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Ref: 10CFR50.90

CPSES-200400606  
Log # TXX-04049  
File # 00236

April 13, 2004

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

**SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)**  
**DOCKET NOS. 50-445 AND 50-446**  
**LICENSE AMENDMENT REQUEST (LAR) [04-02]**  
**REVISION TO TECHNICAL SPECIFICATION (TS) 3.3.2**  
**ENGINEERED SAFETY FEATURES ACTUATION SYSTEM (ESFAS)**  
**INSTRUMENTATION**

Gentlemen:

Pursuant to 10CFR50.90, TXU Generation Company LP (TXU Energy) hereby requests an amendment to the CPSES Unit 1 Operating License (NPF-87) and CPSES Unit 2 Operating License (NPF-89) by incorporating the attached change into the CPSES Unit 1 and 2 Technical Specifications. This change request applies to both units.

The proposed change will revise TS 3.3.2 entitled ENGINEERED SAFETY FEATURES ACTUATION SYSTEM (ESFAS) INSTRUMENTATION. This change would revise the trip setpoint allowable value for Refueling Water Storage Tank Level Low-Low (ESFAS function 7.b) for Unit 2 to be the same as for Unit 1. This change would also revise the frequency for calibration of the RWST water level transmitters for both units from 9 months to 18 months.

Attachment 1 provides a detailed description of the proposed changes, a safety analysis of the proposed changes, TXU Energy's determination that the proposed changes do not involve a significant hazard consideration, a regulatory analysis of the proposed changes and an environmental evaluation. Attachment 2 provides the affected Technical Specification pages marked-up to reflect the proposed changes. Attachment 3 provides proposed changes to the Technical Specification Bases for information only. These changes will be processed per CPSES site procedures. Attachment 4 provides retyped Technical Specification pages which incorporate the requested changes. Attachment 5 provides retyped Technical Specification Bases pages which incorporate the proposed changes.

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TXU Energy requests approval of the proposed License Amendment by December 31, 2004 to be implemented within 60 days of the issuance of the license amendment. The approval date was administratively selected to allow for NRC review but the plant does not require this amendment to allow continued safe full power operations.

In accordance with 10CFR50.91(b), TXU Energy is providing the State of Texas with a copy of this proposed amendment.

This communication contains no new or revised commitments.

Should you have any questions, please contact Mr. Robert A. Slough at (254) 897-5727.

I state under penalty of perjury that the foregoing is true and correct.

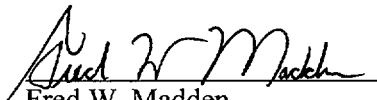
Executed on April 13, 2004.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC  
Its General Partner

Mike Blevins

By:   
Fred W. Madden  
Regulatory Affairs Manager

RAS/ras

Attachments 1. Description and Assessment  
2. Markup of Technical Specifications pages  
3. Markup of Technical Specifications Bases pages (for information)  
4. Retyped Technical Specification Pages  
5. Retyped Technical Specification Bases Pages (for information)

c - Dr. B. S. Mallett, Region IV  
W. D. Johnson, Region IV  
M. C. Thadani, NRR  
Resident Inspectors, CPSES

Ms. Alice Rogers  
Bureau of Radiation Control  
Texas Department of Public Health  
1100 West 49th Street  
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**ATTACHMENT 1 to TXX-04049**  
**DESCRIPTION AND ASSESSMENT**

## **LICENSEE'S EVALUATION**

- 1.0 DESCRIPTION
- 2.0 PROPOSED CHANGE
- 3.0 BACKGROUND
- 4.0 TECHNICAL ANALYSIS
- 5.0 REGULATORY SAFETY ANALYSIS
  - 5.1. No Significant Hazards Consideration
  - 5.2 Applicable Regulatory Requirements/criteria
- 6.0 ENVIRONMENTAL CONSIDERATION
- 7.0 REFERENCE

## **1.0 DESCRIPTION**

By this letter, TXU Energy requests an amendment to the CPSES Unit 1 Operating License (NPF-87) and CPSES Unit 2 Operating License (NPF-89) by incorporating the attached change into the CPSES Unit 1 and 2 Technical Specifications. Proposed change LAR 04-02 is a request to revise Technical Specifications (TS) 3.3.2, ENGINEERED SAFETY FEATURES ACTUATION SYSTEM (ESFAS) INSTRUMENTATION for Comanche Peak Steam Electric Station (CPSES) Units 1 and 2. The proposed change would revise the Allowable Value for Refueling Water Storage Tank (RWST) Level Low-Low (ESFAS function 7.b) for Unit 2 to be the same as for Unit 1. This change would also revise the frequency for calibration of the RWST water level transmitters for both units from 9 months to 18 months.

