Augurt 18, 1997

Mr. C. Lance Terry Group Vice President, Nuclear TU Electric Energy Plaza 1601 Bryan Street, 12th Floor Dallas, TX 75201-3411

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2 - AMENDMENT NOS. 54 AND 40 TO FACILITY OPERATING LICENSE NOS. NPF-87 AND NPF-89 (TAC NOS. M91064 AND M91065)

Dear Mr. Terry:

The Commission has issued the enclosed Amendment Nos. 54 and 40 to Facility Operating License Nos. NPF-87 and NPF-89 for the Comanche Peak Steam Electric Station, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated December 7, 1994 (TXX-94326), as supplemented by letter dated June 21, 1996 (TXX-96384).

The amendments revise Section 3.7.1.5 of the TSs to increase the Allowed Outage Time for one inoperable Main Steam Isolation Valve (MSIV) while in Mode 1, and to clarify requirements related to inoperable MSIVs while in Modes 2 and 3.

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

Sincerely, Orig. signed by Timothy J. Polich, Project Manager Project Directorate IV-1 Division of Reactor Projects III/IV Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

Enclosures:	1.	Amendment No.	54	to	NPF-87
	2.	Amendment No.	40	to	NPF-89
	3.	Safety Evalua	tion		

cc w/encls: See next page

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DOCUMEN	T NAME: CP9	LO64.AMD	See previo	us concurrenc	e*	
OFC	PM/PD4-1	LA/PD4-1	DSSAXSSB	SPLB	TSB97-082	OGC ON JUNON
NAME	TPolich/sp	CHawes CMH	CBerlinger	TMarsh*	CGrimes	O w/ Ow
DATE	5 127/97	8 115 197	5149	12/20/96	5/29/97	8 / 5 /97
СОРҮ	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO

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Mr. C. Lance Terry Group Vice President, aclear TU Electric Energy Plaza 1601 Bryan Street, 12th Floor Dallas, TX 75201-3411

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2 - AMENDMENT NOS. AND TO FACILITY OPERATING LICENSE NOS. NPF-87 AND NPF-89 (TAC NOS. M91064 AND M91065)

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Timothy J. Polich, Project Manager Project Directorate IV-1 Division of Reactor Projects III/IV Office of Nuclear Reactor Regulation

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**TPolich** 

Docket Nos. 50-445 and 50-446

Enclosures: 1. Amendment No./ to NPF-87 2. Amendment No. to NPF-89 3. Safety Evaluation

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DOCUMENT NAME: CP91064.AMD

OFC	PM/PD4-1 /	(A)LA/PD4-1	SPLB M	TSB	OGC
NAME	TPolich/sp	CHawes CMN	TMarsh	CGrimes	
DATE	12/14/967	12/10/96	12/20/96	/ /96	/ /96
СОРУ	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO

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# UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 18, 1997

Mr. C. Lance Terry Group Vice President, Nuclear TU Electric Energy Plaza 1601 Bryan Street, 12th Floor Dallas, TX 75201-3411

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2 - AMENDMENT NOS. 54 AND 40 TO FACILITY OPERATING LICENSE NOS. NPF-87 AND NPF-89 (TAC NOS. M91064 AND M91065)

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The amendments revise Section 3.7.1.5 of the TSs to increase the Allowed Outage Time for one inoperable Main Steam Isolation Valve (MSIV) while in Mode 1, and to clarify requirements related to inoperable MSIVs while in Modes 2 and 3.

