

TEXAS UTILITIES SERVICES INC.

2001 BRYAN TOWER DALLAS, TEXAS 75201-3050

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May 20, 1983

Director of Nuclear Reactor Regulation
Attention: Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION
DOCKET NOS. 50-445 AND 50-446
ALTERNATE SHUTDOWN
REACTOR HEAT REMOVAL

REF: (1) TXX-3515 of May 7, 1982 entitled, "Comanche
Peak Steam Electric Station Alternate Shutdown"

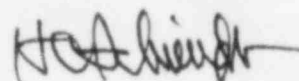
Dear Sir:

Reference (1) described the Alternate Shutdown capability for Comanche Peak Steam Electric Station (CPSES). Alternate Shutdown for CPSES removes reactor heat using the steam generators and forced circulation or natural circulation for the Reactor Coolant System (RCS). If available, the Reactor Coolant Pumps (RCP's) are allowed to run and adequate controls and instrumentation are available to support forced circulation and to operate the required support systems. If the RCP's are not available, natural circulation is used to transfer heat from the reactor to the steam generator for decay heat removal.

The process variables that perform and control this decay heat removal function are reactor (heat source) temperature and steam generator (heat sink) temperature. The differential temperature between these two provides the head for natural circulation which transfers the heat from the reactor to the steam generator. Reactor temperature is directly obtained by monitoring the RCS hot leg temperature for each loop. Since each steam generator is at saturation, steam generator temperature is directly read by monitoring steam generator pressure for each steam generator. Since it is assumed that the reactor coolant system is in a quasi-steady state condition while attaining a safe shutdown condition, RCS cold leg temperature can be implicitly determined for each loop by monitoring each steam generator pressure. The saturation temperature corresponding to each steam generator pressure is a good approximation of RCS cold leg temperature under these system conditions. Steam generator pressure is also monitored to control the rate of steam release and thus the rate of heat removal. RCS hot leg temperature for each loop and steam generator pressure for each steam generator is provided at the Hot Shutdown Panel (HSP) via instrumentation channels which are independent of the Cable Spreading Room and Control Room.

In summary, direct readings of the process variables necessary to perform and control reactor heat removal are provided at the HSP at CPSES as part of the Alternate Shutdown design.

Sincerely,

A handwritten signature in dark ink, appearing to read 'H. C. Schmidt', with a stylized, cursive script.

H. C. Schmidt

DRW:grr

bcc: ARMS

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