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Ref. # 10CFR50.90  
10CFR50.36

William J. Cahill, Jr.  
Group Vice President

December 14, 1992

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)  
DOCKET NOS. 50-445 AND 50-446  
SUBMITTAL LAR 92-002, SUPPLEMENTAL 1 - ADDITIONAL INFORMATION  
COMBINED UNIT 1 AND 2 TECHNICAL SPECIFICATIONS

REF: Letter logged TXX-92537, dated October 29, 1992,  
from William J. Cahill, Jr. to the USNRC

Gentlemen:

Via the referenced letter, TU Electric submitted a supplement to License Amendment Request (LAR) 92-002. The NRC staff has requested an expanded no significant hazards determination evaluation for the changes in Enclosure (1) of the referenced letter. The expanded evaluation is attached.

Should you have any questions, please contact Mr. Manu Patel of Nuclear Licensing at (214) 812-8298.

Sincerely,

William J. Cahill, Jr.

MCP/grp

Attachments: 1. Affidavit  
2. No Significant Hazards Determination Evaluation

c - Mr. J. L. Milhoan, Region IV  
Resident Inspectors, CPSES (2)  
Mr. T. A. Bergman, NRR  
Mr. B. E. Holian, NRR

Mr. D. K. Lacker  
Bureau of Radiation Control  
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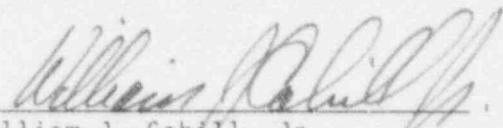
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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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

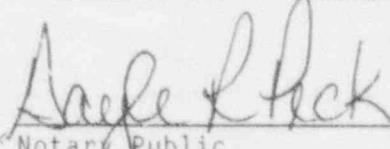
AFFIDAVIT

William J. Cahill, Jr. being duly sworn, hereby deposes and says that he is Group 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 Additional Information to the Supplement to License Amendment Request (LAR) 92-002 to the CPSES Unit 1 Operating License (NFP-87); 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.  
Group Vice President, Nuclear

STATE OF TEXAS )  
 )  
COUNTY OF DALLAS)

Subscribed and sworn to before me, on this 14th day of December,  
1992.

  
\_\_\_\_\_  
Notary Public

- 1) Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

The following changes affect the pressure/temperature limits which define the acceptable regions of operation:

- o the 50 psi decrease in heatup/cooldown curve
- o the 39 psi decrease in a portion of the PORV setpoint curve.
- o the addition of the 20°F/hour heatup curve and
- o the 1°F increase in the criticality limit.

As such, these changes do not affect the probability that overpressure events (the events of concern) would occur. These changes only affect the conditions from which events could be initiated.

The consequences of overpressure events are limited by assuring that the applicable stress limits for the Reactor Coolant System pressure boundary (e.g., ASME Boiler and Pressure Vessel Code, Section III, Appendix G and 10CFR50, Appendix G) are not exceeded. Because the revised acceptable regions of operation still assure that these limits are not exceeded, these changes have no impact on the consequences of an overpressure event.

The change of terminology to use the adjusted reference temperature (ART) is editorial only.

The changes in the ART values are updates based on the results from the reactor vessel material irradiation surveillance program. The ART values on these figures are informational only and do not directly affect plant operations or performance.

The margin for instrumentation error described in the text above the heatup and cooldown curves is changed to reflect the additional 50 psi of measurement uncertainty which is incorporated into the curves. The margin for instrumentation error as noted on these figures is informational only and does not directly affect plant operation or performance.

In summary, these changes are either editorial or descriptive or only affect the limits which define the acceptable range for operation. As such, these changes do not change the probability or consequences of an accident previously evaluated.

- 2) Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

The proposed changes are either editorial or descriptive or only affect the limits which define the acceptable regions for operation. No changes are proposed which could result in a new or different kind of accident from any accident previously evaluated.

- 3) Does the proposed change involve a significant reduction in a margin of safety?

The margin of safety is determined by the failure point for a particular system, structure, or component and the acceptance criteria which are established to ensure that the failure point is not reached during the events of concern. For these specifications, the failure points of concern are the points at which brittle fracture failures could occur in the Reactor Coolant System (RCS) pressure boundary. The acceptance criteria are, in part, the pressure/temperature limits provided by Figures 3.4-2 and 3.4-3 and the PORV setpoint limits in Figure 3.4-4.