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Res

Timothy J. Polich, Project Manager Project Directorate IV-1 Division of Reactor Projects III/IV Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

Enclosures:	1.	Amendment No. 54	to	NPF-87
	2.	Amendment No. 40	to	NPF-89
	3.	Safety Evaluation		

cc w/encls: See next page

Mr. C. Lance Terry TU Electric Company

#### cc:

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Mr. Roger D. Walker, Manager Regulatory Affairs for Nuclear Engineering Organization Texas Utilities Electric Company 1601 Bryan Street, 12th Floor Dallas, TX 75201-3411

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

George L. Edgar, Esq. Morgan, Lewis & Bockius 1800 M Street, N.W. Washington, DC 20036-5869 Comanche Peak, Units 1 and 2

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

Office of the Governor ATTN: Susan Rieff, Director Environmental Policy P. O. Box 12428 Austin, TX 78711

Arthur C. Tate, Director Division of Compliance & Inspection Bureau of Radiation Control Texas Department of Health 1100 West 49th Street Austin, TX 78756-3189



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

# TEXAS UTILITIES ELECTRIC COMPANY

# COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 1

# DOCKET NO. 50-445

### AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 54 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, the licensee) dated December 7, 1994 (TXX-94326), as supplemented by letter dated June 21, 1996 (TXX-96384), 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.
- 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. Jechnical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 54, 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.

FOR THE NUCLEAR REGULATORY COMMISSION

Timothy J. Polich, Project Manager

Timothy J. Polich, Project Manager Project Directorate IV-1 Division of Reactor Projects III/IV Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: August 18, 1997

- 2 -



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

# TEXAS UTILITIES ELECTRIC COMPANY

# COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 2

# DOCKET NO. 50-446

### AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 40 License No. NPF-89

- 1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Texas Utilities Electric Company (TU Electric, the licensee) dated December 7, 1994 (TXX-94326), as supplemented by letter dated June 21, 1996 (TXX-96384), 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.
- 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-89 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 40, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. TU Electric shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION

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Timothy J. Polich, Project Manager Project Directorate IV-1 Division of Reactor Projects III/IV Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: August 18, 1997

- 2 -

# ATTACHMENT TO LICENSE AMENDMENT NOS. 54 AND 40

# FACILITY OPERATING LICENSE NOS. NPF-87 AND NPF-89

## DOCKET NOS. 50-445 AND 50-446

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

REMOVE	INSERT
3/4 7-8 B 3/4 7-3	3/4 7-8 B 3/4 7-3
-	B 3/4 7-3a
-	B 3/4 7-3b
-	B 3/4 /-3C
-	B 3/4 /-30

# TABLE 4.7-1

# SECONDARY COOLANT SYSTEM SPECIFIC ACTIVITY

#### SAMPLE AND ANALYSIS PROGRAM

# TYPE OF MEASUREMENT AND ANALYSIS

#### SAMPLE AND ANALYSIS FREQUENCY

- 1. Gross Radioactivity Determination\*
- 2. Isotopic Analysis for DOSE EQUIVALENT I-131 Concentration

At least once per 72 hours.

- a) Once per 31 days, whenever the gross radioactivity determination indicates concentrations greater than 10% of the allowable limit for radioiodines.
- b) Once per 6 months, whenever the gross radioactivity determination indicates concentrations less than or equal to 10% of the allowable limit for radioiodines.

COMANCHE PEAK - UNITS 1 AND 2 3/4 7-7

<sup>\*</sup>A gross radioactivity analysis shall consist of the quantitative measurement of the total specific activity of the secondary coolant except for radionuclides with half-lives less than 10 minutes. Determination of the contributors to the gross specific activity shall be based upon those energy peaks identifiable with a 95% confidence level.

#### MAIN STEAM LINE ISOLATION VALVES

#### LIMITING CONDITION FOR OPERATION

3.7.1.5 Four MSIVs shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

#### ACTION:

MODE 1:

With one MSIV inoperable but open, POWER OPERATION may continue provided the inoperable valve is restored to OPERABLE status within 8 hours; otherwise be in STARTUP within the next 6 hours.

MODES 2\* and 3\*:

With one or more MSIVs inoperable, subsequent operation in MODE 2 or 3 may proceed provided the MSIV is closed within 8 hours and verified closed once per 7 days. Otherwise, be in HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

#### SURVEILLANCE REQUIREMENTS

4.7.1.5 Each MSIV shall be demonstrated OPERABLE by verifying full closure within 5 seconds when tested pursuant to Specification 4.0.5. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.

