October 18, 1991

Docket No. 50-445

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Mr. William J. Cahill, Jr.
Executive Vice President
TU Electric
400 North Olive Street, L.B. 81
Dallas, Texas 75201

Dear Mr. Cahill:

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 1 - AMENDMENT NO. 4 TO FACILITY OPERATING LICENSE NO. NPF-87 (TAC NO. M80862)

The Commission has issued the enclosed Amendment No. 4 to Facility Operating License No. NPF-87 for the Comanche Peak Steam Electric Station, Unit 1. The amendment consists of changes to the Technical Specifications in response to your application dated June 28, 1991.

The amendment changes Technical Specification Sections 4.4.8.3.2 (a and b) and 4.5.2.d to delete surveillance testing requirements associated with the auto-closure interlock (ACI) feature for the residual heat removal suction isolation valves. This change allows implementation of plant modifications to delete the ACI feature from these valves.

A copy of our related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

Original Signed By

Thomas A. Bergman, Acting Project Manager
Project Directorate IV-2
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 4 to NPF-87
2. Safety Evaluation

cc w/enclosures:
See next page

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Honorable Dale McPherson
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

TEXAS UTILITIES ELECTRIC COMPANY, ET AL.*

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 1

DOCKET NO. 50-445

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 4
License No. NPF-87

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Texas Utilities Electric Company (TU Electric) acting for itself and as agent for Texas Municipal Power Agency (licensees) dated June 28, 1991, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

*The current owners of the Comanche Peak Steam Electric Station are: Texas Utilities Electric Company and Texas Municipal Power Agency. Transfer of ownership from Texas Municipal Power Agency to Texas Utilities Electric Company was previously authorized by Amendment No. 9 to Construction Permit CPPR-126 on August 25, 1988 to take place in 10 installments as set forth in the Agreement attached to the application for Amendment dated March 4, 1988. At the completion thereof, Texas Municipal Power Agency will no longer retain any ownership interest.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-87 is hereby amended to read as follows:

   2. Technical Specifications

      The Technical Specifications contained in Appendix A, as revised through Amendment No. 4, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance to be implemented within 60 days of date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Suzanne C. Black

Suzanne C. Black, Director
Project Directorate IV-2
Division of Reactor Projects - III/IV/V
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 18, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 4

FACILITY OPERATING LICENSE NO. NPF-87

DOCKET NO. 50-445

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE	INSERT
3/4 4-30	3/4 4-30
3/4 5-4	3/4 5-4

