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Ref. # 10CFR50.55(e)

William G. Council  
Executive Vice President

January 11, 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  
15 KV BUS AMPACITY RATING  
SDAR: CP-88-10 (INTERIM REPORT)

Gentlemen:

We are hereby reporting a significant deficiency involving the 15 KV bus ampacity rating under the provisions of 10CFR50.55(e). The required information follows.

#### DESCRIPTION

A February, 1987 walkdown led to the discovery of a deficiency in the installed cable bus cover design. An ampacity test had not been performed on the bus by the manufacturer - P.W. Industries. As a result, Calculation 16345-NU(B)-109-SEA was performed on the various cable bus designs at CPSES to determine their ratings.

The three cable bus designs supplied to CPSES by P-W Industries were:

1. 3000 AMPERE \* - 4 single conductor 1000 kcmil copper cables per phase.
2. 1800 AMPERE \* - 2 single conductor 1000 kcmil copper cables per phase.
3. 800 AMPERE \* - 1 single conductor 1000 kcmil copper cable per phase.

\* Ampacity assigned to the cable bus by P-W Industries.

The cable bus heat transfer calculation showed that the cable bus design provided inadequate cable cooling, resulting in the ampacity ratings exceeding the bus design parameters (40 deg C ambient, 90 deg C conductor temperature, number and size conductors) in procurement specification 2323-ES-14. The calculation also demonstrated that both derating and modifications to the design were necessary to ensure the buses were adequate for their intended use.

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The cause of this deficiency is the failure of the bus manufacturer to conform to the requirement set forth in Electrical Specification 2323-ES-14 "Non-segregated Phase Bus Duct and Accessories". This deficiency is limited to the 15 KV non-segregated phase cable bus.

#### SAFETY IMPLICATIONS

Inadequate cable cooling could have caused the cable buses to operate above their design temperatures, thereby shortening their design life. Although this equipment is non-Class 1E, its potential loss caused by a shortened design life could have resulted in a loss of offsite power.

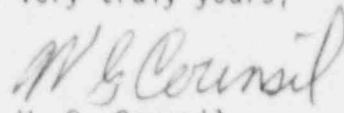
This issue represents a significant deviation from performance specifications such that the bus may not operate properly to meet the requirements stated in the FSAR.

#### CORRECTIVE ACTION

A Design Change Authorization (DCA) has been issued indicating the new bus ratings for revision to project and vendor documents. Also, field modifications will be performed to ensure adequate cooling is achieved on the 15KV non-segregated Phase Cable Bus enclosures. A definitive schedule for the completion of these corrective actions will be provided in our next report.

Our next report on this issue will be submitted no later than March 4, 1988.

Very truly yours,

  
W. G. Council

WJH/grr

c- Mr. R. D. Martin, Region IV  
Resident Inspectors, CPSES (3)