



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. 2  
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 May 18, 1990, as supplemented by letter dated July 9, 1990, 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.

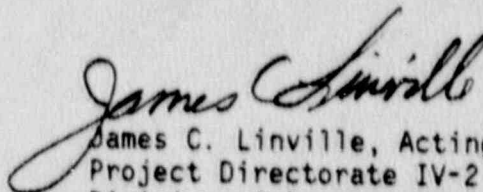
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C.(2) of Facility Operating License No. NPF-87 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 2, 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.

FOR THE NUCLEAR REGULATORY COMMISSION



James C. Linville, Acting Director  
Project Directorate IV-2  
Division of Reactor Projects - III,  
IV, V and Special Projects  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 6, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 2

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

2-4  
2-5  
3/4 3-27  
3/4 3-28

INSERT

2-4  
2-5  
3/4 3-27  
3/4 3-28

# SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS

## 2.2 LIMITING SAFETY SYSTEM SETTINGS

### REACTOR TRIP SYSTEM INSTRUMENTATION SETPOINTS

2.2.1 The Reactor Trip System Instrumentation and Interlock Setpoints shall be set consistent with the Trip Setpoint values shown in Table 2.2-1.

APPLICABILITY: As shown for each channel in Table 3.3-1.

ACTION:

- a. With a Reactor Trip System Instrumentation or Interlock Setpoint less conservative than the value shown in the Trip Setpoint column but more conservative than the value shown in the Allowable Value column of Table 2.2-1, adjust the setpoint consistent with the Trip Setpoint value.
- b. With the Reactor Trip System Instrumentation or Interlock Setpoint less conservative than the value shown in the Allowable Values column of Table 2.2-1, either:
  1. Adjust the setpoint consistent with the Trip Setpoint value of Table 2.2-1 and determine within 12 hours that Equation 2.2-1 was satisfied for the affected channel, or
  2. Declare the channel inoperable and apply the applicable ACTION statement requirement of Specification 3.3.1 until the channel is restored to OPERABLE status with its setpoint adjusted consistent with the Trip Setpoint value.

Equation 2.2-1

$$Z + R + S \leq TA$$

Where:

Z = The value from Column Z of Table 2.2-1 for the affected channel,

R = The "as measured" value (in percent span) of rack error for the affected channel,

S = Either the "as measured" value (in percent span) of the sensor error, or the value from Column S (Sensor Error) of Table 2.2-1 for the affected channel, and

TA = The value from Column TA (Total Allowance) of Table 2.2-1 for the affected channel.

TABLE 2.2-1  
 REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
1. Manual Reactor Trip	N.A.	N.A.	N.A.	N.A.	N.A.
2. Power Range, Neutron Flux					
a. High Setpoint	7.5	4.56	1.25	<109% of RTP*	<111.7% of RTP*
b. Low Setpoint	8.3	4.56	1.25	<25% of RTP*	<27.7% of RTP*
3. Power Range, Neutron Flux, High Positive Rate	1.6	0.5	0	<5% of RTP* with a time constant >2 seconds	<6.3% of RTP* with a time constant >2 seconds
4. Power Range, Neutron Flux, High Negative Rate	1.6	0.5	0	<5% of RTP* with a time constant >2 seconds	<6.3% of RTP* with a time constant >2 seconds
5. Intermediate Range, Neutron Flux	17.0	8.41	0	<25% of RTP*	<31.5% of RTP*
6. Source Range, Neutron Flux	17.0	10.01	0	<10 <sup>5</sup> cps	<1.4 x 10 <sup>5</sup> cps
7. Overtemperature N-16	5.8	3.65	1.2+0.8 <sup>(1)</sup>	See Note 1	See Note 2
8. Overpower N-16	4.0	1.93	0	<112% of RTP*	<115.1% of RTP*
9. Pressurizer Pressure-Low	4.4	0.71	2.0	>1880 psig	>1863.6 psig
10. Pressurizer Pressure-High	7.5	5.01	1.0	<2385 psig	<2400.8 psig

\*RTP = RATED THERMAL POWER

(1) 1.2% span for delta-T (RTDs) and 0.8% for pressurizer pressure.

