

June 20, 2002

Mr. C. Lance Terry
Senior Vice President
& Principal Nuclear Officer
TXU Energy
Attn.: Regulatory Affairs Department
P. O. Box 1002
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES), UNITS 1 AND 2 -
ISSUANCE OF AMENDMENTS RE: CHANGE TO TECHNICAL
SPECIFICATIONS FOR ALLOWED OUTAGE TIME FOR FEEDWATER
ISOLATION VALVES (TAC NOS. MB4640 AND MB4641)

Dear Mr. Terry:

The Commission has issued the enclosed Amendment No. 97 to Facility Operating License No. NPF-87 and Amendment No. 97 to Facility Operating License No. NPF-89 for CPSES, Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated March 25, 2002, as supplemented by the letter dated April 23, 2002.

The amendment revises TS 3.7.3, "Feedwater Isolation Valves (FIVs) and Associated Bypass Valves," to adopt the NUREG-1431, "Standard Technical Specifications for Westinghouse Plants," Revision 2 version of the specification. The revised TS 3.7.3 adds, among other things, operability and suitable surveillance requirements for Feedwater Control Valves and Associated Bypass Valves and allows for the extended out-of-service time for one or more FIVs. In addition, a footnote which allowed a one-time extension for Condition A Completion Time, is being deleted because it is no longer applicable.

C. Terry

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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,

/RA/

David H. Jaffe, Senior Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

Enclosures: 1. Amendment No. 97 to NPF-87
2. Amendment No. 97 to NPF-89
3. Safety Evaluation

cc w/encls: See next page

C. Terry

-2-

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,

/RA/

David H. Jaffe, Senior Project Manager, Section 1
Project Directorate IV
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cc w/encls: See next page

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TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION, UNIT NO. 1
DOCKET NO. 50-445
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 97
License No. NPF-87

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by TXU Generation Company LP dated March 25, 2002, as supplemented by the letter dated April 23, 2002, 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) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 97, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. TXU Generation Company LP 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 and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert A. Gramm, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: June 20, 2002

TXU GENERATION COMPANY LP
COMANCHE PEAK STEAM ELECTRIC STATION, UNIT NO. 2
DOCKET NO. 50-446
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 97
License No. NPF-89

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by TXU Generation Company LP dated March 25, 2002, as supplemented by the letter dated April 23, 2002, 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. 97, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. TXU Generation Company LP 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 and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert A. Gramm, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: June 20, 2002

ATTACHMENT TO LICENSE AMENDMENT NO. 97

TO FACILITY OPERATING LICENSE NO. NPF-87

AND AMENDMENT NO. 97

TO FACILITY OPERATING LICENSE NO. NPF-89

DOCKET NOS. 50-445 AND 50-446

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
3.7-8	3.7-8
3.7-9	3.7-9

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 97 TO

FACILITY OPERATING LICENSE NO. NPF-87

AND AMENDMENT NO.97 TO

FACILITY OPERATING LICENSE NO. NPF-89

TXU GENERATION COMPANY LP

COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2

DOCKET NOS. 50-445 AND 50-446

1.0 INTRODUCTION

By application dated March 25, 2002, as supplemented by the letter dated April 23, 2002, TXU Generation Company LP (the licensee) requested changes to the Technical Specifications (TSs) for the Comanche Peak Steam Electric Station (CPSES), Units 1 and 2. The proposed changes would revise TS 3.7.3, to adopt the NUREG-1431, "Standard Technical Specifications for Westinghouse Plants," Revision 2 version of the specification. The requirements of proposed TS 3.7.3 would add, among other things, operability and suitable surveillance requirements for Feedwater Control Valves (FCVs) and Feedwater Control Bypass Valves (FCBVs) and would allow for an extended out-of-service time for one or more Feedwater Isolation Valves (FIVs). In addition, a footnote, which allowed a one-time extension for Condition A Completion Time, is being deleted because it is no longer applicable.

2.0 BACKGROUND

Each CPSES Unit contains four steam generators (SGs), which are supplied with feedwater for the purpose of steam generation. The feedwater for each SG passes through a FCV, which modulates feedwater flow in response to changing steam flow/power demand. Each FCV is equipped with a FCBV which modulates feedwater flow during startup and low power operation. Downstream of the FCV/FCBV, the feedwater stream splits into two branches; the main branch contains a FIV, while the secondary branch contains a FIV Bypass Valve (FIVBV). Each FIV has a FIVBV and a Feedwater Preheater Bypass Valve (FPBV), which are its associated bypass valves.

The associated function of the FCVs and their associated bypass valves (FCBVs and FPBVs) is to provide backup isolation of Main Feedwater (MFW) flow to the secondary side of the SGs following a High Energy Line Break. The FCVs are not designated as active (i.e., are not of a full safety grade), but are designed as highly reliable backups to the FIVs.

Closure of the FIVs and associated bypass valves, or FCVs and associated bypass valves, terminates flow to the SGs, terminating the event for feedwater line breaks (FLBs) occurring upstream of the FIVs or FCVs. The consequences of events occurring in the main steam lines or in the MFW lines downstream from the FIVs will be mitigated by their closure. Closure of the FIVs and associated bypass valves, or FCVs and associated bypass valves, effectively terminates the addition of feedwater to an affected SG, limiting the mass and energy release for steam line breaks (SLBs) or FLBs inside containment, and reducing the cooldown effects for SLBs.

The configuration of the FCVs, FCBVs, FIVs, and FIVBVs is shown on Figure M1-0203 in the updated CPSES Final Safety Analysis Report (FSAR).

