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UNITED STATES
NUCLEAR REGULATORY COMMISSION
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December 20, 1999

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2 -
CLOSEOUT OF GENERIC LETTER 96-06, "ASSURANCE EQUIPMENT
OPERABILITY AND CONTAINMENT INTEGRITY DURING DESIGN-BASIS
ACCIDENT CONDITIONS" (TAC NOS. M96797 AND M96798)

Dear Mr. Terry:

On September 30, 1996, the U. S. Nuclear Regulatory Commission (NRC) staff issued Generic Letter (GL) 96-06. The NRC staff has reviewed TXU Electric Company's (the licensee's) submittals dated October 30, 1996, January 27 and November 7, 1997, June 30, 1998, and November 12, 1999, in response to GL 96-06 for Comanche Peak Steam Electric Station (CPSES), Units 1 and 2. The following review, by the NRC staff, addresses the issues of waterhammer and two-phase flow associated with containment coolers and thermally-induced pressurization of piping runs penetrating the containment.

GL 96-06 included a request for licensees to evaluate cooling water systems that serve containment air coolers to assure that they are not vulnerable to waterhammer and two-phase flow conditions. The licensee provided its assessment for CPSES, Units 1 and 2, in letters dated January 27 and November 7, 1997, and additional information was submitted in a letter dated June 30, 1998. Based on the information that was provided, the licensee does not intend to operate the containment fan coolers when there is a possibility of a waterhammer or two-phase flow condition. In the June 30, 1998, submittal, the licensee indicated that the Emergency Operating Procedures (EOPs) would be revised to clarify that the licensee's plant staff will assess the potential for flashing and waterhammer prior to aligning the ventilation-chilled water to containment during an event. The licensee also indicated that guidance for assessing the potential for waterhammer will be developed and will be available to the emergency response team for use during an event. By letter dated November 12, 1999, the licensee confirmed that the subject EOPs had received the required changes. We are satisfied with the licensee's response and consider the waterhammer and two-phase flow elements of GL 96-06 to be closed.

With regard to the thermally-induced pressurization concern of GL 96-06, in its submittal of January 27, 1997, the licensee stated that two pipe lines penetrating the containment are potentially vulnerable to a water solid volume that may be subjected to an increase in pressure due to heating of the trapped fluid. The affected two lines are the Component Cooling Water (CCW) return line, for CPSES, Units 1 and 2, and the Personnel Airlock Hydraulic System for

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CPSES, Unit 1. The licensee determined that the affected lines are operable based on potential leakage through mechanical seals, packing, bonnet gaskets, and/or valve seating surfaces. For its long-term corrective action, the licensee committed to perform further analysis and/or design modifications of the affected lines to resolve the thermally-induced pressurization issue.

In response to the NRC staff's request for additional information dated August 28, 1997, the licensee submitted a letter dated November 7, 1997, informing the staff of its design modifications. In the case of the CCW return line, the licensee proposed a design change to lock open the manual isolation valves of the CCW loop to two heat exchangers in the containment to ensure that a relief path is available in modes 1 through 4. The licensee also indicated that the design change was scheduled for implementation during the 1997 refueling outage of CPSES, Unit 2, and during the spring 1998 refueling outage of CPSES, Unit 1. For the Personnel Airlock Hydraulic System in Unit 1, the licensee proposed to add a thermal overpressure protection device. This design change was scheduled for implementation during the spring 1998 refueling outage of CPSES, Unit 1. The licensee stated that these actions ensure that the plant complies with the current licensing basis. By letter dated November 12, 1999, the licensee informed the NRC staff that the design modifications associated with the manual isolation valves of the CCW loop, to the two heat exchangers inside containment, and the design modifications associated with the Personnel Airlock Hydraulic System in CPSES, Unit 1, had been completed.

The NRC staff concludes that the licensee's proposed corrective actions provide an acceptable resolution for the issues of waterhammer and two-phase flow associated with containment coolers and thermally-induced pressurization of piping runs penetrating the containment at CPSES, Units 1 and 2.

This completes the NRC staff's review of GL 96-06 for CPSES, Units 1 and 2, and closes TAC numbers M96797 and M96798.

Sincerely,

ORIGINAL SIGNED BY
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Docket Nos. 50-445 and 50-446

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Comanche Peak Steam Electric Station

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