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Ref. # 10CFR50.55(e)

William G. Council  
Executive Vice President

January 25, 1988

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION  
DOCKET NOS. 50-445 AND 50-446  
POST ACCIDENT MONITORING INSTRUMENTATION  
SDAR: CP-88-18 (FINAL REPORT)

Gentlemen:

On January 21, 1988, we verbally notified your Mr. H. S. Phillips of a deficiency involving post accident monitoring channels for the Reactor Coolant System (RCS). We have determined that this deficiency is reportable under the provisions of 10CFR50.55(e). The required information follows.

DESCRIPTION

The RCS pressure and temperature are defined by the CPSES Design Basis Document (DBD-EE-004 "Accident Monitoring Instrumentation") and Regulatory Guide 1.97, Rev. 2, as Type A Category 1 variables. The DBD requires continuous Class 1E indication of T-hot and T-cold for each of the four reactor coolant loops. Currently the RCS is provided with a total of only two qualified indicators for T-hot and T-cold and four unqualified recorders (1 per loop) for T-hot and T-cold measurements. In addition, there are only two monitoring channels for RCS pressure which provide redundancy of information to the operator. In all cases the failure of one channel may result in information ambiguity which could lead operators to defeat or fail to accomplish a required safety function. This is a deficiency in final design as approved and released for construction such that the design does not conform to the criteria and bases stated in the FSAR.

The cause of this deficiency was an inadequate design that did not implement the requirements of Regulatory Guide 1.97, Rev. 2.

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A review of the CPSES Design Basis of Accident Monitoring Instrumentation for the Reactor Coolant System has established that RCS pressure and T-hot/T-cold for the four reactor coolant loops were the only parameters which did not have sufficient redundancy and/or diversity to meet the requirements of the Regulatory Guide.

#### SAFETY IMPLICATIONS

Should failure of one channel of RCS pressure occur causing information ambiguity, an operator may deduce incorrect RCS pressure conditions which could result in improper operator actions. During shutdown operations following loss of one steam generator, T-hot and T-cold could be monitored for only one loop. Failure of one of the T-hot or T-cold instruments would leave the operator without indication (i.e. lack of redundancy).

#### CORRECTIVE ACTION

The following measures will be implemented to correct these conditions.

- a. A third monitoring channel for RCS pressure will be installed. This will include a Class 1E pressure transmitter, an indicating recorder and associated instrument loop.
- b. The four existing T-hot and T-cold recorders will be replaced with Class 1E indicating recorders.

To prevent recurrence, Design Basis Document DBD-EE-004 has been issued to define functional and qualification requirements for post accident monitoring instrumentation.

The corrective action completion date is scheduled for June 15, 1988.

Very truly yours,

W. G. Council

By: Roger D. Walker  
R. D. Walker  
Manager, Nuclear Licensing

VIP/grr

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Resident Inspectors CPSES (3)