\*Separate entry times into Action Statement is allowed for each MSIV.

COMANCHE PEAK - UNITS 1 AND 2

3/4 7-8

Unit 1 - Amendment No. 54 Unit 2 - Amendment No. 40

#### BASES

### 3/4.7.1.4 SPECIFIC ACTIVITY

The limitations on Secondary Coolant System specific activity ensure that the resultant offsite radiation dose will be limited to a small fraction of 10 CFR 100 dose guideline values in the event of a steam line rupture. This dose also includes the effects of a coincident 1 gpm primary-to-secondary tube leak in the steam generator of the affected steam line. These values are consistent with the assumptions used in the safety analyses.

# 3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

#### BACKGROUND

The MSIVs isolate steam flow from the secondary side of the steam generators following a high energy line break (HELB). MSIV closure terminates flow from the unaffected (intact) steam generators.

One MSIV is located in each main steam line outside, but close to, containment. The MSIVs are downstream from the main steam safety valves (MSSVs), the steam generator atmospheric relief valves (ARVs), and auxiliary feedwater (AFW) pump turbine steam supply, to prevent MSSV, ARV, and AFW isolation from the steam generators by MSIV closure. Closing the MSIVs isolates each steam generator from the others, and isolates the turbine, steam dump system, and other auxiliary steam supplies from the steam generators.

The MSIVs close on a main steam isolation signal generated by either low steam generator pressure, high containment pressure, or steam line pressure negative rate-high. Each MSIV is provided with a three-position control switch mounted on the main control board. The switch has three positions which are close, auto and open, with a spring return to auto position. Both Train A and Train B contacts are contained in each hand switch to ensure that the valves can be closed even if one train fails. The valves also fail closed on a loss of hydraulic fluid signal.

Each MSIV has an MSIV bypass valve which is locked closed during power operation. During startup, hot standby, and hot shutdown, one MSIV bypass valve may be opened provided the other three bypass valves are locked closed and their associated MSIVs are closed. The MSIVs may also be actuated manually.

#### APPLICABLE SAFETY ANALYSES

The basis for the MSIV operability is derived from their assumed operation in the accident analyses of the breaks in the secondary system (principally, steamline break). The design of the secondary system precludes the uncontrolled blowdown of more than one steam generator, assuming a single active component failure (e.g., the failure of one MSIV to close on demand). In addition, the MSIVs are credited in the analyses of the steam generator tube rupture accidents.

In the safety analyses, several different SLB events are compared against different event acceptance limits. A double-ended guillotine SLB at hot zero power is the limiting case with respect to the core response. The double-ended

COMANCHE PEAK - UNITS 1 AND 2

B 3/4 7-3

Unit 1 - Amendment No. 54 Unit 2 - Amendment No. 40

#### BASES

#### 3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

#### **APPLICABLE SAFETY ANALYSES** (Continued)

guillotine SLB outside containment upstream of the MSIV is limiting for offsite dose consequences, although a break in this short section of piping has a very low probability. A 1.0  $ft^2$  non-mechanistic break upstream of the MSIVs in the steam tunnels from at-power conditions is limiting with respect to environmental qualification in the steam tunnels. A large SLB at higher power levels is limiting with respect to maximum containment temperature used for equipment qualification. In the analyses of the feedwater line break and steam generator tube rupture accidents, the MSIVs are credited for steam generator isolation. A significant failure considered for all cases is the failure of a MSIV to close.