No changes to the CPSES Final Safety Analysis Report are anticipated at this time as a result of this License Amendment Request.

## **2.0 PROPOSED CHANGE**

The proposed change would revise the Allowable Value for the RWST Level Low-Low function in Table 3.3.2-1, Function 7.b, to delete the unique value for Unit 2 and the unit-specific designation for the remaining value, thereby specifying only one value which would be equally applicable to each unit. The proposed change would eliminate the current unit difference. The proposed change would also delete SR 3.3.2.12 from the Surveillance Requirements column for Function 7.b and insert SR 3.3.2.9. Both SR 3.3.2.9 and 3.3.2.12 require the performance of a channel calibration. SR 3.3.2.12 is performed at 9 month intervals while SR 3.3.2.9 is performed every 18 months. The note contained in SR 3.3.2.9 requiring verification that the time constants are adjusted to the prescribed values is not applicable to several functions, including RWST Level Low-Low (ESFAS function 7.b), which do not have associated time constants. SR 3.3.2.12 is deleted from the Technical Specifications since there are no other functions which require its use.

In summary, this change would revise the Allowable Value for the RWST Level Low-Low function for Unit 2 to be the same as for Unit 1 and would change the frequency for the required channel calibration surveillance for both Units from 9 months to 18 months.

For information only, this LAR includes proposed associated changes to the Technical Specification Bases.

## **3.0 BACKGROUND**

The RWST Water Level Low-Low trip function initiates the semi-automatic switchover of the ECCS pump suction from the RWST to the containment sump. The nominal trip setpoint is selected based on net positive suction head requirements and prescribed operator response times. The nominal setpoint was previously reviewed and approved by the NRC in Amendment 73. As shown in Technical Specification Table B 3.3.2-1, the nominal trip setpoint is 45% of span.

As described in the Bases for Technical Specification 3.3.2, the calculations of the Allowable Values for both CPSES units, presented in Technical Specification Table 3.3.2-1, were performed in accordance with WCAP-12123, "Westinghouse Setpoint Methodology for Protection Systems, Comanche Peak Unit 1, Revision 1," April 1989 (Reference 7.1). The current difference in the Allowable Values between Unit 1 and Unit 2 is a direct result of the different differential pressure transmitters used for this application. Veritrak transmitters were originally used in Unit 1. Due to the relatively large drift associated with the Veritrak transmitter, it was necessary to perform a sensor calibration surveillance at 9-month intervals.

#### **4.0 TECHNICAL ANALYSIS**

Unit 2 was licensed with Rosemount differential pressure transmitters for the Refueling Water Storage Tank (RWST) level application. With respect to sensor drift, the Rosemount transmitter has displayed significantly better performance than the Veritrak transmitter. Even so, in order to standardize the uncertainty calculations for both Units, a conservative allowance for the sensor drift on Unit 2 was provided which was consistent with the allowance necessitated by the use of the Veritrak transmitters in Unit 1. Other aspects of the Rosemount transmitter performance, however, are more sensitive than the Veritrak which required the use of a different Allowable Value for Unit 2.

The Veritrak differential pressure transmitters on Unit 1 have been replaced with the same model of Rosemount differential pressure transmitters used on Unit 2. As a result, it is not necessary to retain the larger allowances for transmitter drift. A new uncertainty analysis, based on the use of Rosemount transmitters in both units and consistent with the previously reviewed methodologies described in WCAP-12123 (Reference 7.1), has been developed. The same nominal trip setpoint of 45% span and the same Allowable Value of 43.9% span can be used for both units. In addition, because of the stability of the Rosemount differential pressure transmitter, the requirement to perform sensor calibration surveillance tests at 9-month intervals can be replaced by the more standard 18-month surveillance test interval.

Since Unit 2 has always utilized the Rosemount transmitters and the Unit 1 Veritrak RWST level transmitters have been replaced with the Rosemount transmitters, the calculated allowable value of 43.9% and the transmitter calibration interval of 18 months is equally applicable to both units.

Based on the above evaluation, TXU Energy concludes that there is reasonable assurance that the health and safety of the public will not be affected by the proposed changes.

