

November 13, 1991

Docket No. 50-445

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

DISTRIBUTION:

Docket File	BBoger
NRC PDR	GHill (4)
Local PDR	Wanda Jones
PDIV-2 Reading	CGrimes
EPeyton	ACRS (10)
JClifford (2)	GPA/PA
MVirgilio	OC/LFMB
OGC	DHagan
LYandell, RIV	Plant File
TBergman	RJones

Dear Mr. Cahill:

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 1 - AMENDMENT NO. 7 TO FACILITY OPERATING LICENSE NO. NPF-87 (TAC NO M81778)

The Commission has issued the enclosed Amendment No. 7 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 October 1, 1991.

The amendment revises Technical Specification Surveillance 4.5.2.h by lowering the minimum centrifugal charging pump and high head safety injection pump flow rate surveillance acceptance criteria. The purpose for the change is to avoid pump operation at flow rates exceeding runout limits for the pumps.

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. 7 to NPF-87
2. Safety Evaluation

cc w/enclosures:

See next page

OFC	: PDIV-2/LA	: PDIV-2/PM	: OGC <i>noted</i>	: PDIV-2/D	:	:	:
NAME	: EPeyton	: TBergman	: <i>m/king</i>	: SBlack	:	:	:
DATE	: 11/5/91	: 11/5/91	: 11/7/91	: 11/13/91	:	:	:

OFFICIAL RECORD COPY  
Document Name: COMANCHE PEAK AMENDMENT/81778

9112020143 911113  
PDR ADDCK 05000445  
P PDR

DF01  
41  
CP

November 13, 1991

cc w/enclosures:

Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
P. O. Box 1029  
Granbury, Texas 76048

Regional Administrator, Region IV  
U.S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76011

Mrs. Juanita Ellis, President  
Citizens Association for Sound Energy  
1426 South Polk  
Dallas, Texas 75224

Owen L. Thero, President  
Quality Technology Company  
Lakeview Mobile Home Park, Lot 35  
4793 East Loop 820 South  
Fort Worth, Texas 76119

Mr. Roger D. Walker  
Manager, Nuclear Licensing  
Texas Utilities Electric Company  
400 North Olive Street, L.B. 81  
Dallas, Texas 75201

Texas Utilities Electric Company  
c/o Bethesda Licensing  
3 Metro Center, Suite 610  
Bethesda, Maryland 20814

William A. Burchette, Esq.  
Counsel for Tex-La Electric  
Cooperative of Texas  
Jordan, Schulte, & Burchette  
1025 Thomas Jefferson Street, N.W.  
Washington, D.C. 20007

GDS Associates, Inc.  
Suite 720  
1850 Parkway Place  
Marietta, Georgia 30067-8237

Jack R. Newman, Esq.  
Newman & Holtzinger  
1615 L Street, N.W.  
Suite 1000  
Washington, D.C. 20036

Chief, Texas Bureau of Radiation Control  
Texas Department of Health  
1100 West 49th Street  
Austin, Texas 78756

Honorable Dale McPherson  
County Judge  
P.O. Box 851  
Glen Rose, Texas 76043



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. 7  
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 October 1, 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. 7, 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 30 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



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: November 13, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 7

FACILITY OPERATING LICENSE NO. NPF-87

DOCKET NO. 50-445

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

REMOVE

3/4 5-6

INSERT

3/4 5-6

## EMERGENCY CORE COOLING SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

- 2) A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or abnormal corrosion.
- e. At least once per 18 months, during shutdown, by:
- 1) Verifying that each automatic valve in the flow path actuates to its correct position on Safety Injection actuation test signals, and
  - 2) Verifying that each of the following pumps start automatically upon receipt of a Safety Injection actuation test signal:
    - a) Centrifugal charging pumps,
    - b) Safety injection pumps, and
    - c) RHR pumps.
- f. By verifying that each of the following pumps develops the indicated differential pressure on recirculation flow when tested pursuant to Specification 4.0.5:
- 1) Centrifugal charging pump  $\geq$  2370 psid,
  - 2) Safety injection pump  $\geq$  1440 psid, and
  - 3) RHR pump  $>$  170 psid.
- g. By verifying the correct position of each mechanical position stop for the following ECCS throttle valves:
- 1) Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the ECCS subsystems are required to be OPERABLE, and
  - 2) At least once per 18 months.