The MSIVs remain open during power operation and their safety function is to close on demand. These valves are assumed to operate under the following situations:

- A HELB (SLB or FLB) inside containment. In order to maximize the mass and а. energy release into containment, the analyses assumes that the MSIV on the affected steam generator fails to close. For this scenario, steam is discharged into containment from all steam generators until the remaining MSIVs close. After MSIV closure, steam is discharged into containment only from the affected steam generator and from the residual steam in the main steam piping downstream of the closed MSIVs in the unaffected loops. Closure of the MSIVs isolates the break from the unaffected steam generators.
- A break or postulated crack outside of containment does not affect the b. containment environment, but may affect the environment in the steam tunnels. With respect to the core response to a SLB event, the uncontrolled blowdown of more than one steam generator must be prevented to limit the potential for uncontrolled RCS cooldown and positive reactivity addition. Assuming that the MSIV on the affected steam generator fails to close, the closure of the other MSIVs isolates the break and limits the blowdown to a single steam generator.
- с. A break downstream of the MSIVs will be isolated by the closure of the MSIVs.
- **d**. Following a steam generator tube rupture event, closure of the MSIVs isolates the affected steam generator from the intact steam generators. In addition to minimizing radiological releases, this enables the operator to maintain the pressure of the steam generator with the ruptured tube below the MSSV setpoints, a necessary step toward isolating the flow through the rupture.
- The MSIVs are also utilized during other events such as a feedwater line e. break. These events are less limiting so far as MSIV OPERABILITY is concerned.

COMANCHE PEAK - UNITS 1 AND 2

B 3/4 7-3a

Unit 1 - Amendment No.54 Unit 2 - Amendment No.40

#### BASES

### 3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

**APPLICABLE SAFETY ANALYSES (Continued)** 

The MSIVs satisfy Criterion 3 of the NRC Policy Statement on Technical Specification Improvement for Nuclear Power Reactors (58 FR 39132 of July 22, 1993).

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This LCO requires that four MSIVs in the steam lines be OPERABLE. The MSIVs are considered OPERABLE when the isolation times are within limits, and they close on an isolation actuation signal (per Surveillance Requirement 4.3.2.1).

This LCO provides assurance that the MSIVs will perform their design safety function to mitigate the consequences of accidents that could result in offsite exposures comparable to the 10 CFR 100 (Ref. 1) limits or the NRC staff approved licensing basis.

#### APPLICABILITY

The MSIVs must be OPERABLE in MODE 1, 2, and 3 when there is significant mass and energy in the RCS and steam generators. When the MSIVs are closed, they are already performing the safety function.

In MODE 4, normally most of the MSIVs are closed, and the steam generator energy is low.

In MODE 5 or 6, the steam generators do not contain much energy because their temperature is below the boiling point of water; therefore, the MSIVs are not required for isolation of potential high energy secondary system pipe breaks in these MODES.

#### ACTION

#### MODE 1

With one MSIV inoperable in MODE 1, action must be taken to restore OPERABLE status within 8 hours. Some repairs to the MSIV can be made with the unit hot. The 8 hour completion time is reasonable, considering the low probability of an accident occurring during this time period that would require a closure of the MSIVs.

The 8 hour completion time is greater than that normally allowed for containment isolation valves because the MSIVs are valves that isolate a closed system penetrating containment. These valves differ from other containment isolation valves in that the closed system provides an additional means for containment isolation.

If the MSIV cannot be restored to OPERABLE status within 8 hours, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed in MODE 2 within 6 hours and Modes 2 and 3

COMANCHE PEAK - UNITS 1 AND 2

B 3/4 7-3b

Unit 1 - Amendment No.54 Unit 2 - Amendment No.40

#### BASES

### 3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

#### **ACTIONS** (Continued)

ACTION would be entered. The completion times are reasonable, based on operating experience, to reach MODE 2 and to close the MSIVs in an orderly manner and without challenging unit systems.

#### MODES 2 AND 3

This Action is modified by Note \* indicating that separate action statement entry is allowed for each MSIV. The Note \* allows this Action to be entered separately for each inoperable valve, and completion times (the times allotted in the Action Statement to complete the designated actions) to be tracked on a per valve basis. When a valve is declared inoperable, this Action is entered and its completion time starts. If subsequent valves are declared inoperable, this Action is entered for each valve and separate completion times start and are tracked for each valve.

Since the MSIVs are required to be OPERABLE in MODES 2 and 3, the inoperable MSIVs may either be restored to OPERABLE status or closed. When closed, the MSIVs are already in the position required by the assumptions in the safety analysis.