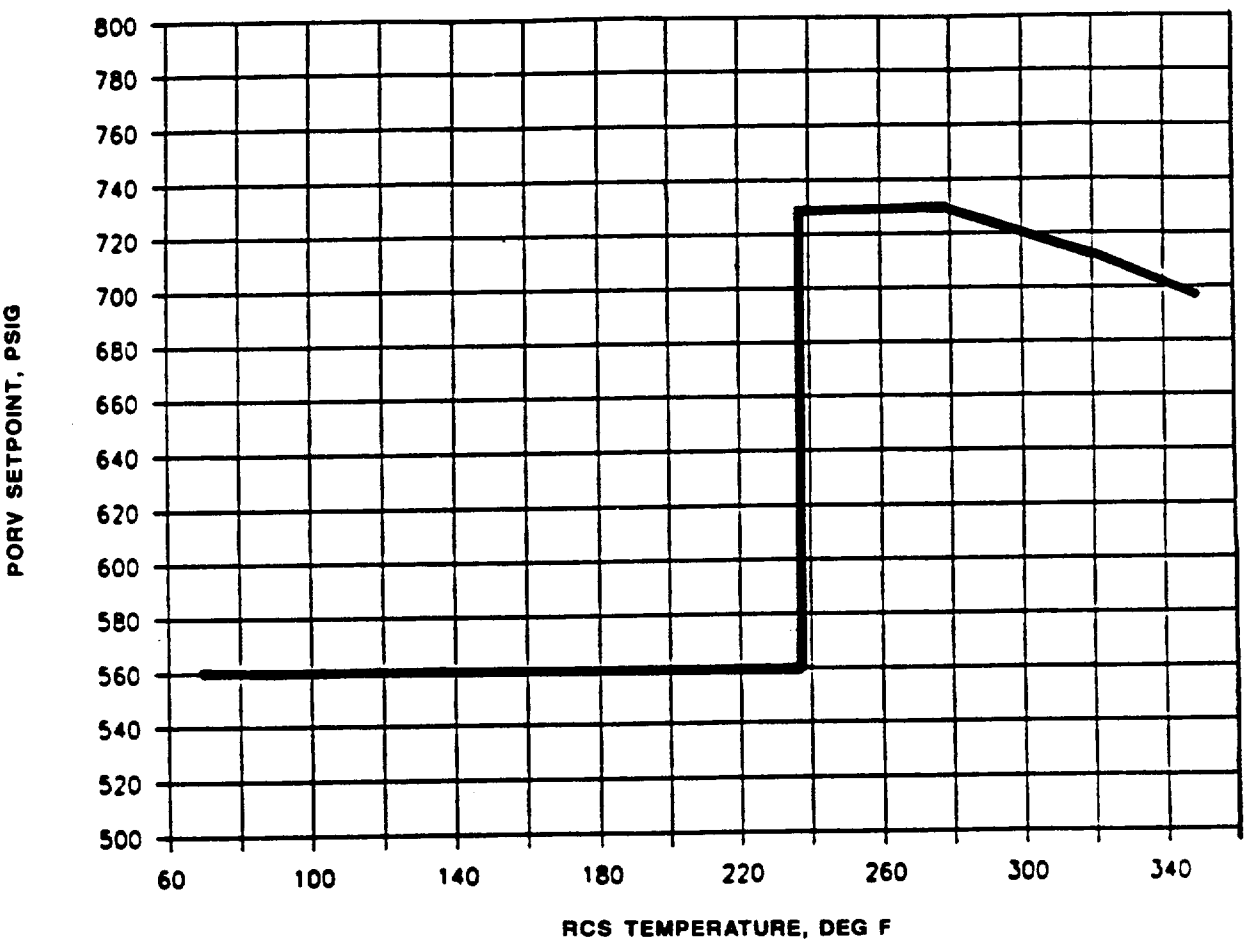

FIGURE 3.4-4. PORV SETPOINTS FOR OVERPRESSURE MITIGATION APPLICABLE UP TO 16 EFPY

SURVEILLANCE REQUIREMENTS

4.4.8.3.1 Each PORV shall be demonstrated OPERABLE by:

a. Performance of an ANALOG CHANNEL OPERATIONAL TEST on the PORV actuation channel, but excluding valve operation, within 31 days prior to entering a condition in which the PORV is required OPERABLE and at least once per 31 days thereafter when the PORV is required OPERABLE;

b. Performance of a CHANNEL CALIBRATION on the PORV actuation channel at least once per 18 months; and

c. Verifying the PORV isolation valve is open at least once per 72 hours when the PORV is being used for overpressure protection.

4.4.8.3.2 Each RHR suction relief valve shall be demonstrated OPERABLE when the RHR suction relief valves are being used for cold overpressure protection as follows:

a. For RHR suction relief valve 8708B by verifying at least once per 72 hours that RHR Suction Isolation Valve (RRSIV) 8702B and 8701B are open.

b. For RHR suction relief valve 8708A by verifying at least once per 72 hours that RRSIV 8701A and 8702A are open.

c. Testing pursuant to Specification 4.0.5.

4.4.8.3.3 The RCS vent(s) shall be verified to be open at least once per 12 hours* when the vent(s) is being used for overpressure protection.

*Except when the vent pathway is provided with a valve which is locked, sealed, or otherwise secured in the open position, then verify these valves open at least once per 31 days.

3/4.5.2 ECCS SUBSYSTEMS - $T_{avg} \geq 350°F$

LIMITING CONDITION FOR OPERATION

3.5.2 Two independent Emergency Core Cooling System (ECCS) subsystems shall be OPERABLE with each subsystem comprised of:

a. One OPERABLE centrifugal charging pump,

b. One OPERABLE safety injection pump,

c. One OPERABLE RHR heat exchanger,

d. One OPERABLE RHR pump, and

e. An OPERABLE flow path capable of taking suction from the refueling water storage tank on a Safety Injection signal and automatically opening the containment sump suction valves during the recirculation phase of operation.

APPLICABILITY: MODES 1, 2, and 3*.