The FIV and FIVBV perform a safety function in that they are credited in the safety analysis for isolation in the event of a FLB inside containment. In addition, closure of a FIV/FIVBV limits the addition of feedwater to a SG in the event of a main steam line break. A four hour allowable outage time (AOT) for the FIVs is contained in TS 3.7.3.

During the TS conversion to the NUREG-1431 Standard TS (STS) format, the licensee decided against adopting the STS version of TS 3.7.3 because the STS added new requirements associated with the FCVs and their associated bypass valves. Subsequently, the licensee found that the hydraulic systems, which hold the FIVs in the open position (each FIV has a hydraulic system), had degraded due to the incompatibility of the seal material with the hydraulic fluid. The hydraulic systems are not safety-related since the safety function of the valves is to close on an isolation signal, a function performed by a nitrogen accumulator. Degradation and eventual failure of the FIV hydraulic systems could have caused loss of hydraulic pressure, with resulting closure of the associated FIV and plant shutdown. Repair of the FIV hydraulic systems would require the associated FIVs to be made inoperable; the repair was expected to take longer than the TS AOT time of four hours.

On May 25, 2000, the licensee requested that the U.S. Nuclear Regulatory Commission (NRC or the Commission) staff exercise its enforcement discretion on a one-time basis so that the licensee might repair the degraded FIV hydraulic pumps, which would result in the licensee's exceeding the FIV Completion Time. The NRC staff determined that exercising discretion under these circumstances was appropriate, and subsequently granted the licensee's amendment request to extend the FIV Completion Time on a one-time basis. This appears as a footnote to TS 3.7.3 on page 3.7-8.

The licensee originally declined to adopt the NUREG-1431 version of STS 3.7.3 during the TS Conversion to STS Format. However, apparently due to the recent operating experience with the FIV hydraulic systems, the licensee proposes to adopt NUREG-1431, STS 3.7.3 for FIVs which provides a Completion Time of 72 hours for one or more FIVs inoperable and an 8 hour Completion Time when two valves in the same flowpath are inoperable. The proposed extended Completion Time (with respect to the current TS) is based primarily on the addition of the FCVs and the associated bypass valves to the specification, and taking credit for the ability of the FCVs and FCBVs to perform the feedwater isolation function.

3.0 EVALUATION

The licensee's proposed change to the TS essentially adds the FCVs and associated FCVBVs to the specification, taking credit for the ability of the FCVs and the associated bypass valves for the safety function of the FIVs (closure on isolation signals); the safety function of the FIVBVs is not affected. Section 10.4.7.5 of the updated CPSES FSAR states the following with regard to the subject valves:

Feedwater isolation valves are tripped closed upon receipt of the following safety-related instrumentation signals: a steam generator high-high level (two out of three high-high level signals from any steam generator), a safety injection signal, or a low average [reactor coolant] temperature with a reactor trip. When the plant is operating, these valves can be tested for partial closure of the valve. Feedwater isolation bypass valves, feedwater control valves and feedwater preheater bypass valves are all tripped closed by separate, redundant control circuits and solenoids.

While the FCVs and the associated bypass valves are not safety-grade equipment, they are highly reliable, close on the same isolation signals as those that close the FIVs, and are tested to the same standards (frequency and closure time) as the FIVs. Thus, the FCVs and the associated bypass valves can reliably fulfill the safety function of the FIVs. The difference between the FCVs and FIVs is that the FCVs are not fully seismically qualified or missile protected. However, the CPSES licensing basis (TS Bases B3.7.3) states the following:

Because an earthquake is not assumed to occur coincident[ly] with a spontaneous break of safety related secondary piping, loss of the non-safety grade FCVs is not assumed [Ref. 3]. If the single active failure postulated for a secondary pipe break is the failure of a safety grade FIV to close, then credit is taken for closing the non-safety grade FCV or tripping the feedwater pump in that line. [Ref. 3]

This is also supported by NUREG-0138, "Staff Discussion on Fifteen Technical Issues Listed in Attachment to November 3, 1976, Memorandum From Director, NRR to NRC Staff." It states the following:

Consistent with the lesser safety importance of the secondary system boundary, staff does not require that an earthquake be assumed to occur coincident[ly] with a postulated spontaneous break of the steamline piping; i.e., loss of equipment not designed to withstand a SSE [Safe Shutdown Earthquake] is not assumed coincident with an assumed spontaneous steamline break accident.

Continued reliability of these components over the life of the plant is assured by frequency (generally weekly) [of] in-service tests....Thus, the staff believes that it is acceptable to rely on these non-safety grade components in the steam and feedwater systems because their design and performance are compatible with the accident conditions for which they are called upon to function. It is the staff position that utilization of these components as a backup to a single failure in safety grade components adequately protects the health and safety of the public.

Therefore, the FCVs and the associated bypass valves can be considered to be fully capable of reliably mitigating these design basis events.

Additionally, the proposed revision to the TS is adopted from NUREG-1431 STS 3.7.3.

Based upon the above, the NRC staff concludes that the proposed change to TS 3.7.3, to adopt the NUREG-1431 STS, which (1) adds the FCVs and the associated bypass valves to the specification and takes credit for the ability of the FCVs and the associated bypass valves for the safety function of the FIVs (closure on isolation signals), (2) provides a Completion Time of 72 hours for one or more FIVs inoperable and an 8 hour Completion Time when two valves in the same flow path are inoperable, and (3) provides for suitable surveillance requirements on FCVs and FCBVs, is 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. 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 (67 FR 34492, published May 14, 2002). 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 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 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: June 20, 2002

Comanche Peak Steam Electric Station

cc:

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