The 8 hour completion time is consistent with that allowed in Mode 1 ACTION.

For inoperable MSIVs that cannot be restored to OPERABLE status within the specified completion time, but are closed, the inoperable MSIVs must be verified on a periodic basis to be closed. This is necessary to ensure that the assumptions in the safety analysis remain valid. The 7 day completion time is reasonable, based on engineering judgment, in view of MSIV status indications available in the control room, and other administrative controls, to ensure that these valves are in the closed position.

If the MSIVs cannot be restored to OPERABLE status or are not closed within the associated completion time, the unit must be placed in a MODE in which the LCO does not apply. To achieve this status, the unit must be placed at least in MODE 3 within 6 hours, and in MODE 4 within 12 hours. The allowed completion times are reasonable, based on operating experience, to reach the required unit conditions from MODE 2 conditions in an orderly manner and without challenging unit systems.

#### SURVEILLANCE REQUIREMENTS (SR)

#### <u>SR 4.7.1.5</u>

This SR verifies that MSIV closure time is  $\leq$  5 seconds on an actual or simulated actuation signal. The MSIV closure time is assumed in the

COMANCHE PEAK - UNITS 1 AND 2 B 3/4

B 3/4 7-3c

Unit 1 - Amendment No.54 Unit 2 - Amendment No.40

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#### BASES ·

# 3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

#### SR 4.7.1.5 (Continued)

accident and containment analyses. This Surveillance is normally performed upon returning the unit to operation following a refueling outage. The MSIVs should not be tested at power, since even a part stroke exercise increases the risk of a valve closure when the unit is generating power. As the MSIVs are not tested at power, they are exempt from the ASME Code, Section XI, requirements during operation in MODE 1 or 2.

The Frequency is in accordance with the Inservice Testing Program pursuant to Specification 4.0.5.

This test is conducted in MODE 3 with the unit at operating temperature and pressure. This SR is modified by a Note that provides exemption from Specification 4.0.4 for entry into MODE 3. This allows a delay of testing until MODE 3, to establish conditions consistent with those under which the acceptance criterion was generated.

#### REFERENCES

10 CFR 100.11. 1.

## 3/4.7.1.6 MAIN FEEDWATER ISOLATION VALVES

The feedwater isolation valves, the feedwater isolation bypass valves, ine recovater isolation values, the recovater isolation bypass values, and the feedwater preheater bypass values are designed to close on a Feedwater Isolation Signal to 1) limit the cooldown following a safety injection/reactor trip, and 2) limit the mass addition to the containment on a steamline break inside containment, and 3) limit the severity of feedwater malfunctions which result in over feeding of a steam generator. The allowed outage times and required actions are consistent with normal plant operating requirements and the safety functions of the values. safety functions of the valves.

# 3/4.7.1.7 STEAM GENERATOR ATMOSPHERIC RELIEF VALVES

The OPERABILITY of the steam generator atmospheric relief valves (ARVs) ensures that reactor decay heat can be dissipated to the atmosphere in the event of a steam generator tube rupture and loss of offsite power and that the Reactor Coolant System can be cooled down for Residual Heat Removal System operation. Two ARVs are required to cool the Reactor Coolant System in a time frame compatible with prevention of overfill of the faulted steam generator. All four ARVs are required to be OPERABLE to allow for not being able to use the ARV on the faulted steam generator and an active failure of one of the remaining three ARVs.

# 3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

The limitation on steam generator pressure and temperature ensures that the pressure-induced stresses in the steam generators do not exceed the maximum allowable fracture toughness stress limits. The limitations of 70°F and 200 psig are based on a steam generator  $RT_{MDT}$  of 60°F and are sufficient to prevent brittle fracture.

COMANCHE PEAK - UNITS 1 AND 2 B 3/4 7-3d

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Unit 1 - Amendment No.54 Unit 2 - Amendment No.40

BASES

#### 3/4.7.3 COMPONENT COOLING WATER SYSTEM

The OPERABILITY of the Component Cooling Water System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses.