ACTION:

a. With one ECCS subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

b. In the event the ECCS is actuated and injects water into the Reactor Coolant System, a Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 90 days describing the circumstances of the actuation and the total accumulated actuation cycles to date. The current value of the usage factor for each affected Safety Injection nozzle shall be provided in this Special Report whenever its value exceeds 0.70.

*The provisions of Specifications 3.0.4 and 4.0.4 are not applicable for entry into MODE 3 for the centrifugal charging pumps and the safety injection pumps declared inoperable pursuant to Specification 3.5.3 provided the centrifugal charging pumps and the safety injection pumps are restored to OPERABLE status within 4 hours or prior to the temperature of one or more of the RCS cold legs exceeding 375°F, whichever comes first.

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

a. At least once per 12 hours by verifying that the following valves are in the indicated positions with power to the valve operators removed:

Valve Number	Valve Function	Valve Position
8802 A & B	SI Pump to Hot Legs	Closed
8808 A, B, C, D	Accum. Discharge	Open*
8809 A & B	RHR to Cold Legs	Open
8835	SI Pump to Cold Legs	Open
8840	RHR To Hot Legs	Closed
8806	SI Pump Suction from RWST	Open
8813	SI Pump Mini-Flow Valve	Open

b. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suctions during LOCA conditions. This visual inspection shall be performed:

1) For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and

2) Of the areas affected within containment at the completion of each containment entry when CONTAINMENT INTEGRITY is established.

d. At least once per 18 months by:

1) Verifying interlock action of the RHR system from the Reactor Coolant System to ensure that with a simulated or actual Reactor Coolant System pressure signal greater than or equal to 442 psig the interlocks prevent the valves from being opened.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 4 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

By application dated June 28, 1991, Texas Utilities Electric Company (the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License No. NPF-87) for the Comanche Peak Steam Electric Station, Unit No. 1. The proposed changes would revise Technical Specification Sections 4.4.8.3.2 (a and b) and 4.5.2.d to delete surveillance testing requirements associated with the autoclosure interlock (ACI) feature for the residual heat removal (RHR) suction isolation valves. This change allows implementation of plant modifications to delete the ACI feature from these valves.

This proposal is being made to address the concern identified in Generic Letter 88-17, "Loss of Decay Heat Removal," about inadvertent RHR isolation events caused by spurious activations of the ACI circuity. Topical Report WCAP-11736-A "Residual Heat Removal System Autoclosure Interlock Deletion Report for the Westinghouse Owners Group" provides the basis for the removal of the ACI. The Safety Evaluation Report (SER) documenting the NRC review of WCAP-11736 concluded that a net safety benefit would result from the removal of the RHR ACI provided that five plant improvements listed in the SER were implemented. In addition, the SER concluded that the information contained in the report may be referenced in the plant-specific submittal requesting removal of the RHR ACI. The above mentioned plant improvements are listed below:

(1) An alarm will be added to each RHR suction valve which will actuate if the valve is open and the pressure is greater than the open permissive setpoint and less than the RHR system design pressure minus the RHR pump head pressure.

(2) Valve position indication to the alarm must be provided from stem-mounted limit switches and power to these switches must not be affected by power lockout of the valve.

(3) The procedural improvements described in WCAP-11736 should be implemented. Procedures themselves are plant-specific.

(4) Where feasible, power should be removed from the RHR suction valves prior to their being leak-checked (plant specific).

(5) The RHR suction valve operators should be sized so that the valves cannot be opened against full system pressure (plant specific).

2.0 EVALUATION

The proposed revision to Technical Specification (TS) 4.4.8.3.2 deletes the surveillance requirement to verify once every 31 days that one of the two in-series valves in each RHRS train is in the open position with its power removed, and to verify once every 12 hours that the second suction valve in each train is open. This is replaced by the requirement to verify once every 72 hours that both suction valves in each train are open. The proposed change in TS 4.5.2 deletes the surveillance requirement for verifying ACI operability (the open permissive interlock surveillance remains unchanged).

The NRC-approved report WCAP-11736 provides the underlying basis for justifying the licensee's planned action. The WCAP-11736 reference plant for Comanche Peak is Callaway Unit 1. The licensee's submittal includes a listing of the relevant design/operational differences that exist between Comanche Peak and the reference plant in WCAP-11736. The licensee has examined these differences to determine their impact on inter-system loss-of-coolant-accident potential, RHR system availability, low-temperature overpressure protection, and on the conclusions reached in WCAP-11736. In addition, the licensee has addressed each of the five improvements set forth in our SER and listed above.

