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Ref. # NRCB 88-08

March 27, 1990

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
FINAL RESPONSE FOR UNIT 1 TO NRC BULLETIN 88-08:
THERMAL STRESSES IN PIPING CONNECTED TO REACTOR
COOLANT SYSTEMS

Ref: 1) TU Electric Letter, TXX-88766, from W. G. Council to
NRC, dated October 31, 1988.
2) TU Electric Letter, TXX-89805, from W. J. Cannon, Jr. to
NRC, dated November 17, 1989.

Gentlemen:

Reference 1 provided TU Electric's response to Reporting Requirement 1 of NRC Bulletin 88-08 for Units 1 and 2. The TU Electric response identified sections of unisolable piping that are potentially susceptible to the conditions described in the bulletin. Reference 2 provided an interim response for Unit 1 to Reporting Requirement 2 of the bulletin. TU Electric's final response to Reporting Requirement 2 for Unit 1 is provided below. For clarity, Reporting Requirement 2 and associated Actions 2 and 3 have been restated. The attachment provides the required affidavit, in accordance with the requirement of NRC Bulletin 88-08, that responses be submitted under oath or affirmation under the provisions of Section 182a, Atomic Energy Act of 1954, as amended.

Reporting Requirement 2

Those addressees who determine that there are unisolable sections of piping that can be subjected to stresses from temperature stratification or temperature oscillations that could be induced by leaking valves and that were not evaluated in the design analysis of the piping shall submit a letter within 30 days of completion of Actions 2 and 3. This letter should confirm that Actions 2 and 3 have been completed and describe the actions taken.

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Action 2

For any unisolable sections of piping connected to the RCS that may have been subjected to excessive thermal stresses, examine nondestructively the welds, heat-affected zones and high stress locations, including geometric discontinuities, in that piping to provide assurance that there are no existing flaws.

TU Electric Response to Action 2

Based on crack initiation and propagation analysis for Farley Unit 2, TU Electric and Westinghouse have determined that it is highly unlikely that a crack could be initiated by thermal fatigue during the relatively short amount of time that Unit 1 has been hot. Therefore, the nondestructive examination requirements of Action 2 are not considered applicable to Unit 1.

Action 3

Plan and implement a program to provide continuing assurance that unisolable sections of all piping connected to the RCS will not be subjected to combined cyclic and static thermal and other stresses that could cause fatigue failure during the remaining life of the unit. This assurance may be provided by 1) redesigning and modifying these sections of piping to withstand combined stresses caused by various loads including temporal and spatial distributions of temperature resulting from leakage across valve seats, 2) instrumenting this piping to detect adverse temperature distributions and establishing appropriate limits on temperature distributions, or 3) providing means for ensuring that pressure upstream from block valves which might leak is monitored and does not exceed RCS pressure.

TU Electric Response to Action 3

TU Electric has implemented a program utilizing the second option, described by Action 3 above. Resistance Temperature Detectors (RTD's) have been installed on the unisolable piping sections described in reference 1). The RTD's sense pipe temperatures at selected locations on the piping. The output of these RTD's is fed to a data acquisition system. Temperature data is collected by Operations personnel at procedurally specified intervals and is used to develop temperature profiles for evaluation by engineering personnel. Other plant parameters, such as RCS pressures and temperatures, and system flow rates are also recorded.

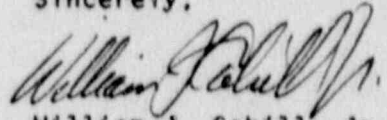
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Limits on temperatures and differential temperatures are specified in procedures. If these limits are exceeded, further engineering evaluations will be conducted and appropriate actions will be taken. The above program is based on monitoring guidelines developed by Westinghouse. The program may be modified in the future to reflect operational experience accumulated by CPSES and Westinghouse.

Installation of the RTD's, Data Acquisition System, and interconnecting wiring have been completed. Data Acquisition System testing and checkout has been performed and the system was declared operational on March 10, 1990. Documentation of these activities is available for review by NRC inspectors.

As required by NRC Bulletin 88-08, Actions 2 and 3 will be completed for Unit 2 prior to Unit 2 initial criticality, and a letter will be submitted pursuant to Reporting Requirement 2 within 30 days of completing Actions 2 and 3.

Sincerely,



William J. Cahill, Jr.

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Attachment

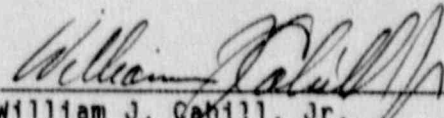
c - Mr. R. D. Martin, Region IV
Resident Inspectors, CPSES (3)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)	
)	
Texas Utilities Electric Company)	Docket Nos. 50-445
)	50-446
(Comanche Peak Steam Electric)	
Station, Units 1 & 2))	

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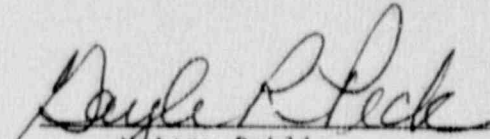
William J. Cahill, Jr. being duly sworn, hereby deposes and says that he is Executive Vice President, Nuclear of TU Electric, the lead Applicant herein; that he is duly authorized to sign and file with the Nuclear Regulatory Commission this Unit 1 final response to NRC Bulletin 88-08; that he is familiar with the content thereof; and that the matters set forth therein are true and correct to the best of his knowledge, information and belief.



William J. Cahill, Jr.
Executive Vice President, Nuclear

STATE OF TEXAS)
)
COUNTY OF DALLAS)

Subscribed and sworn to before me, a Notary Public, on this 26th day of March, 1989.



Notary Public