

UNITED STATES NUCLEAR REGULATORY COMMISSION WASHINGTON, D. C. 20555

September 28, 1992

Docket No. 50-445

Mr. William J. Cahill, Jr. Group Vice President, Nuclear TU Electric 400 North Olive Street, L.B. 81 Dallas, Texas 75201

Dear Mr. Cahill:

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES), UNIT 1, RESPONSE TO NRC BULLETIN 88-08, "THERMAL STRESS IN PIPING CONNECTED TO REACTOR COOLANT SYSTEM" (TAC NO. M83765)

TU Electric sent an update to its response to NRC Bulletin 88-08 in a letter dated February 7, 1992 (TXX-92010). On March 23, 1992 (TXX-92009), TU Electric requested a change in actions described in the February 7, 1992 letter.

Bulletin 88-08 requires that licensees provide continuing assurance that unisolable sections of all piping connected to the reactor coolant system (RCS) will not be subjected to cyclic stresses, including thermal cyclic stresses associated with leaking isolation valves, that could cause fatigue failure during the remaining life of the plant. Action 3 of Bulletin 88-08 presented the following three options for providing this assurance: (1) redesign of the piping to meet the ASME Section III code requirements, (2) installation of temperature monitoring instrumentation, or (3) assurance that pressure upstream of the isolation valves will not exceed RCS pressure.

TU Electric stated in their letter of February 7, 1992, that it had implemented the second option of Action 3. The licensee installed temperature monitoring instrumentation on unisolable piping in Unit 1, and its operations personnel recorded temperature data at specific intervals. TU Electric stated that appropriate action will be taken if any datum is outside its procedurally specified limits.

By letter of March 23, 1992, TU Electric transmitted data for the RHR lines from the first operating cycle. The licensee stated that \underline{W} had reviewed the data and concluded that further data collection is not necessary. In its review, \underline{W} concluded that ISI program intervals should be developed based on the claim that 1.5 years of leakage are required to propagate a crack from 10 percent to 60 percent of wall thickness.

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Action 3 of Bulletin 88-08 requires that licensees provide continuing assurance that unisolable sections of piping connected to the RCS will not be subjected to thermal cycling due to valve leakage that could cause fatigue failure during the life of the plant. Options for providing unis assurance specifically do not include ISI. General Design Criterion 14 of 10 CFR 50, Appendix A, states that "the reactor coolant pressure boundary shall be designed ... so as to have an extremely low probability of abnormal leakage " ISI is applicable to the detection of random cracks or flag of finite size and unknown origin, and therefore conflicts with the basic intent of the criterion. The intent of Criterion 14 is to preclude the initiation of cracks due to known causes. Furthermore, Supplements 1 and 2 of Bulletin 88-08 show that ISI is not always reliable for detecting flaws before they develop into leaking cracks. The staff therefore considers ISI as an unaccuptable method for satisfying the requirements of Action 3 of Bulletin 88-08.

TU Electric is therefore required to provide continuing assurance that unisolable sections of piping do not experience abnormal thermal cycling due to leaking isolation valves in accordance with the options stated in Action 3 of Bulletin 88-08.

Sincerely,

Thomas A. Bergman, Project Manager Project Directorate IV-2 Division of Reactor Projects III/IV/V Office of Nuclear Reactor Regulation

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