TEXAS UTILITIES SERVICES INC.
2001 BRYAN TOWER · DALLAS, TEXAS 75201

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Mr. Spottswood Burwell
Licensing Project Manager
U. S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, D.C. 20555

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION
DETECTION OF A LOSS OF COMPONENT COOLING WATER
TO A REACTOR COOLANT PUMP

Dear Mr. Burwell:

The CPSES design includes flow, temperature and valve position indications to detect a loss of component cooling water to a Reactor Coolant Pump. We believe our design is more than adequate based on diversity and numbers.

Instrumentation provided which would detect a loss of CCW to a Reactor Coolant Pump is as follows:

A. Each Reactor Coolant Pump is supplied by a common supply line which divides to supply:

1. the upper bearing oil cooler,
2. the lower bearing oil cooler,
3. the motor air cooler, and
4. the thermal barrier cooler.

Each of the return lines from these are equipped with seismically qualified flow transmitters which are indicated and alarmed on the main control board in the control room. These 16 instruments are powered by IE power supplies via isolation transformers. They are shown on the CCWS flow diagram, Figure 9.2-3 (Sheet 3).

B. Each Reactor Coolant Pump motor is equipped with temperature indicators for:

1. the thrust bearing upper shoe,
2. the thrust bearing lower shoe,
3. the stator winding,
4. the upper radial bearing, and
5. the lower radial bearing.

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These 20 thermocouples are indicated and alarmed in the Control Room. They are shown on the Reactor Coolant System flow diagram, Figure 5.1-1 (Sheet 3).

C. The CCWS isolation valve monitor lights, which indicate valve closure, and position indicators, which indicate open versus closed status, are located on the main control board. The monitor light displays are Class IE and are qualified to R. G. 1.89 as discussed in Section 7.5.5. The valves are shown on Figure 9.2-3 (Sheet 3).

Therefore, there are 36 separate indications of a loss of CCW to the reactor coolant pumps which are both indicated and alarmed in the Control Room. In addition, there are two separate indications of valve position for each of the six containment isolation valves on the main control board.

Operating procedures are provided for a loss of component cooling water to the reactor coolant pumps. Included in these operating procedures is the provision to trip the affected reactor coolant pumps if the RCP motor temperature as indicated by B, above, exceeds the Westinghouse recommended maximum operating temperature.

If you have any questions, please call.

Sincerely,

H. C. Schmidt

AND:tls
cc: R. D. Calder
R. E. Ballard
J. C. Kuykendall