## 5.0 REGULATORY SAFETY ANALYSIS

### 5.1 No Significant Hazards Consideration

TXU Generation Company LP has evaluated whether or not a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10CFR50.92, Issuance of amendment, as discussed below:

1. Do the proposed changes involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No

The proposed change in the trip setpoint allowable value for Unit 2 Refueling Water Storage Tank (RWST) Low-Low Level has no impact on the probability of any accident previously evaluated. Since none of the accident analyses are affected by this change, the consequences of all previously evaluated accidents remain unchanged.

Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Do the proposed changes create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

No new accident scenarios, transient precursors, failure mechanisms, or limiting single failures are introduced as a result of these changes. There will be no adverse effect or challenges imposed on any safety-related system as a result of these changes. There are no changes in the method by which any safety-related plant system performs its safety function. Overall protection system performance will remain within the bounds of the previously performed accident analyses and the protection systems will continue to function in a manner consistent with the plant design basis. The proposed changes do not affect the probability of any event initiators. The proposed changes do not alter any assumptions or change any mitigation actions in the radiological consequence evaluations in the Final Safety Analysis Report (FSAR).

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any previously evaluated.

3. Do the proposed changes involve a significant reduction in a margin of safety?

Response: No

The proposed changes do not affect the acceptance criteria for any analyzed event nor is there a change to any Safety Analysis Limit (SAL). There will be no effect on the manner in which safety limits, limiting safety system settings, or limiting conditions for operation are determined nor will there be any effect on those plant systems necessary to assure the accomplishment of protection functions. There will be no impact on the overpower limit, the Departure from Nucleate Boiling Ratio (DNBR) limits, the Heat Flux Hot Channel Factor ( $F_Q$ ), the Nuclear Enthalpy Rise Hot Channel Factor ( $F_{\Delta H}$ ), the Loss of Coolant Accident Peak Centerline Temperature (LOCA PCT), peak local power density, or any other margin of safety. The radiological dose consequence acceptance criteria listed in the Standard Review Plan will continue to be met.

Therefore the proposed change does not involve a reduction in a margin of safety.

Based on the above evaluations, TXU Energy concludes that the proposed amendment(s) present no significant hazards consideration under the standards set forth in 10CFR50.92(c) and, accordingly, a finding of no significant hazards consideration is justified.

## **5.2 Applicable Regulatory Requirements/Criteria**

The regulatory bases and guidance documents associated with the systems discussed in this amendment application include:

GDC 13 requires that instrumentation shall be provided to monitor variables and systems over their anticipated ranges for normal operation, for anticipated operational occurrences, and for accident conditions as appropriate to assure adequate safety, including those variables and systems that can affect the fission process, the integrity of the reactor core, the reactor coolant pressure boundary, and the containment and its associated systems.

GDC 20 requires that the protection system(s) shall be designed (1) to initiate automatically the operation of appropriate systems including the reactivity control systems, to assure that specified acceptable fuel design limits are not exceeded as a result of anticipated operational occurrences and (2) to sense accident conditions and to initiate the operation of systems and components important to safety.

GDC 21 requires that the protection system(s) shall be designed for high functional reliability and testability.



GDC 22 through GDC 25 and GDC 29 require various design attributes for the protection system(s), including independence, safe failure modes, separation from control systems, requirements for reactivity control malfunctions, and protection against anticipated operational occurrences.

Regulatory Guide 1.22 discusses an acceptable method of satisfying GDC 20 and GDC 21 regarding the periodic testing of protection system actuation functions. These periodic tests should duplicate, as closely as practicable, the performance that is required of the actuation devices in the event of an accident.

10CFR50.55a(h) requires that the protection systems meet IEEE 279-1971. Section 4.2 of IEEE 279-1971 discusses the general functional requirement for protection systems to assure they satisfy the single failure criterion.

There will be no changes to the RTS or ESFAS instrumentation design such that compliance with any of the regulatory requirements and guidance documents above would come into question. The above evaluations confirm that the plant will continue to comply with all applicable regulatory requirements.

In conclusion, based on the considerations discussed above, (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.

## **6.0 ENVIRONMENTAL CONSIDERATION**

TXU Energy has determined that the proposed amendment would change requirements with respect to the installation or use of a facility component located within the restricted area, as defined in 10CFR20, or would change an inspection or surveillance requirement. TXU Energy has evaluated the proposed changes and has determined that the changes do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amount of effluent that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criterion for categorical exclusion set forth in 10CFR51.22 (c)(9). Therefore, pursuant to 10CFR51.22 (b), an environmental assessment of the proposed change is not required.

