October 5, 2006

Mr. M. R. Blevins
Senior Vice President
& Chief Nuclear Officer
TXU Power
ATTN: Regulatory Affairs
P. O. Box 1002
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES), UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: REVISIONS TO TECHNICAL SPECIFICATIONS 3.3.2, "ESFAS [ENGINEERED SAFETY FEATURES ACTUATION SYSTEM] INSTRUMENTATION"; AND 3.5.2, "ECCS [EMERGENCY CORE COOLING SYSTEM] - OPERATING (TAC NOS. MC9494 AND MC9495)

Dear Mr. Blevins:

The Commission has issued the enclosed Amendment No. 129 to Facility Operating License No. NPF-87 and Amendment No. 129 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 December 16, 2005, as supplemented by letters dated June 23 and August 25, 2006.

The amendments revise TSs 3.3.2, "ESFAS [Engineered Safety Features Actuation System] Instrumentation," and 3.5.2, "ECCS [Emergency Core Cooling System] - Operating."

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/

Mohan C. Thadani, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

Enclosures: 1. Amendment No. 129 to NPF-87
2. Amendment No. 129 to NPF-89
3. Safety Evaluation

cc w/encls: See next page

October 5, 2006

Mr. M. R. Blevins
Senior Vice President
& Chief Nuclear Officer
TXU Power
ATTN: Regulatory Affairs
P. O. Box 1002
Glen Rose, TX 76043

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES), UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: REVISIONS TO TECHNICAL SPECIFICATIONS 3.3.2, "ESFAS [ENGINEERED SAFETY FEATURES ACTUATION SYSTEM] INSTRUMENTATION"; AND 3.5.2, "ECCS [EMERGENCY CORE COOLING SYSTEM] - OPERATING (TAC NOS. MC9494 AND MC9495)

Dear Mr. Blevins:

The Commission has issued the enclosed Amendment No. 129 to Facility Operating License No. NPF-87 and Amendment No. 129 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 December 16, 2005, as supplemented by letters dated June 23 and August 25, 2006.

The amendments revise TSs 3.3.2, "ESFAS [Engineered Safety Features Actuation System] Instrumentation," and 3.5.2, "ECCS [Emergency Core Cooling System] - Operating."

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/
Mohan C. Thadani, Senior Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446
Enclosures: 1. Amendment No. 129 to NPF-87
2. Amendment No. 129 to NPF-89
3. Safety Evaluation
cc w/encls: See next page

DISTRIBUTION: PUBLIC LPLIV Reading RidsOgcRp GHill
RidsNrrDorlLpl4 RidsNrrPMMThadani RidsNrrLALFeizollahi RidsNrrDirsItsb
MVaaler, SPWB RidsNrrDorlDpr RidsAcrsAcnwMailCenter RidsRgn4MailCenter
Package Accession No.: ML062550059 RidsNrrLAJBurkhardt RidsNrrPMBVaidya
TS Pages Accession No. : ML062840102
Amendment Accession No.: ML062550076 *No significant change to SE input

OFFICE	NRR/LPL4/PM	NRR/LPL4/PM	NRR/LPL4/LA	NRR/SPWB/BC	OGC-NLO	NRR/LPL4/BC
NAME	BVaidya	MThadani	LFeizollahi	JNakoski*	PMoulding	DTerao
DATE	9/27/06	10/4/06	9/13/06	9/28/06	10/4/06	10/5/06

OFFICIAL RECORD COPY

TXU GENERATION COMPANY LP

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT NO. 1

DOCKET NO. 50-445

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 129
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 December 16, 2005, as supplemented by letters dated June 23 and August 25, 2006, 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 and License Condition paragraph 2.C.(2) of Facility Operating License No. NPF-87, as indicated in the attachment to this license amendment.

3. This license amendment is effective as of its date of issuance and shall be implemented within 120 days from the date of issuance for TS 3.5.2 revisions, and within 120 days from the completion of the 12th refueling outage of Unit 1, for TS 3.3.2 revisions.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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

Attachment: Changes to the Operating
License Condition paragraph 2.C.(2) of the
Facility Operating License NPF-87 and
Technical Specifications

Date of Issuance: October 5, 2006

TXU GENERATION COMPANY LP

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT NO. 2

DOCKET NO. 50-446

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 129
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 December 16, 2005, as supplemented by letters dated June 23 and August 25, 2006, 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 and License Condition paragraph 2.C.(2) of Facility Operating License No. NPF-89, as indicated in the attachment to this license amendment.