With regard to the above mentioned five plant improvements, the licensee's submittal has provided the following responses:

Improvement 1 - An alarm, both audio and visual, to alert the operators that an RHR suction isolation valve is open coincident with high RCS pressure is being added as part of the modification to remove the RHR auto-closure interlock. The setpoint is consistent with the WCAP-11736 guidance. Also, in accordance with WCAP-11736, the open permissive interlock (OPI) for each RHR suction valve will remain intact and unchanged.

Improvement 2 - The CPSES design utilizes motor switch contacts which are diverse from the limit switch contacts that provide main control board valve position indication. The valve position input to the alarm will not be affected by power lockout of the valve. The original intent of using stem-mounted limit switches in the alarm circuit was to provide a diverse means of valve position indication; the CPSES design provides this diversity.

Improvement 3 - The licensee has reviewed the CPSES operating procedures to determine the effect of ACI removal and has committed to make appropriate revisions. If an alarm is received, the operators will be directed to take necessary actions to terminate the overpressure condition or close the open RHR suction valves. RCS pressurization will be stopped and the plant returned to the shutdown cooling mode if the open valves cannot be closed. To further ensure alarm operability, instrument loop calibration procedures will be revised.

Improvement 4 - The licensee does not plan to remove power from the RHR suction/ isolation valves prior to leak testing. Since all RHR isolation valve leak rate testing is conducted at CPSES in Mode 5, removing power from the RHR suction valves prior to leak rate testing is not beneficial for the following reasons:

(a) Power removal from these valves does not improve the RHR system's ability to withstand pressure transients since overpressure protection is provided and the RHR system is within its pressure limits.

(b) This requirement would increase the procedural complexity of leakrate testing and extend testing time thus potentially reducing the availability of that loop for decay heat removal and overpressure protection.

(c) If a failure of the operable RHR loop occurred during leak testing of the opposite loop, restoring the non-operable loop to operability would be delayed for restoration of power to the valves.

Improvement 5 - The licensee has stated that the RHRS suction valves potentially have the capability of opening against full RCS pressure. However, TU Electric maintains that the low probabilities predicted for the opening of these valves, in concert with the open permissive interlock, the new valve-not-closed alarm, the administrative controls, and the removal of power from the valves after they are closed and above 350°F, provide adequate protection against opening the valves at full RCS pressure.

3.0 SUMMARY

We have completed our evaluation of the licensee's submittal and have concluded that:

(a) The licensee has adequately identified differences in RHR system configuration and design/operational characteristics that exist between CPSES and the reference plant. Because these differences are insignificant, the analysis and conclusions presented in WCAP-11736 are directly applicable to Comanche Peak.

(b) The licensee has adequately addressed the five plant improvements and the licensee's proposed actions are identified. For the proposed actions that differ from the five improvements listed in the SER, the licensee has adequately demonstrated that the proposed actions provided at least an equivalent level of safety relative to the improvements in the SER.

(c) The proposed change to TS 4.4.8.3.2 (a and b) will remove the requirement to verify that the RHR RCS suction isolation valve (RRSIV) is open with power to the valve operator removed, and will change the requirement of verifying that the RRSIVs are open from once every 12 hours to once every 72 hours. These changes are consistent with those specified for the reference plant in the already approved WCAP-11736.

(d) The proposed change to TS 4.5.2 d (to delete the requirement for verifying ACI operability) is consistent with the licensee's plans to remove the ACI feature from the RHR suction isolation valves. This change is, therefore, acceptable.

On the basis of these conclusions, we find the proposed TS changes and the proposed plan for RHR ACI removal to be acceptable.

4.0 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.

5.0 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 changes 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 47243). 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.

6.0 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

REFERENCES

(1) R. A. Newton, Chairman WOG, letter to NRC, dated April 22, 1988 (Submission of WCAP 11736).

(2) A. Thadani (NRC) letter to R. A. Newton, Chairman WOG, "Acceptance for Reference WCAP-11736. Rev. 0, 'Residual Heat Removal System, Auto Closure Interlock (ACI) Removal Report' in Plant Specific Submittals," dated August 8, 1989.

Principal Contributor: M. Chatterton, SRXB/DST

Date: October 18, 1991