CCP/SI System  
Valve Number

SI System Valve Number

SI-8810A	SI-8822A	SI-8816A
SI-8810B	SI-8822B	SI-8816B
SI-8810C	SI-8822C	SI-8816C
SI-8810D	SI-8822D	SI-8816D

## EMERGENCY CORE COOLING SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

---

- h. By performing a flow balance test, during shutdown, following completion of modifications to the ECCS subsystems that alter the subsystem flow characteristics and verifying that:
  - 1) For centrifugal charging pump lines, with a single pump running:
    - a) The sum of the injection line flow rates, excluding the highest flow rate, is greater than or equal to 245 gpm, and
    - b) The total pump flow rate is less than or equal to 560 gpm.
  - 2) For safety injection pump lines, with a single pump running:
    - a) The sum of the cold leg injection line flow rates, excluding the highest flow rate, is greater than or equal to 400 gpm, and
    - b) The total pump flow rate is less than or equal to 675 gpm.
  - 3) For RHR pump lines, with a single pump running, the sum of the cold leg injection line flow rates is greater than or equal to 4652 gpm.
- i. Prior to entering MODE 3 and following any maintenance or operations activity which drains portions of the system by venting the ECCS pump casing and accessible discharge piping high points.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 7 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 October 1, 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 (CPSES). The proposed changes would revise Technical Specification (TS) Surveillance 4.5.2.h, paragraphs (1)(a) and (2)(a), by lowering the minimum centrifugal charging pump (CCP) and high head safety injection (HHSI) pump flow rate surveillance acceptance criteria. The purpose of this change is to avoid pump operation at flow rates exceeding runout limits for the pumps.

2.0 EVALUATION

In the October 1, 1991, submittal, the licensee identified that CPSES CCP and HHSI pump flows could exceed their runout limit when aligned to take suction from the low pressure injection pump discharge in the recirculation mode of emergency core cooling system (ECCS) operation. This could lead to pump damage and/or compromise of ECCS safety function.

The licensee indicates that the previous TS minimum flow limits (total CCP flow = 333 gpm, excluding the highest injection line flow; total HHSI pump flow = 437 gpm, excluding the highest injection line flow) are too high to ensure that runout limits (total CCP flow = 560 gpm, total HHSI pump flow = 675 gpm) would not be reached.

The proposed Technical Specification addresses the runout concern by reducing the settings of injection line throttle valves, resulting in reductions in the minimum flow values to 245 gpm total for the CCPs and 400 gpm total for the HHSI pumps. These criteria for avoiding runout were established by the Westinghouse Electric Corporation, which designed the ECCS, with concurrence by the Dressler/Pacific Pumps Company, supplier of the pumps. The methodologies used were similar to those previously used to determine design flows, but considered the newly identified conditions for operation.

The reductions in flow will be implemented through TS Surveillance 4.5.2.h paragraphs (1)(a) and (2)(a). In performing these surveillances, the ECCS will be rebalanced by resetting the throttle valves on each of the safety injection branch lines from the discharges of the CCPs and the HHSI pumps, as well as the reactor coolant pump seal injection throttle valves. Lowering the setting on the throttle valves will reduce the maximum pump flow and provide greater assurance against pump runout, but will also reduce the minimum flow for non-runout situations.

The submittal also provided an assessment of the impact of the flow reductions on design analyses for the plant. For non-LOCA accidents and transients, the licensee's assessment identified four events whose analyses could be affected: (a) Mass and Energy Release Inside Containment from a Steamline Break (FSAR Chapter 6.2.1.4), (b) Mass and Energy Release Outside Containment from a Steamline Break, (c) Steamline Break - Core Response (FSAR Chapters 15.1.4 and 15.1.5), and (d) Feedline Break (FSAR Chapter 15.2.8). For each of these analyses, a Westinghouse evaluation, summarized in the submittal, concluded that the flow reductions would not prevent the ECCS from mitigating the consequences of the events analyzed in the FSAR, and that the conclusions of the FSAR event analyses remain valid.

For LOCA analyses, the licensee's submittal provides an assessment of the impact of the flow reductions on the calculated peak cladding temperature (PCT). The impacts of the flow reductions were added to those from other changes to the analyses of record and assessed against the PCTs for the analyses of record. The estimated changes due to ECCS flow reduction for small break LOCAs is 64.85°F, with 182.2°F for other changes to the PCT of record, and a resulting small break LOCA PCT of 2034.55°F. For large break LOCAs these values are 0°F effect due to flow reduction, 55°F due to other changes to the PCT of record, and a resulting PCT of 2065.7°F. These values meet 10 CFR 50.46(b)(1).

Based on the information provided by the licensee, the staff concludes that with reduced CCP and HHSI flow, the CPSES, Unit 1, will continue to meet applicable performance criteria, and that the proposed TS changes are acceptable.

With regard to the significant changes to the ECCS record of analyses, by letter of July 31, 1991, the licensee committed to provide reanalyses of the LOCA analyses performed with models conforming with 10 CFR 50, Appendix B, by May 29, 1992, thereby satisfying the requirements of 10 CFR 50.46.

### 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 CONSIDERATION

The amendment changes a surveillance requirement. 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 50956). 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.

Principal Contributor: F. Orr, SRXB/NRR

Date: November 13, 1991