3. This license amendment is effective as of its date of issuance and shall be implemented within 120 days from the date of issuance for TS 3.5.2 revisions, and within 120 days from the completion of the 12th refueling outage of Unit 1, for TS 3.3.2 revisions.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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

Attachment: Changes to the Operating
License Condition paragraph 2.C.(2) of the
Facility Operating License NPF-89 and
Technical Specifications

Date of Issuance: October 5, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 129

TO FACILITY OPERATING LICENSE NO. NPF-87

AND AMENDMENT NO. 129

TO FACILITY OPERATING LICENSE NO. NPF-89

DOCKET NOS. 50-445 AND 50-446

Replace the following page of the Facility Operating License NPF-87 with the attached revised page. The revised page is identified by an amendment number and contains a marginal line indicating the area of change.

Remove	Insert
- 3 -	- 3 -

Replace the following page of the Facility Operating License NPF-89 with the attached revised page. The revised page is identified by an amendment number and contains a marginal line indicating the area of change.

Remove	Insert
- 3 -	- 3 -

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.

Remove	Insert
3.3-34	3.3-34
3.5-7	3.5-7

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 129 TO

FACILITY OPERATING LICENSE NO. NPF-87

AND AMENDMENT NO. 129 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 letter to the U.S.Nuclear Regulatory Commission (NRC,Commission), dated December 16, 2005, TXU Generation Company LP (the licensee) submitted a request for changes to the Comanche Peak Steam Electric Station (CPSES), Units No. 1 and 2, Technical Specifications (TSs) (ADAMS Accession No. ML053620314). The changes would be to TS 3.3.2, 3.5.2, and 3.6.7, entitled "ESFAS Instrumentation," "ECCS-Operating," and "Spray Additive System," respectively. These revisions to the TSs would allow modifications to the facility in order to comply with the NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized-Water Reactors" (ML042260449). The submittal was supplemented by letters dated June 23, 2006 (ML061800342), and August 25, 2006 (ML062440420). The June 23, 2006, letter provided information about ongoing TXU efforts to investigate the merits of sodium hydroxide (NaOH) over trisodium phosphate (TSP) as a chemical buffering agent for maintaining the containment sump equilibrium pH > 7.1. The August 25, 2006, letter provided responses to NRC Staff requests for additional information transmitted during an August 22, 2006, teleconference between the staff of the NRC and the licensee. This supplementary letter also withdrew the proposed change to TS 3.6.7 "Spray Additive System" based on discussions with the NRC staff determining that the licensee retain the existing TS Surveillance Requirements until chemical effects analyses can be completed. The supplementary letters, dated June 23, and August 25, 2006, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the the staff's original proposed no significant hazards consideration determination.

The proposed changes, as supplemented, would revise TS Table 3.3.2-1 in order to reduce the allowable value for refueling water storage tank (RWST) level low-low (ESFAS function 7.b), thereby increasing the emergency sump water levels and the net positive suction head available for emergency core cooling; reduce the RWST empty alarm setpoint; and revise

TS 3.5.2 to change the description from a flat screen sump strainer to a complex perforated plate strainer. The associated TS Bases sections would be amended to reflect these changes.

2.0 REGULATORY EVALUATION

The emergency core cooling systems (ECCS) are designed to cool the reactor core and provide additional shutdown capability following initiation of any of the following accident conditions: a loss of coolant from the reactor coolant system (RCS) in excess of the normal makeup capability; a steam generator tube rupture; and a pipe break in the main steam system. During the initial phase of ECCS injection, the ECCS pumps take suction from the RWST and inject into the cold legs of the RCS. When the RWST has emptied to the low-level setpoint, the suctions of the residual heat removal (RHR) pumps are realigned to the containment recirculation sump for recirculation of the sump water to the RCS.

The NRC's regulatory requirements related to the cooling capability of the ECCS during a loss-of-coolant-accident (LOCA) are set forth in Title 10 of the *Code of Federal Regulations* Section 50.46 (10 CFR 50.46), "Acceptance Criteria for ECCS for Light-Water Nuclear Power Reactors." This regulation requires that licensees design their ECCS systems to meet five criteria, one of which is to provide the capability for long-term cooling. Following successful initial operation, the ECCS must possess the capability to remove decay heat such that the core temperature is maintained at an acceptably low value for the extended period of time required by the long-lived radioactivity remaining in the core.