#### 3/4.7.4 STATION SERVICE WATER SYSTEM

The OPERABILITY of the Station Service Water System ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of this system, assuming a single failure, is consistent with the assumptions used in the safety analyses. A unit in MODE 1, 2, 3 or 4 will be designated as operating and a unit in MODE 5, 6 or Defueled will be designated as shutdown with respect to the Station Service Water System.

Train isolation by two normally closed valves in series or one locked closed valve is provided to satisfy GDC-44. Unit isolation by one locked closed valve is provided to satisfy GDC-5. A pump for an operating unit is inoperable when its associated cross-connect is open.

In the event of a total loss of Station Service Water in one unit at Comanche Peak, backup cooling capacity is available via a cross-connect between the two units. An OPERABLE pump is manually realigned and flow balanced to provide cooling to essential heat loads. The OPERABILITY of the unit cross-connect along with a Station Service Water pump in the shutdown unit ensures the availability of sufficient redundant cooling capacity for the operating unit. The Limiting Condition of Operation will ensure a significant risk reduction as indicated by the analyses of a loss of Station Service Water System event. The surveillance requirements ensure the short and long-term OPERABILITY of the Station Service Water System and cross-connect between the two units.

The Station Service Water System cross-connect between the two units consists of appropriate piping, and cross-connect valves connecting the discharge of the Station Service Water pumps of the two units. By aligning the cross-connect flow paths, additional redundant cooling capacity from one unit is available to the Station Service Water System of the other unit.

A cross-connect value is OPERABLE if it can be cycled or is locked open. A value that cannot be demonstrated OPERABLE by cycling is considered inoperable until the value is surveilled in the locked open position. However, at least one cross-connect value between units is required to be maintained closed in accordance with GDC-5 unless required for flushing or due to total loss of Station Service Water pumps for either unit.

COMANCHE PEAK - UNITS 1 AND 2

B 3/4 7-4

Unit 1 - Amendment No. 14



UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

# SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

# RELATED TO AMENDMENT NOS. 54 AND 40 TO

# FACILITY OPERATING LICENSE NOS. NPF-87 AND NPF-89

### TEXAS UTILITIES ELECTRIC COMPANY

### COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2

### DOCKET NOS. 50-445 AND 50-446

#### 1.0 INTRODUCTION

By application dated December 7, 1994 (TXX-94326), as supplemented by letter dated June 21, 1996 (TXX-96384). Texas Utilities Electric Company (TU Electric/the licensee) requested changes to the Technical Specifications (TSs) (Appendix A to Facility Operating License Nos. NPF-87 and NPF-89) for the Comanche Peak Steam Electric Station (CPSES), Units 1 and 2. The proposed changes revise Section 3.7.1.5 of the TSs to increase the Allowed Outage Time (AOT) for one inoperable Main Steam Isolation Valve (MSIV) while in Mode 1. The Bases associated with this TS are also revised to adopt the expanded Bases format of the Improved Standard Technical Specifications (ISTS).

#### 2.0 BACKGROUND

One Main Steam Isolation Valve (MSIV) is located in each main steam line outside, but close to, containment. The MSIVs are downstream from the main steam safety valves, the steam generator atmospheric relief valves, and the auxiliary feedwater (AFW) pump turbine steam supplies. Closing the MSIVs isolates each steam generator steam line from the others, and isolates the main turbine, steam dump system, and other auxiliary steam supplies from the steam generators.

Each MSIV is designed to stop flow from either direction after a steam line break to prevent the uncontrolled release of steam from more than one steam generator. The MSIVs are automatically closed on high-high containment pressure or steam line break protection logic (as indicated by high steam pressure rate or low steam line pressure). High steam pressure rate is only effective when the steam line safety injection (SI) signal is manually blocked during startup and cooldown, and low steam line pressure is only effective when the block is removed. The MSIVs can be manually operated from the control room.