## **7.0 REFERENCES**

- 7.1 WCAP-12123, Revision 2, "Westinghouse Setpoint Methodology for Protection Systems, Comanche Peak Unit 1, Revision 1," April 1989.

**ATTACHMENT 2 to TXX-04049**

**PROPOSED TECHNICAL SPECIFICATION CHANGES (MARK-UP)**

**Pages 3.3-28  
3.3-34**

ACTIONS (continued)

| SURVEILLANCE   | FREQUENCY                                  |
|--|--|
| <p>SR 3.3.2.10 -----NOTE-----<br/> Not required to be performed for the turbine driven AFW pump until 24 hours after SG pressure is <math>\geq</math> 532 psig.<br/> -----<br/> Verify ESF RESPONSE TIMES are within limits.</p> | <p>18 months on a STAGGERED TEST BASIS</p> |
| <p>SR 3.3.2.11 -----NOTE-----<br/> Verification of setpoint not required.<br/> -----<br/> Perform TADOT.</p>   | <p>18 months</p>                           |
| <p>SR 3.3.2.12 Perform CHANNEL CALIBRATION.</p>  | <p>9 months</p>                            |

Table 3.3.2-1 (page 6 of 6)  
Engineered Safety Feature Actuation System Instrumentation

| FUNCTION   | APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS  | REQUIRED CHANNELS     | CONDITIONS | SURVEILLANCE REQUIREMENTS   | ALLOWABLE VALUE(a)   |
|--|---|-----------------------|------------|---|--|
| 7. Automatic Switchover to Containment Sump            |   |                       |            |   |  |
| a. Automatic Actuation Logic and Actuation Relays      | 1, 2, 3, 4  | 2 trains              | C          | SR 3.3.2.2<br>SR 3.3.2.4<br>SR 3.3.2.6                                      | NA   |
| b. Refueling Water Storage Tank (RWST) Level - Low Low | 1, 2, 3, 4  | 4                     | K          | SR 3.3.2.1<br>SR 3.3.2.5<br>SR 3.3.2.10<br>SR 3.3.2.12<br><u>SR 3.3.2.9</u> | ≥ 43.9% instrument span (Unit 1)<br>≥ 44.1% instrument span (Unit 2) |
| Coincident with Safety Injection                       | Refer to Function 1 (Safety Injection) for all initiation functions and requirements. |                       |            |   |  |
| 8. ESFAS Interlocks                                    |   |                       |            |   |  |
| a. Reactor Trip, P-4                                   | 1, 2, 3   | 1 per train, 2 trains | F          | SR 3.3.2.11   | NA   |
| b. Pressurizer Pressure, P-11                          | 1, 2, 3   | 3                     | L          | SR 3.3.2.5<br>SR 3.3.2.9  | ≤ 1975.2 psig (Unit 1)<br>≤ 1976.4 psig (Unit 2)                     |

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(a) The Allowable Value defines the limiting safety system setting. See the Bases for the Trip Setpoints.

**ATTACHMENT 3 to TXX-04049**

**PROPOSED TECHNICAL SPECIFICATION BASES CHANGES (MARK-UP)  
(For Information Only)**

**Page B 3.3-119**

BASES

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~~SURVEILLANCE~~ ~~SR 3.3.2.12~~  
~~REQUIREMENTS~~

~~(continued)~~ ~~SR 3.3.2.12 is the performance of a CHANNEL CALIBRATION.~~

~~A CHANNEL CALIBRATION is performed every 9 months. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to measured parameter within the necessary range and accuracy.~~

~~CHANNEL CALIBRATIONS must be performed consistent with the assumptions of the unit specific setpoint methodology.~~

~~The Frequency of 9 months is based on the assumption of an 9 month calibration interval in the determination of the magnitude of equipment drift in the setpoint methodology.~~