2.1 ECCS Sump Performance

In Generic Safety Issue 191 (GSI-191), "Assessment of Debris Accumulation on Pressurized Water Reactor (PWR) Sump Performance," the NRC deals with the possibility that debris could accumulate on the ECCS sump screen during a LOCA, resulting in a loss of net positive suction head (NPSH) margin. The loss of NPSH margin to ECCS pumps drawing suction from the sump may impede or prevent the flow of water needed to meet the criteria of 10 CFR 50.46.

The NRC issued Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors," to request that licensees perform an evaluation of the ECCS and containment spray system (CSS) recirculation functions and, if appropriate, take additional actions to ensure system function. The request was based on identified potential susceptibility of the PWR recirculation sump screens to debris blockage during design basis accidents requiring recirculation operation of the ECCS or CSS, and on the potential for additional adverse effects due to debris blockage of flow paths necessary for ECCS and CSS recirculation and containment drainage.

The licensee evaluated the items identified in GL 2004-02 and provided the results of that evaluation to the NRC by letter dated September 1, 2005 (ML052550052), as supplemented by letter dated March 31, 2006 (ML060950406). The licensee concluded that deeper water for NPSH margin and reduced debris transport, larger sump strainers of a different design, and a change to a less corrosive pH range would limit the potential susceptibility of the recirculation sump screens to debris blockage. Each of these modifications is constrained by the current CPSES TSs, prompting the licensee to request the current license amendment.

2.2 Containment Spray System

To further satisfy the requirements of 10 CFR 50.46, the licensee's analysis takes credit, in part, for a CSS performing the safety functions necessary to maintain a suitable post-LOCA containment environment. Additionally, in the event that ECCS sump recirculation is initiated, the remainder of flood up is carried out by containment spray operation. The increased water levels, which continuously add clean strainer surface area until the sump strainer is fully submerged (prior to CSS switchover to recirculation), reduce the transport of debris to the sump. This assures that the ECCS maintains its capability throughout the LOCA and subsequent decay heat removal.

In addition, CPSES also credits the CSS with reducing the accident source term to meet the limits of 10 CFR Part 100, "Reactor Site Criteria," and/or 10 CFR 50.67, "Accident source term." The CSS is designed to meet the requirements of 10 CFR Part 50, Appendix A, General Design Criterion (GDC) 38, "Containment heat removal," GDC 39, "Inspection of containment heat removal system," GDC 40, "Testing of containment heat removal systems," GDC 41, "Containment atmosphere cleanup," GDC 42, "Inspection of containment atmosphere cleanup systems," and GDC 43, "Testing of containment atmosphere cleanup systems."

The licensee's proposed changes to the CSS continue to provide containment atmosphere cooling to limit post accident pressure and temperature in containment to less than the design values. Reduction of containment pressure and the iodine removal capability of the spray reduces the release of fission product radioactivity from containment to the environment, in the event of a DBA, to meet regulatory limits.

3.0 TECHNICAL EVALUATION

The staff evaluated the proposed TS changes by reviewing: (1) the licensee's application dated December 16, 2005; (2) supplemental information provided June 23, 2006; (3) request for additional information (RAI) responses received August 25, 2006; (4) applicable sections of the CPSES Updated Final Safety Analysis Report (UFSAR); (5) Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors," and the CPSES responses to requests made of licensees in GL 2004-02 and subsequent related communications.

3.1 Design Modifications to Recirculation Sump Screen / Strainer Structures

The proposed change involves revising TSs surveillance requirement (SR) 3.5.2.8 to use the term "strainers" to replace the terms "trash racks and screens." This change is needed to reflect the replacement of reactor building emergency sump suction inlet trash racks and screens with strainer assemblies in response to GL 2004-02. The new strainers are functionally equivalent to the existing trash racks and screens for meeting requirements of 10 CFR 50.46(b)(5) for Long Term Cooling and of 10 CFR Part 50, Appendix A, Criterion 35 for Emergency Core Cooling. The use of the generic term "strainers" can be used for both the existing and new sump assembly designs, will not affect implementation of SR 3.5.2.8, and can be used for implementation of corrective actions to address GSI-191.

The licensee stated in its submittal that CPSES Units 1 and 2 plan to install new sump strainers to increase the minimum available submerged strainer area from the current approximately

200 square feet per sump (at an RWST low-low nominal setpoint of 45 percent) to an area of approximately 4000 square feet per sump. This change will lessen the likelihood that debris will accumulate to an extent that would impede the necessary ECCS flow paths from the sump.

