



TU ELECTRIC

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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
CONDUIT SUPPORT DESIGN
SDAR: CP-85-034 (SUPPLEMENTAL REPORT)

- REF: 1) TU Electric Letter, TXX-4571, from W. G. Council to the NRC dated September 30, 1985
- 2) TU Electric Letter, TXX-4681, from W. G. Council to the NRC dated January 31, 1986
- 3) TU Electric Letter, TXX-4805, from W. G. Council to the NRC dated May 16, 1986
- 4) TU Electric Letter, TXX-6047, from W. G. Council to the NRC dated October 21, 1986
- 5) TU Electric Letter, TXX-6305, from W. G. Council to the NRC dated February 27, 1987
- 6) TU Electric Letter, TXX-88188, from W. G. Council to the NRC dated January 28, 1988
- 7) TU Electric Letter, TXX-88237, from W. G. Council to the NRC dated March 7, 1988
- 8) NUREG-0797, Supplement No. 16, Safety Evaluation Report related to the operation of Comanche Peak Steam Electric Station Units 1 and 2, dated July 1988
- 9) TU Electric Letter, TXX-91164, from William J. Cahill, Jr. to the NRC dated April 23, 1991

Gentlemen:

On September 30, 1985, TU Electric notified the NRC via reference 1 of a deficiency involving the adequacy of conduit supports to perform their design functions. The deficiency was deemed reportable under the provisions of 10CFR50.55(e). Evaluation of the deficiency and corrective actions were provided to the NRC in references 2 through 7.

Reference 8 documented NRC review of this deficiency. The approach to some of the corrective actions described in reference 8 has changed as a result of lessons learned in Unit 1. This letter provides an update with regard to those changes. Specifically, this letter clarifies the Unit 2 conduit

support design validation process relative to the use of design drawings for new and modified designs involving Train A and B conduit and Train C conduit greater than 2 inches in diameter. In addition, this letter clarifies the Unit 1 and 2 reinspection of spacing tolerances for conduit clamps using one-quarter inch diameter anchor bolts.

Discussion in this letter of Quality Control (QC) inspections shall be understood to apply to the Train A and B conduit. Construction Engineers inspect Train C conduit greater than 2 inches as previously described in reference 9.

Conduit Drawings

The design drawings used for Unit 2 conduit systems are: 1) isometric drawings, utilized primarily for conduit systems installed or engineered prior to the suspension of Unit 2 activities, and 2) matrix-type design drawings, utilized primarily for new installations. The matrix-type drawing may also be used for previously installed or engineered installations if rework is necessary.

The matrix-type drawing provides information equivalent to the isometric drawings and specifies all of the required inspection attributes including conduit size, maximum spans, origin, destination, support types, support location tolerances and other support parameters. The matrix-type drawing is developed by the design group of record from a field sketch prepared by Construction Engineers. Conduit systems are QC inspected using the matrix-type drawing in conjunction with the Pre-Engineered System Drawings (PESD), which provide the installation details for typical supports.

To permit flexibility in some cases, procedural controls allow for installation of conduit and conduit supports at the same time that the matrix-type drawing is being design validated. The Construction Engineer's field sketch, rather than the matrix-type drawing, is used for hardware installation. In-process QC inspections are performed using the PESD since the matrix-type drawing is not yet issued at that time. QC performs the final inspection using the matrix-type drawing after it is issued. Although the matrix-type drawing may not be design validated prior to installation, it is the design document of record that ultimately controls the final installation configuration and is the basis for the subsequent final QC inspection.

The construction and inspection process, as well as the use of the matrix-type drawing, was initiated as part of the lessons learned from Unit 1. The process assures that conduit is installed per design and installation specification requirements while providing sufficient flexibility to facilitate timely changes to installation details due to field constraints. Consistent with reference 8, unique support drawings are only prepared for "modified typical" or "individually engineered" supports.

Clamps Using One-Quarter Inch Anchor Bolts

Reference 8 stated that conduit clamps with one-quarter inch diameter anchor bolts were being reinspected as part of the Unit 1 Post Construction Hardware Validation Program (PCHVP) to ensure that they met the required tolerance or the clamps were being modified. This reinspection originated from clamp test results which indicated that the use of excessive bolt hole spacing tolerances could result in clamp distortion.

Further review determined that the Unit 1 installation drawing specified bolt hole spacing tolerances that were more conservative than those which caused clamp distortion during testing. As a result, no reinspection was required for Unit 1 and Common clamps with one-quarter inch bolts, or for those Unit 2 clamps which were installed in the Common area utilizing the Unit 1 installation drawing.

Unit 2 conduit clamps are installed using the Unit 2 installation drawings, which do not allow one-quarter inch anchor bolts. Therefore, reinspection for spacing tolerance of one-quarter inch diameter anchor bolts is not required for Unit 2.

Sincerely,

William J. Cahill, Jr.

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