



Log # TXX-88131
File # 10110
903.8
Ref. # 10CFR50.55(e)

William G. Counsel
Executive Vice President

February 4, 1988

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
UNDERSIZED BOLTS AND MISSING JAM NUTS
SDAR: CP-87-67 (FINAL REPORT)

Gentlemen:

On August 24, 1987, we verbally notified your Mr. H. S. Phillips of a deficiency involving the absence of jam nuts on the Unit 1 rotating platform and undersized bolts in vendor fabricated structural steel installations. Our last report on this issue was logged TXX-6734, dated September 23, 1987. Due to the similarities between the deficiencies involving missing jam nuts identified in this issue and the missing jam nuts identified in SDAR CP-87-61, "'Snug Tight' Torquing of Structural Bolts" the evaluation of this issue dealing with missing jam nuts has been included in the evaluation of SDAR CP-87-61 (TXX-88015, dated January 5, 1988). We are conservatively reporting this issue under the provisions of 10CFR50.55(e). The required information follows.

DESCRIPTION

This deficiency was discovered during investigations conducted for Corrective Action Request (CAR) 87-011.

Numerous vendor fabricated structural steel connections have been identified as installed with bolts smaller than those specified on the design drawings. These smaller bolts are generally consistent with the vendor drawings. The substitution of the smaller diameter bolts had gone undetected in the engineering review of the vendor's shop drawings, and remained undetected during the installation and inspection of the affected connections.

The cause of this deficiency is inadequate review (and in some cases lack of review) of the associated vendor structural drawings by the responsible design organization. This deficiency is limited to review of vendor drawings by the responsible design organization.

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SAFETY IMPLICATIONS

Undersized bolts in structural steel connections could result in the failure of these connections to perform their required safety function during an accident or seismic event.

We are conservatively reporting this issue due to the extensive evaluation required to establish the adequacy of the structural steel connections with undersized bolts.

CORRECTIVE ACTION

In our report TXX-6734, dated September 23, 1987, we noted that a comparison between design and vendor drawings would be performed for all structural steel connections to identify all cases in which the vendor drawings incorrectly indicate bolt sizes smaller than those depicted on the design drawings. Also, a review of the design calculations would be performed to assess the structural adequacy of connections with undersized bolts. Design Change Authorizations (DCAs) would be issued either accepting the size of bolts used or showing modifications required to achieve structural adequacy.

However, since the Post Construction Hardware Validation Program (PCHVP) currently addresses the validation of bolt diameters (Field Verification Method CPE-SWEC-FVM-EE/ME/IC/CS-090), review of vendor documents will not be required. Deviations from the design drawings will be documented on Nonconformance Reports (NCRs) and evaluated for acceptability by engineering.

To prevent recurrence of this deficiency, Specification 2323-SS-16B, "Structural Steel/Miscellaneous Steel (Category I & II)," requires the vendor to obtain written approval from the responsible engineering organization prior to any bolt diameter substitutions. This requirement has also been included in Specification 2323-SS-17, "Miscellaneous Steel."

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The Unit 1 completion schedule for the field validation for this issue will be commensurate with the schedule for the PCHVP. All Unit 2 corrective actions will be implemented prior to Unit 2 fuel loading.

Very truly yours,

W. G. Council

By: John W. Beck
John W. Beck
Vice President,
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CBC/grr

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