

October 13, 2006

MEMORANDUM TO: David Terao, Chief  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

FROM: Timothy J. Kobetz, Chief **/RA/**  
Technical Specifications Branch  
Division of Inspections and Regional Support  
Office of Nuclear Reactor Regulation

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION UNITS 1 AND  
2 - STAFF'S REVIEW OF THE REVISION TO TECHNICAL  
SPECIFICATION SURVEILLANCE REQUIREMENTS 3.3.1.2  
AND 3.3.1.3, "REACTOR TRIP SYSTEM INSTRUMENTATION"  
(RTS) (TAC NOS. MD9492 and 9493)

By letter dated December 12, 2005 (ML053570277) TXU Generation Company LP (the licensee) submitted a license amendment request (LAR) regarding Comanche Peak Units 1 and 2 revision to Technical Specification (TS) Surveillance Requirements (SRs) 3.3.1.2 and 3.3.1.3, "Reactor Trip System Instrumentation (RTS)". The proposed amendment would revise the existing SRs to be consistent with the U.S. Nuclear Regulatory Commission's approved Technical Specification Task Force (TSTF) Standard Technical Specification Change Traveler, TSTF-371, "NIS Power Range Channel Daily SR TS Change to Address Low Power Decalibration" Revision 1.

The staff of the Technical Specifications Branch (ITSB) of the Division of Inspections and Regional Support (DIRS) has completed its review of the LAR. The staff's review is enclosed.

Docket No.: 50-445 and 446

Enclosure:  
Staff Safety Evaluation

CONTACTS: Trent I. Wertz, ITSB/DIRS  
301-415-1568

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<b>DATE</b>	09/29/2006	10/03/2006	10/13/2006

OFFICIAL RECORD

**SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION RELATED  
TO AMENDMENTS TO FACILITY OPERATING LICENSES  
TXU GENERATION COMPANY LP  
COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2  
DOCKET NOS. 50-445 and 50-446**

1.0 INTRODUCTION

By letter dated December 12, 2005 TXU Generation Company LP (TXU Power) submitted a license amendment request for Comanche Peak Steam Electric Station (CPSES) Units 1 and 2 based on Technical Specification Task Force Traveler, TSTF-371, Revision 1 "NIS Power Range Channel Daily SR TS Change to Address Low Power Decalibration." TSTF-371, Revision 1 revised the requirements for performing a daily surveillance adjustment of the power range channel(s) to address industry concern that compliance with Surveillance Requirements (SR) 3.3.1.2 and 3.3.1.3 may result in a non-conservative channel calibration during reduced power operations. The proposed changes to the Technical Specifications (TS) bases correspond and support the proposed changes to TS SR 3.3.1.2 and SR 3.3.1.3 and are similar in wording in the standard technical specifications (STS) to account for plant specific differences.

2.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act (the "Act") requires applicants for nuclear power plant operating licenses to include TS as part of the license. The TS ensure the operational capability of structures, systems and components that are required to protect the health and safety of the public. The Commission's regulatory requirements related to the content of the TS are contained in 10 CFR Section 50.36. That regulation requires that the TS include items in the following specific categories: (1) safety limits, limiting safety systems settings, and limiting control settings (50.36(c)(1)); (2) Limiting Conditions for Operation (50.36(c)(2)); (3) Surveillance Requirements (50.36(c)(3)); (4) design features (50.34(c)(4)); and (5) administrative controls (50.36(c))(5)).

In general, there are two classes of changes to TS: (1) changes needed to reflect modifications to the design basis (TS are derived from the design basis), and (2) voluntary changes to take advantage of the evolution in policy and guidance as to the required content and preferred format of TS over time. This amendment deals with the second class of changes. In determining the acceptability of revising STS 3.7.2 and 3.7.3, the staff used the accumulation of generically approved guidance in NUREG-1430, "Standard Technical Specifications, Revision 3 Babcock and Wilcox Plants," dated June, 2004; NUREG-1431, Revision 3, "Standard Technical Specifications, Westinghouse Plants," dated June, 2004; and NUREG-1432, "Standard Technical Specifications, Revision 3 Combustion Engineering Plants," dated June, 2004.

Licenses may revise the TS to adopt current improved STS format and content provided that plant-specific review supports a finding of continued adequate safety because: (1) the change is editorial, administrative or provides clarification (i.e., no requirements are materially altered), (2) the change is more restrictive than the licensee's current requirement, or (3) the change is less restrictive than the licensee's current requirement, but nonetheless still affords adequate assurance of safety when judged against current regulatory standards. The detailed application of this general framework, and additional specialized guidance, are discussed in Section 3.0 in the context of specific proposed changes.