The current sump screens each consist of 10 wire mesh screens in frames mounted on a steel structure covered by a top deck. Each screen is protected from large debris by a trash rack. The new sump strainers would consist of two rows of modules made with perforated plates. Trash racks are not required to structurally protect the new strainers in the way that they protect the existing fine screens because of the more robust construction of the new strainers. The existing sump screen structures are 75 inches tall, whereas the new strainers would be approximately 45 inches tall.

In support of the new strainer design, RWST switchover nominal setpoints would be revised to ensure that the new strainers are fully submerged at the completion of RWST injection. Testing conducted by CPSES in support of the new sump strainer design has shown that significant head loss margin is gained when the strainers become fully submerged. The new strainers would have an approach velocity 95 percent less than that of the current screens, reducing both head loss and the ingestion of debris that could affect downstream components.

Upon approval of the proposed amendment request, the emergency sump trash racks and screens will be replaced with strainers during the refueling outage for Unit 2 Cycle 9 (Fall 2006) and Unit 1 Cycle 12 (Spring 2007).

The NRC staff has reviewed the licensee's regulatory and technical analyses (ML053620314) in support of the proposed change to the new sump strainer assemblies, which are described in the results of the GL 2004-02 evaluation dated September 1, 2005 (ML052550052), as supplemented by letter dated March 31, 2006 (ML060950406). The NRC staff finds that the proposed changes are consistent with all of the referenced documents, are in accordance with NRC-approved methodology, and suitably meet the requirements of 10 CFR 50.46(b)(5) for long-term cooling. Therefore, the NRC staff concludes that the proposed changes are acceptable.

3.2 RWST Level Low-Low and Empty Alarm Setpoint Change

As discussed below, the proposed reduction in the RWST level low-low nominal setpoint and empty alarm setpoint would not impact the safe operation of the plant or challenge any Safety Limit during DBA conditions. CPSES stated in its original submittal that the methodology and ECCS switchover acceptance criteria described in the UFSAR for determining the new RWST low-low and empty alarm nominal setpoints are not changed from that previously used. The application of this methodology continues to be acceptable to the NRC staff.

The RWST level low-low (engineered safety features actuation system (ESFAS) function 7.b) does not provide any signal or input that is used to generate a protection signal provided by the reactor protection system (RPS), and it does not protect any reactor safety limit. Therefore, RWST level is not a variable for which a limiting safety system setting has been specified for protection of a reactor safety limit. The consequences of accidents evaluated in the UFSAR that could be affected by the proposed change are those involving the pressurization of the containment and associated flooding and recirculation of this fluid within the ECCS or the CSS (e.g. LOCAs).

The proposed changes to TS 3.3.2, specifically Table 3.3.2-1, include reducing the allowable value for RWST level low-low and empty. Currently, the allowable low-low value for CPSES, Unit 1 is greater than 43.9 percent, and the allowable value for CPSES, Unit 2 is greater than 44.1 percent. The proposed change would reduce the allowable value for both Units to greater than 31.9 percent. These revisions to the RWST nominal setpoints and allowable values ensure an additional 60,900 gallons of water in the flood plane at the beginning of the ECCS switchover and would significantly increase the clean screen margins for the new sump strainer assemblies. The proposed RWST low-low allowable value would also maximize the containment sump level at the start of switchover. This increased water level is necessary because of the design of the new strainer as described previously in Section 3.1.

Although the water level in the containment flood plain would be higher at the start of ECCS switchover, the calculated maximum water levels during a DBA (or other LOCA) are unchanged. This is because the calculation of maximum containment water levels is based on the full contained volume of the RWST, maximum inventory addition to the sump from the LOCA, and conservative modeling of the containment to maximize the flood level for the design and environmental qualification of equipment. This analysis was unchanged by the change in RWST setpoints, as it is based on the physical characteristics of the RWST and does not use setpoints as part of the maximum calculation.

In order to implement the new RWST level low-low nominal setpoint and the lower RWST empty alarm setpoint, the RWST empty alarm logic would be changed from a 1/4 logic to a 2/4 logic to match the 2/4 logic for the RWST level low-low alarm (licensee's letter dated September 28, 2006). In addition, the containment spray motor operated RWST isolation valves would be modified to reduce the closing stroke time from 90 seconds to less than 30 seconds (licensee's letter dated September 28, 2006). These changes are required to provide consistency between the "low-low" and the "empty" alarm logics and to ensure that there is enough remaining water inventory for the operators to complete the switchover of the ECCS pump suction from the RWST to the containment sump prior to emptying the RWST.

