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June 28, 1996

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
LARGE BREAK LOCA ANALYSIS 10CFR50.46 REPORT

Gentlemen:

On June 6, 1996, TU Electric determined that changes in the large break LOCA analyses are required for both CPSES Units 1 and 2 and that the changes are expected to result in a differences of greater than 50°F in calculated peak clad temperatures (PCT). However, the resulting PCTs remain below the relevant event acceptance criterion of 2200°F. Pursuant to 10CFR50.46, TU Electric herein reports the following significant change in the large break LOCA analyses for Units 1 and 2.

Background:

TU Electric was made aware on June 6, 1996, of the results of an audit of Siemens Power Company's (SPC) ECCS evaluation model documentation performed by the Nuclear Regulatory Commission. Of particular importance is the finding that SPC's revision to one of the code packages used in their 1986 ECCS evaluation model, TOODEE2, is significant and requires NRC staff review and approval.

TU Electric adopted the SPC 1986 ECCS evaluation model (EXEM/PWR) and demonstrated the application of this methodology to the Comanche Peak Steam Electric Station through a topical report submitted for NRC review in December 1990. During the NRC's review process, TU Electric committed to maintain compliance with the explicitly approved EXEM/PWR methodology (with the exception of the number of core nodes). This commitment was reflected in the NRC's Safety Evaluation Report which approved TU Electric to perform plant-specific analyses of large break loss of coolant accidents.

Between the time of the original report submittal by TU Electric and the first application to Comanche Peak Steam Electric Station Unit 1, Cycle 4, SPC released a revised version of TOODEE2. SPC stated that the revised version corrected an anomalous trend that could have led to erroneous judgments concerning the adequacy of the ECCS. Siemens also stated that this version was consistent with the approved EXEM/PWR methodology and represented the revision to the NRC as a minor change. Consistent with commitments to the NRC, TU Electric incorporated the revised TOODEE2 version into their evaluation model.

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Discussion:

After October 1988, 10CFR50, Appendix K, I.C.5.c does not allow the use of Dougall-Rosenhow flow film boiling heat transfer correlation in the evaluation model if a change or error correction, or the cumulative effects thereof, results in a substantial PCT benefit of greater than 50°F. Because the EXEM/PWR evaluation model includes the Dougall-Rosenhow correlation, and preliminary comparisons recently performed by TU Electric indicate that the use of the revised version results in a decrease in the PCT of greater than 50°F over the original TOODEE2 version, the incorporation of the revised version may be inappropriate.

Results:

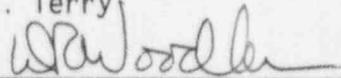
The current LBLOCA PCTs of record for CPSES Units 1 and 2 are 1956°F and 1949°F, respectively, both calculated with the revised TOODEE2 version. Based on preliminary evaluations, the PCTs calculated with the original TOODEE2 version are approximately 200°F higher than those calculated with the revised version. If this 200°F difference was added to the PCTs of record, the resulting PCTs would remain below the relevant event acceptance criterion of 2200°F. Therefore, the conclusion of the analyses presented in FSAR Section 15.6.5 remains valid and operability is unaffected.

CPSES Unit 1 is scheduled to enter a refueling outage in early October 1996. TU Electric proposes to reanalyze the large break loss of coolant accident for Unit 1, using the original version of TOODEE2, prior to the start of power operations following the outage. TU Electric proposes to reanalyze the large break loss of coolant accident for Unit 2 within the three month period following the end of the Unit 1 refueling outage.

Should you have any questions concerning this report, please contact Mr. J. D. Seawright at (214) 812-4375.

Sincerely,

C. L. Terry

By: 

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JDS/grp

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