



Log # TXX-92472
File # 10110 (CP-86-41)
Ref. # 10CFR50.55(e)

TU ELECTRIC

October 2, 1992

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
BUCKET NOS. 50-445 AND 50-446
SMALL BREAK LOSS OF COOLANT ACCIDENT DURING MODE 4 OPERATION
SDAR CP-36-41 (FINAL REPORT)

Gentlemen:

On May 28, 1986, TU Electric orally notified your Mr. J. Barnes of a deficiency involving the evaluation of the effect of a small break Loss of Coolant Accident (LOCA) during Mode 4 operation. Evaluation of this deficiency has been completed and determined to be not reportable. This is the final report under the provisions of 10CFR50.55(e).

This issue originated as a result of NRC questions regarding the effects of the operational status of plant equipment during Mode 4 operation on the Emergency Core Cooling System (ECCS) performance. Westinghouse performed a review of Mode 4 LOCA evaluations and provided each affected utility with sufficient information to perform a plant specific assessment based on that plant's operating procedures, operator training and operational status of plant equipment. The information provided to the utilities was also provided to the NRC in Westinghouse letter NS-NRC-86-3144 from E. P. Rahe, Jr. to NRC dated June 24, 1986.

Due to the generic nature of this issue the Westinghouse Owners Group (WOG) became involved. The WOG developed a program to resolve this issue. The WOG program proposed the use of leak-before-break technology to define the maximum credible break size to be considered for shutdown conditions and a LOCA analysis to determine the available operator action time to mitigate the consequences of the maximum credible LOCA.

Based on NRC comments, the WOG program was modified to eliminate the use of leak-before-break methodology. The modified program consisted of determining the failure rate of large bore piping for Mode 3 conditions using structural reliability and risk assessment technology, performing an evaluation that demonstrated that the risk associated with a large break LOCA in Mode 3 or 4 is less than the risk associated with Mode 1 by comparing core damage frequencies, and performing a thermal hydraulic analysis for a six inch pipe break with the plant in Mode 3 or 4 to demonstrate that adequate time is available for the operator to assess the condition and activate ECCS.

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Upon completion of this modified program, the WOG issued topical report, WCAP-12476, "Evaluation of OCA During Mode 3 and Mode 4 Operation for Westinghouse NSSS," which described in detail the assumptions, methodologies, and results of the modified program. The topical report was sent to affected utilities and the NRC for review. The report concluded that:

- o the current ECCS and ECCS actuation system design for Westinghouse NSSS is adequate for Mode 3 and Mode 4 operation,
- o the risk of core damage from a large break LOCA is lower in Mode 3 and 4 than the risk at full power operation, and
- o there is adequate operator action time to mitigate the consequences of a small break LOCA.

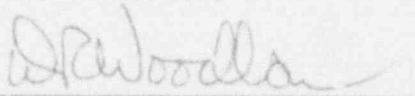
TU Electric actively participated on the WOG Analysis Subcommittee which developed the topical report. The assumptions, methodology, and results of the topical report are conservative and they envelope the plant specific condition for CPSES Units 1 and 2. In addition, the CPSES plant operating procedures are conservative with respect to operator actions and required action times assumed in the topical report. Hence, no changes to the CPSES small break LOCA analysis or operating procedures are required.

Because the topical report has demonstrated that there are no safety implications for this event and no changes to the CPSES analysis or operating procedures are required, this condition has been determined to be not reportable. TU Electric plans no further actions or reports to the NRC on this issue. However, if the NRC reviews the topical report and has questions or concerns, then TU Electric will address those questions or concerns at that time.

Sincerely,

William J. Cahill, Jr.

By:



D. R. Woodlan
Docket Licensing Manager

DNB/dnb

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