The present CPSES design for the RWST "low-low" level alarm (which starts the ECCS switchover) is a 2/4 logic. However, the current "empty" level alarm logic is 1/4. Because of this difference, the uncertainty in the alarms has a greater affect on the volume between the "low-low" level alarm and the "empty" level alarm setpoints. The total loop uncertainty for each channel is +/- 12 inches. Since one channel could be at +12 inches and the other 3 at -12 inches, the uncertainty in the volume between the setpoints for 1/4 logic is +/- 24 inches of water (i.e. the 2/4 low-low could occur at the setpoint minus 12 inches and the 1/4 empty could occur at empty plus 12 inches). Therefore, the volume between setpoints must be increased by 24 inches to ensure the necessary volume. If the empty alarm was a 2/4 logic, the uncertainty in the volume of water between the setpoints would be equal to the nominal water level less the uncertainty in the setability of the alarm bistables. The uncertainty in the bistables is much less than the total loop uncertainty (2.6 inches vs 24 inches for the 1/4 logic). This situation would

allow a setpoint 4% lower than the 1/4 logic. However, by revising the "empty" level alarm logic to 2/4, the uncertainty in the volume between the setpoints is significantly reduced, thereby allowing an overall lower "low-low" level alarm setpoint and adding over 21,000 gallons to the containment before the start of cold leg recirculation.

Changes to RWST setpoints are based on the RWST setpoint calculation. The previous design with low-low set at 45% and empty at 12% (ML9934901741) was based on the fact that the existing analysis of a RWST low-low setpoint of 40% did not show enough water below the empty alarm to complete ECCS pump protection precautions and containment spray switchover prior to depleting the useable water in the tank. In order to complete ECCS switchover before the empty alarm, a low-low setpoint of 45% was necessary. The primary problem was slow-closing RWST isolation valves (e.g. 90 second stroke times).

The licensee has revised the RWST setpoint calculation using revised input from Westinghouse on the required ECCS switchover volume with low-low assumed at 38% in lieu of 45% and the sump at a corresponding coincident level. Although no containment overpressure is assumed, the water head in containment relative to the RWST level is considered. This assumption reduces the calculated RWST outflow since there is more water provided by the ECCS sump and less by RWST outflow. The increased flow to the ECCS sump showed the benefit of refined calculations. Therefore, the licensee revised the calculation of containment spray flowrates for RWST draindown to credit the water head in containment relative to the RWST level to reduce the calculated RWST outflow with no credit for containment overpressure. The licensee then determined that containment spray switchover could start at 6% and be completed before depleting the useable water in the tank if the RWST isolation valve stroke time was reduced from 90 seconds to 30 seconds and the “Transfer to Cold Leg Recirculation” procedure was revised to make spray switchover a continuous action step (i.e. one step in lieu of two). Each of the isolation valve switches on the main control board is a two position (maintained) switch. The calculation assumes that the operator is anticipating the start of spray switchover at 6% and will begin within 10 seconds of the indication and be complete in one minute (70 seconds total). The licensee indicated that the draft procedure was tested on the CPSES simulator on September 21, 2006.

Training of the operator consisted of a pre-job brief on the procedure change. At 6% indication the operator changes the switches in order for HS-4782 to open, for HS-4783 to open, for HS-4758 to close, and HS-4759 to close. HV-4782 and HV-4783 open in less than 20 seconds. The replacement valves for HV-4758 and HV-4759 close in less than 30 seconds. Adequate containment spray pump suction flow is maintained even if all four valves were switched simultaneously. On the first trial run, the operator completed switchover in 47 seconds. No failures were simulated. In its analysis, the licensee assumed bounding single active failure of one sump isolation valve to open. On the second run simulating the single failure, the operator completed switchover of the operable train in 36 seconds and stopped the affected pump within the time assumed in the analysis. Starting spray switchover at 6% will have tank isolation complete before 3% is indicated. The calculation of containment spray flowrates for RWST draindown also shows that once the sump isolation valves are open, the pumps will have adequate NPSH even if the RWST is not isolated and is completely depleted. The analysis demonstrates the conservatism and margin in the design, because no credit is taken for containment overpressure. Containment backpressure from a real event will significantly

reduce or terminate RWST outflow, and the spray switchover change from 24% to 6% significantly increases the total RWST injection volume.