The MSIVs are provided with manual bypass valves which are normally locked closed during power operation. During startup, hot standby and hot shutdown one MSIV bypass valve may be opened provided the other three bypass valves are locked closed and their associated MSIVs are closed. The MSIV bypass valves

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are used for warming the system and equalizing the pressure across the MSIV. The MSIV bypass valve is also designed to stop flow from either direction.

The proposed license amendment revises the technical specification for the MSIVs to increase the Allowed Outage Time (AOT) while in MODE 1, to modify the Action Statement for MODES 2 and 3 to reflect the safety significance of these valves in these modes, and to adopt the expanded Bases format of the improved Standard Technical Specifications (NUREG-1431) adding information specific to CPSES. The licensee chose to retain applicability in MODES 2 and 3 in lieu of the reduced applicability requirements in NUREG-1431 for MODES 2 and 3.

#### 3.0 EVALUATION

3.1 Editorial Change

The current TS reads, "Each main steam isolation valve (MSIV) shall be OPERABLE." The licensee proposes to change the proceeding to "Four main steam isolation valves (MSIVs) shall be OPERABLE." which is an editorial change. The staff finds this change acceptable on the basis that the TS intent has not been altered.

3.2 MSIV Allowed Outage Time

The current MODE 1 ACTION statement requires that with only one MSIV inoperable but open, power operation may continue provided that the inoperable valve is restored to an OPERABLE status within 4 hours; otherwise, the plant must be shut down. The licensee proposes to change this ACTION statement to allow power operation to continue for 8 hours before the plant must be shut down. The closed system provides an additional barrier for containment isolation. This longer AOT is reasonable considering the relative stability of the closed system to act as a penetration isolation boundary and the relative importance of maintaining containment integrity during MODES 1, 2, 3, and 4. The increased AOT provides additional time to diagnose, repair, and restore and inoperable valve. The 8 hour period is reasonable considering the low probability of an accident occurring during this time. The staff finds the 8 hour AOT acceptable.

An AOT of 72 hours has been approved for improved Standard Technical Specifications (ISTS), TS 3.6.3, "Containment Isolation Valves." However, based on the other safety functions of the MSIVs a longer time has not been approved in the ISTS. This is consistent with the licensee's current TS 3.6.3 which does not apply to the MSIV and other valves such as main steam safety valves, the steam generator atmospheric relief valves, and the main feedwater isolation valves.

#### 3.3 MODE 2 and 3 ACTION Statement Entry

The current MODE 2 and 3 ACTION statement requires that with one MSIV inoperable operation in MODE 2 or 3 can continue provided that the inoperable valve is maintained closed. The TS specifies neither the time allowed to close the valve, nor the frequency with which the valve must be verified closed. The licensee proposes to change the TS to specify that the valve shall be closed within 8 hours and verified closed once every 7 days. The 8 hour limit is consistent with the MODE 1 AOT, and the 7 day verification is reasonable considering the MSIV positions indication available in the control room and administrative controls that will ensure that the valve is not opened accidentally. The staff finds this change acceptable.

### 3.4 MODE 2 and 3 Operation With More Than One Inoperable MSIV

The current TS allows continued operation in MODE 2 and 3 with one MSIV inoperable as long as the valve is maintained closed. The licensee proposes to allow continued operation in MODES 2 and 3 with any number of MSIVs inoperable provided the ACTION statement is met for each valve. Once an MSIV becomes inoperable and is closed and maintained closed per the above TS changes, it has completed its safety function independent from the other MSIVs. If a subsequent MSIV becomes inoperable and controlled in the same manner, the subsequent MSIV inoperability does not contribute more safety significance than the first. The staff finds this change acceptable.

#### 3.5 Expanded Bases

The current Bases was expanded significantly using the ISTS as the model. Although the ISTS Bases were not fully incorporated the intent was met and the staff finds the Bases changes acceptable.

#### 4.0 STATE CONSULTATION

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

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change 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 amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (60 FR 6312). Accordingly, the amendments meet 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 amendments.

#### 6.0 <u>CONCLUSION</u>

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

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Date: August 18, 1997