For the Reactor Coolant System, the severity of the stresses which can exist are determined by the actual temperature, pressure, and heatup/cooldown rates which are allowed. The method of determining the pressure/temperature limit curves for various heatup and cooldown rates is based on approved calculational methodologies which establish an acceptable margin between the actual stresses and the failure point of the materials. An allowance for measurement uncertainties of the instruments is then combined with the actual stresses to produce the heatup/cooldown limit curves.

The different heatup/cooldown rate curves are calculated by the same methodologies and the same instrument uncertainties apply. Therefore, the curve for each heatup/cooldown rate provides essentially the same margin of safety. For example, for each heatup curve, the maximum stress, and therefore the minimum margin of safety, exists at the heatup rate designated for that curve. Consequently, the margin of safety for a 60°F/hour heatup while operating on the 60°F/hour curve is essentially the same as the margin of safety for a 100°F/hour heatup while operating on the 100°F/hour curve.

The new 20°F/hour heatup curve was determined using the same calculational methodologies as the new 60°F/hour and 100°F/hour heatup curves. The same instrument uncertainties were applied to develop all of these curves and therefore each provides essentially the same margin of safety.

The instrumentation used to assure operation within the allowed range for these curves has not been changed and therefore the uncertainty of the instrumentation has not changed. However, a previously unrecognized 50 psi uncertainty has been incorporated into all of the heatup/cooldown and PORV setpoint curves. Because the actual instrument uncertainty is unchanged but the existing curves are being lowered to incorporate an allowance for the additional 50 psi uncertainty, the maximum stress conditions allowed to exist have been reduced and the margin of safety has been increased.

As with the heatup and cooldown curves discussed above, the maximum allowable PORV setpoints specified in Figure 3.4-4 are selected to assure that pressure/temperature limits are not exceeded. The transients of concern are analyzed including factors such as equipment time delays, instrumentation uncertainties, valve opening times, etc., to ensure that the pressure overshoot does not exceed the limits established by Appendix G of Section III of the ASME Boiler and Pressure Vessel code. The PORV setpoint curve is determined by combining the results of the analysis with the limits determined by the ASME code. To account for the additional 50 psi uncertainty, the analysis was revised. When the analysis was revised, some overly conservative assumptions were replaced with acceptable but less conservative assumptions. As a result, the PORV setpoint curve has decreased when below 237°F by 39 psi instead of 50 psi. The other 11 psi was absorbed by the revised assumptions.

No changes were made to the installed plant hardware or instrumentation. Thus, an actual plant transient will progress in the same manner following this change in PORV setpoint curve except for the initial conditions. In other words, the actual pressure overshoot for the limiting transient is not expected to change. The pressure limits per the ASME code remains essentially unchanged. Therefore, the 39 psi reduction in the setpoint limit (i.e., initial conditions) increases the margin of safety.

The change in the terminology to use "ART" and the descriptive change in the pressure margin have no direct effect on either plant operations or on the actual margin.

The changes in the ART values are the results of an update of existing calculations and are based on the actual neutron fluence obtained from the reactor vessel material irradiation surveillance program. The revised ART values are used in the calculations of the revised heatup and cooldown curves. The effects of the changes to the ART values are reflected in the heatup and cooldown curves, but do not directly affect any margins or plant operations. The fact that the ART values decreased indicates that the reactor vessel is more resistant to brittle fracture; however, the change is so small as to be inconsequential.

The revised criticality limits reflected on Figure 3.4-2 specify pressure/temperature limits for critical core operation in order to provide additional margin during actual power production, in accordance with 10CFR50, Appendix G. The curves are applicable for RCS temperatures below approximately 350°F. However, because criticality below an average RCS temperature of 551°F is prohibited by Technical Specification 3.1.1.4, the changes to these limits are descriptive, and have no effect on margin or plant operations.

In summary, the proposed changes are either editorial or descriptive in nature with no effect on margin, or represent an increase in the actual margin of safety.

COMMITMENT TRACKING  
OUTGOING CORRESPONDENCE EVALUATION  
SHEET

DOCUMENT IDENTIFICATION

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INFORMATION COMBINED UNIT 1 AND 2 TECH SPEC

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10010  
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ITEM TRACKING

Description

Tracking  
Document/No.

No new commitments identified in letter : TXX-92611

\* Item Types : EA - External Action    OB - Operational Basis    DB - Design Basis  
                  IA - Internal Action    DO - Description Only  
                  C - Committed Date    P - Proposed Date

COMPLETED BY :

REVIEWED BY :

Initials MCP *[Signature]* Date 12/9/92

Initials *[Signature]* Date 12/14/92