TUELECTRIC

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Executive Vice President

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
SEPARATION BARRIER MATERIAL ON POWER CABLES AND POWER RACEWAYS
SDAR: CP-86-83 (INTERIM REPORT)

Gentlemen:

On December 8, 1986, we verbally notified your Mr. Ian Barnes of a deficiency involving the use of Separation Barrier Material (SBM) on power cables and power raceways. Our last interim report submitted was logged TXX-6338, dated March 20, 1987. We have concluded that this issue is reportable under the provisions of 10CFR50.55(e) and the required information follows.

DESCRIPTION

Contrary to the established design requirements, thermal SBM was installed on power cables and associated raceways without considering the effects of the material on the ampacity of the cables.

As previously noted (in TXX-6338), calculations have concluded that, due to significant conservatism in cable sizing design, the specific cables noted in the initiating nonconformance and cables in raceways did not exceed their insulation temperature rating during start-up testing.

Further evaluation of the deficiency, conducted to assure the cable sizing design is sufficiently conservative to counteract the derating effects of SBM, has resulted in the identification of 32 inadequate power cable installations. These cables, listed in Attachment A, could have exceeded the ampacity rating previously assumed for plant operations (i.e., 40 year design life). These cables are currently documented by Nonconformance Reports (NCRs).

SAFETY IMPLICATION

SBM installed on power cables and/or power raceways requires derating of the cables' power carrying capacity (ampacity) to compensate for change in the operational environment. By failing to address the derating factor, the power cables could exceed the design temperature rating. Cable operation above the temperature rating is unpredictable. Actual failure of the cable insulation would be determined by the degree of temperature increase, the time spent operating over the rating, and other factors - which makes the point of actual failure indeterminate. However, failure could cause Class 1E power systems to become inoperative.

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This issue represents a significant final design deficiency as approved and released for construction and, were it to have remained uncorrected, could have adversely affected the safety of plant operations.

CORRECTIVE ACTIONS

As a result of the analysis, NCR CE-87-4577 has been dispositioned to require removal of all SBM from power cables/raceways except where specifically designated for radiant energy shield purposes in the containment buildings. To preclude additional instances of this deficiency, construction procedure CP-CPM 10.3, "Application of the Thermolag Fire Protection System", will be revised to adequately control the installation of SBM.

Our next report, statusing corrective actions, will be submitted by August 28, 1987. At that time, the construction schedule will be developed to the extent necessary to forecast actual completion dates.

Very truly yours,

W. G. Counsil

WJH/dl
Attachment

c - Mr. R. D. Martin - Region IV
CPSES Resident Inspector - 3 copies

Attachment A

The following raceways contain the listed cables that would have insufficient ampacity for design life plant operations if B&B SBM were left in place:

Raceway No.	Cable No.
C12Ø05099	AØ100562
C12Ø05984	AØ100450
C12G05247	AØ100562
C12G06343	EG100197A
C02Ø12407	EØ006954
C12Ø13221	EØ100818
C12Ø18156	EØ100227A
C12Ø18157	EØ100227B
C02Ø18344	EØ000376
C12G21190	EG105547
C22Ø00418	EØ200443, 444, 561
C22G05996	EG200194
T12ØRBK06, 07, 08	AØ100224Z
T12KCBR14, 15	NK001103, NK001133
T12KRBT23, 24, 25, 26, 27	NK101940Z-43Z, 46Z-48Z 51Z-53Z, 55Z-57Z
T12KABN46	NK001178, NK101802, 803