to 24 hours before restoring the LTOP channel to operable status. The licensee has also changed surveillance requirement 4.4.8.1.2 to include Figure 3.4-4 (PORV Setpoints for Overpressure Protection Mitigation) to the list of figures to Le updated based on the results of the Reactor Vessel Irradiation Surveillance Program.

The staff has reviewed the licensee's proposed modifications to the CPSES

it 1 Technical Specifications. Since the proposed modifications are consistent with the staff's position previously stated in the GL and are justified in the above referenced regulatory analysis, the staff finds the proposed modifications to be acceptable.

3.0 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.

4.0 ENVIRONMENTAL CONCLUSION

The amendment involves a change in a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in 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 effluent that may ta 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 that there has been no public comment on such finding (57 FR 20518). 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 to be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The staff has concluded, based on the consideration 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. The staff therefore concludes that the proposed changes are acceptable.

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