TABLE 2.2-1 (Continued)  
 REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
11. Pressurizer Water Level High	8.0	2.18	2.0	<92% of instrument span	<93.9% of instrument span
12. Reactor Coolant Flow-Low	2.5	1.18	0.6	>90% of loop design flow**	>88.6% of loop design flow**
13. Steam Generator Water Level - Low-Low	25.0	22.08	2.0	>25.0% of narrow range instrument span	>23.1% of narrow range instrument span
14. Undervoltage - Reactor Coolant Pumps	7.7	0	0	>4830 volts-each bus	>4753 volts-each bus
15. Underfrequency - Reactor Coolant Pumps	4.4	0	0	>57.2 Hz	>57.1 Hz
16. Turbine Trip					
a. Low Trip System Pressure	N.A.	N.A.	N.A.	>59 psig	>46.6 psig
b. Turbine Stop Valve Closure	N.A.	N.A.	N.A.	>1% open	>1% open
17. Safety Injection Input from ESF	N.A.	N.A.	N.A.	N.A.	N.A.

\*\*Loop design flow = 95,700 gpm.

TABLE 2.2-1 (Continued)  
 REACTOR TRIP SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TOTAL ALLOWANCE (TA)</u>	<u>Z</u>	<u>SENSOR ERROR (S)</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
18. Reactor Trip System Interlocks					
a. Intermediate Range Neutron Flux, P-6	N.A.	N.A.	N.A.	$1 \times 10^{-10}$ amps	$\geq 6 \times 10^{-11}$ amps
b. Low Power Reactor Trips Block, P-7					
1) P-10 input	N.A.	N.A.	N.A.	10% of RTP*	$< 12.7\%$ of RTP*
2) P-13 input	N.A.	N.A.	N.A.	10% RTP* Turbine First Stage Pressure Equivalent	$< 12.7\%$ RTP* Turbine First Stage Pressure Equivalent
c. Power Range Neutron Flux, P-8	N.A.	N.A.	N.A.	48% of RTP*	$< 50.7\%$ of RTP*
d. Power Range Neutron Flux, P-9	N.A.	N.A.	N.A.	$< 50\%$ of RTP*	$< 52.7\%$ of RTP*
e. Power Range Neutron Flux, P-10	N.A.	N.A.	N.A.	10% of RTP*	$\geq 7.3\%$ of RTP*
19. Reactor Trip Breakers	N.A.	N.A.	N.A.	N.A.	N.A.
20. Automatic Trip and Interlock Logic	N.A.	N.A.	N.A.	N.A.	N.A.

\*RTP = RATED THERMAL POWER

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TOTAL ALLOWANCE (TA)</u>	<u>Z</u>	<u>SENSOR ERROR (S)</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
4. Steam Line Isolation					
a. Manual Initiation	N.A.	N.A.	N.A.	N.A.	N.A.
b. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
c. Containment Pressure--High-2	2.7	0.71	1.7	<6.2 psig	<6.8 psig
d. Steam Line Pressure--Low	17.3	15.01	2.0	>605 psig*	>593.5 psig*
e. Steam Line Pressure - Negative Rate--High	8.0	0.5	0	<100 psi**	< 178.7 psi**
5. Turbine Trip and Feedwater Isolation					
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
b. Steam Generator Water Level--High-High	7.6	4.78	2.0	<82.4% of narrow range instrument span.	<84.3% of narrow range instrument span.
c. Safety Injection	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.				



TABLE 3.3-3 (Continued)

## ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

FUNCTIONAL UNIT	TOTAL ALLOWANCE (TA)	Z	SENSOR ERROR (S)	TRIP SETPOINT	ALLOWABLE VALUE
6. Auxiliary Feedwater					
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
b. Steam Generator Water Level--Low-Low	25.0	22.08	2.0	> 25.0% of narrow range instrument span.	> 23.1% of narrow range instrument span.
c. Safety Injection - Start Motor Driven Pumps	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.				
d. Loss-of-Offsite Power	N.A.	N.A.	N.A.	N.A.	N.A.
e. Trip of All Main Feedwater Pumps	N.A.	N.A.	N.A.	N.A.	N.A.
7. Automatic Initiation of ECCS Switchover to Containment Sump					
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	N.A.
b. RWST Level--Low-Low	2.5	0.71	1.25	> 40.0% of span	> 38.9% of span
Coincident With Safety Injection	See Item 1. above for all Safety Injection Trip Setpoints and Allowable Values.				
8. Loss of Power (6.9 kV & 480 V Safeguards System Undervoltage)					
a. 6.9 kV Preferred Offsite Source Undervoltage	N.A.	N.A.	N.A.	> 5004 V	< 5900 V > 4900 V