### 3.0 TECHNICAL EVALUATION

The proposed changes adopt NRC-approved generic changes in the industry TSTF-371, Revision 1, "NIS Power Range Channel Daily SR TS Change to Address Low Power Decalibration," that was approved by the NRC staff in a letter dated April 2, 2002. As stated by the NRC staff in its discussion of TSTF-371, the TSTF revises SR 3.3.1.2 to resolve the undesirable condition that compliance with the current SR 3.3.1.2 may result in a non-conservative channel calibration during reduced power operations. The proposed SR 3.3.1.2 would only require adjustment of the Nuclear Instrumentation System (NIS) power range channels and the N-16 Power Monitor channels when the calorimetric heat balance calculated power is greater than the power range indicated power by +2 percent. Additionally, conforming editorial changes would be made to SR 3.3.1.3 because of the changes to SR 3.3.1.2.

The NIS power range channels and N-16 Power Monitor channels provide indications of reactor power. These are included in TS Table 3.3.1-1, for the Reactor Trip System (RTS) trip functions for power range neutron flux high (function 2.a), overtemperature N-16 (function 6), and overpower N-16 (function 7). SR 3.3.1.2 requires daily surveillance of the NIS power range channels and the N-16 Power Monitor channels to ensure the channels accurately reflect the reactor power based on the calorimetric heat balance calculation. A low power indication in the NIS power range channels and N-16 Power Monitor channels would non-conservatively affect the RTS, and thus, the protection of the reactor.

The proposed amendment removes the requirement to adjust the NIS power range channels and N-16 Power Monitor channels in the decreasing power direction when the indicated power is greater than the calorimetric heat balance calculation by more than 2 percent rated thermal power (RTP). The licensee stated that compliance with existing SR 3.3.1.2 may result in a non-conservative channel calibration during reduced power operation. The licensee's presentation of the changes to TS Bases for SR 3.3.1.2 provides a description of the potential decalibration of the NIS power range channels at reduced-power operation.

The current SR 3.3.1.2 Note 1 requires the power range channel and N-16 Power Monitor channel outputs to be adjusted when the absolute difference between the channel output and the calorimetric heat balance calculation is greater than 2 percent RTP. With the content of Note 1 moved into the SR and by removing the reference to the absolute difference, the revised SR 3.3.1.2 is unchanged except that the revised SR would require the power range channel and N-16 Power Monitor channel to be adjusted only when the calorimetric heat balance calculation results exceed the power range channel output by 2 percent RTP. Therefore, if the power range channels and N-16 Power Monitor channels are underestimating reactor power by more than 2 percent RTP, the channels are required to be adjusted to indicate power more accurately. The 2 percent RTP limit and the daily surveillance frequency are sufficient to ensure that the power range high neutron flux high, overtemperature N-16, and overpower N-16 setpoint reactor trip signals will be generated prior to the safety analysis limit. The calorimetric heat balance calculation is considered the more accurate determination of reactor power. This change does not affect the design of any NIS channel or N-16 Power monitor channel.

For SR 3.3.1.3, the licensee has proposed to move revise the format of Note 1 to be consistent with the format of SR 3.3.1.3. The proposed change moves the requirement in Note 1 of SR 3.3.1.3 into the body of the SR and the acronym NIS is spelled out because it no longer appears in SR 3.3.1.2. The surveillance requirement in SR 3.3.1.3 remains unchanged; excore NIS channels are adjusted every 31 effective full power days if the absolute difference between the incore and excore axial flux difference is greater than or equal to 3 percent RTP. This

proposed change to SR 3.3.1.3 is editorial in nature because the requirements of SR 3.3.1.3 are not being changed.

Based on the above evaluation, the NRC staff concludes the proposed change to SR 3.3.1.2 accounts for potential effects of decalibrating the NIS power range channels and N-16 Power Monitor channels during reduced-power operation; will ensure that the power range high neutron flux high, overtemperature N-16, and overpower N-16 setpoint reactor trip signals will be generated prior to the safety analysis limit; and does not change the design of any NIS channel or N-16 Power Monitor channel or alter conformance with the regulatory requirements stated in Section 2.0 of this Safety Evaluation. The NRC staff finds that the NIS power range channels and N-16 Power Monitor channels continue to meet GDC 13 because appropriate controls are provided to maintain reactor power within prescribed operating ranges for normal operation, anticipated operational occurrences, and accidents to ensure adequate safety. For the proposed change to SR 3.3.1.3, the NRC staff concludes that the change is editorial in nature and does not change the requirement of SR 3.3.1.3. Based on these conclusions, the NRC staff further concludes that the proposed amendments are acceptable.

In its application, the licensee presented the changes to be made to the TS Bases that address the potential decalibration of the NIS power range channels and N-16 Power Monitor channels at reduced power operation. Since the Bases are not part of the TS, the NRC staff reviewed the Bases only to assure consistency with the proposed changes. The NRC staff is not approving the Bases changes, but is including the revised bases pages for completeness.

#### 4.0 CONCLUSIONS

The NRC staff finds the proposed change to revise SR 3.3.1.2 for performing a daily surveillance adjustment of the power range channel(s) and N-16 Power Monitor channel(s) above 15 percent RTP to include only changes in the increasing direction and the revised formats of SR 3.3.1.2 and SR 3.3.1.3 to establish a consistent presentation of notations for surveillance requirements will allow safe operation. The staff, therefore, concludes that the proposed changes are acceptable.

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.