The new RWST level low-low nominal setpoint would continue to ensure that ECCS switchover is completed prior to receipt of the RWST empty alarm. The RWST empty alarm would be

lowered from 12 percent to 9 percent to provide a conservative volume of water for ECCS transfer, assuming no credit for containment backpressure and the worst single active failure. The licensee concluded that the revised RWST empty alarm would still provide sufficient margin to ensure that switchover to recirculation is complete and that suction to the RWST is isolated without allowing air entrainment from the RWST into the ECCS or CSS pumps.

The NRC staff has reviewed the licensee's regulatory and technical analyses (ML 053620314) in support of the proposed change to the RWST level low-low nominal setpoint and RWST empty alarm setpoint analyses, which are described in the results of the GL 2004-02 evaluation dated September 1, 2005 (ML052550052), as supplemented by letter dated March 31, 2006 (ML060950406). CPSES performed evaluations to demonstrate that the RWST level low-low nominal setpoint, in conjunction with plant modifications to the RWST isolation valves, ensures that the switchover of both the ECCS and CSS will be completed without stopping the pumps or entirely depleting the RWST inventory, and with no credit for containment backpressure. The licensee also performed evaluations that show, even with a worst case single active failure, suction to the pumps would not be lost and air entrainment into the ECCS would not occur. Based on its review, the NRC staff finds that the licensee's analysis is conservative and therefore, the proposed changes are acceptable.

The proposed changes to TS 3.3.2 will be implemented when the containment sump valve modifications are completed during the ninth refueling outage for CPSES, Unit 2 (Fall 2006) and the twelfth refueling outage for CPSES, Unit 1 (Spring 2007). The NRC staff finds that the revised TSs SRs will continue to ensure that all Limiting Conditions for Operation are met for the current design. The NRC staff notes that the Mode, Applicability, and Actions for the affected Specifications are unchanged from the current TSs.

The NRC staff has determined that the licensee used methods described in NEI 04-07, which was evaluated and approved by the NRC in the safety evaluation report dated December 6, 2004. Use of NEI 04-07 guidance assures compliance with GL 2004-02 and sufficiently addresses the related GSI-191 corrective actions. Based on this determination, the NRC staff finds that the changes to TS 3.3.2 are acceptable.

3.3 Summary of NRC Staff's Evaluations

As discussed above, the NRC staff has reviewed the licensee's regulatory and technical analyses in support of the proposed license amendment. The proposed changes will revise TS Table 3.3.2 to reduce the Allowable Value for RWST level low-low (ESFAS function 7.b), thereby increasing the emergency sump water levels and the net positive suction head available for emergency core cooling; reduce the RWST empty alarm setpoint; and revise TS 3.5.2 to change the description from a flat screen sump strainer to a complex perforated plate strainer design. On the basis of its review, as described above, the NRC staff finds the proposed changes to be acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Texas State official was notified of the proposed issuance of the amendment. 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 they also change 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 published March 14, 2006 (71 FR 13179). 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.

Principal Contributor: M. Vaaler
F. Forsaty

Date: October 5, 2006

Comanche Peak Steam Electric Station

cc:

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P. O. Box 2159
Glen Rose, TX 76403-2159

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011

Mr. Fred W. Madden, Director
Regulatory Affairs
TXU Generation Company LP
P. O. Box 1002
Glen Rose, TX 76043

George L. Edgar, Esq.
Morgan Lewis
1111 Pennsylvania Avenue, NW
Washington, DC 20004

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

Environmental and Natural
Resources Policy Director
Office of the Governor
P. O. Box 12428
Austin, TX 78711-3189

Mr. Richard A. Ratliff, Chief
Bureau of Radiation Control
Texas Department of Health
1100 West 49th Street
Austin, TX 78756-3189

Mr. Brian Almon
Public Utility Commission
William B. Travis Building
P. O. Box 13326
1701 North Congress Avenue
Austin, TX 78701-3326

Ms. Susan M. Jablonski
Office of Permitting, Remediation
and Registration
Texas Commission on Environmental
Quality
MC-122
P. O. Box 13087
Austin, TX 78711-3087

Terry Parks, Chief Inspector
Texas Department of Licensing
and Regulation
Boiler Program
P. O. Box 12157
Austin, TX 78711