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|            |     |   |    |
|------------|-----|---|----|
| REFERENCES | 1.  | FSAR, Chapter 6.  |    |
|            | 2.  | FSAR, Chapter 7.  |    |
|            | 3.  | FSAR, Chapter 15.   |    |
|            | 4.  | IEEE-279-1971.  |    |
|            | 5.  | 10 CFR 50.49.   |    |
|            | 6.  | WCAP-10271-P-A, Supplement 2, Rev. 1, June 1990.  |    |
|            | 7.  | Technical Requirements Manual.  |    |
|            | 8.  | WCAP-10271-P-A, Supplement 3, September 1990.   | 16 |
|            | 9.  | "Westinghouse Setpoint Methodology for Protection Systems Comanche Peak Unit 1, Revision 1," WCAP-12123, Revision 2, April, 1989. |    |
|            | 10. | WCAP-13877-P-A, Revision 2, August 2000.  | 21 |
|            | 11. | "Elimination of Periodic Protection Channel Response Time Tests", WCAP-14036-P-A, Revision 1, October 6, 1998.                    | 31 |

**ATTACHMENT 4 to TXX-04049**  
**RETYPE TECHNICAL SPECIFICATION CHANGES**

**Pages 3.3-28**  
**3.3-34**

ACTIONS (continued)

| SURVEILLANCE   | FREQUENCY                                  |
|--|--|
| <p>SR 3.3.2.10 -----NOTE-----<br/>           Not required to be performed for the turbine driven AFW pump until 24 hours after SG pressure is <math>\geq</math> 532 psig.<br/>           -----<br/>           Verify ESF RESPONSE TIMES are within limits.</p> | <p>18 months on a STAGGERED TEST BASIS</p> |
| <p>SR 3.3.2.11 -----NOTE-----<br/>           Verification of setpoint not required.<br/>           -----<br/>           Perform TADOT.</p>   | <p>18 months</p>                           |



Table 3.3.2-1 (page 6 of 6)  
Engineered Safety Feature Actuation System Instrumentation

| FUNCTION   | APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS  | REQUIRED CHANNELS     | CONDITIONS | SURVEILLANCE REQUIREMENTS                             | ALLOWABLE VALUE(a)                               |
|--|---|-----------------------|------------|---|--|
| 7. Automatic Switchover to Containment Sump            |   |                       |            |   |  |
| a. Automatic Actuation Logic and Actuation Relays      | 1, 2, 3, 4  | 2 trains              | C          | SR 3.3.2.2<br>SR 3.3.2.4<br>SR 3.3.2.6                | NA   |
| b. Refueling Water Storage Tank (RWST) Level - Low Low | 1, 2, 3, 4  | 4                     | K          | SR 3.3.2.1<br>SR 3.3.2.5<br>SR 3.3.2.9<br>SR 3.3.2.10 | ≥ 43.9% instrument span                          |
| Coincident with Safety Injection                       | Refer to Function 1 (Safety Injection) for all initiation functions and requirements. |                       |            |   |  |
| 8. ESFAS Interlocks                                    |   |                       |            |   |  |
| a. Reactor Trip, P-4                                   | 1, 2, 3   | 1 per train, 2 trains | F          | SR 3.3.2.11   | NA   |
| b. Pressurizer Pressure, P-11                          | 1, 2, 3   | 3                     | L          | SR 3.3.2.5<br>SR 3.3.2.9                              | ≤ 1975.2 psig (Unit 1)<br>≤ 1976.4 psig (Unit 2) |

(a) The Allowable Value defines the limiting safety system setting. See the Bases for the Trip Setpoints.

**ATTACHMENT 5 to TXX-04049**  
**RETYPE TECHNICAL SPECIFICATION BASES**  
**(For Information Only)**

**Page B 3.3-119**

**BASES**

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|            |     |   |    |
|------------|-----|---|----|
| REFERENCES | 1.  | FSAR, Chapter 6.  |    |
|            | 2.  | FSAR, Chapter 7.  |    |
|            | 3.  | FSAR, Chapter 15.   |    |
|            | 4.  | IEEE-279-1971.  |    |
|            | 5.  | 10 CFR 50.49.   |    |
|            | 6.  | WCAP-10271-P-A, Supplement 2, Rev. 1, June 1990.  |    |
|            | 12. | Technical Requirements Manual.  |    |
|            | 13. | WCAP-10271-P-A, Supplement 3, September 1990.   | 16 |
|            | 14. | "Westinghouse Setpoint Methodology for Protection Systems Comanche Peak Unit 1, Revision 1," WCAP-12123, Revision 2, April, 1989. |    |
|            | 15. | WCAP-13877-P-A, Revision 2, August 2000.  | 21 |
|            | 16. | "Elimination of Periodic Protection Channel Response Time Tests", WCAP-14036-P-A, Revision 1, October 6, 1998.                    | 31 |

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