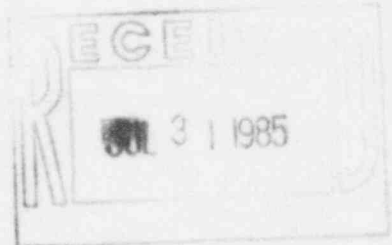


TEXAS UTILITIES GENERATING COMPANY

SKYWAY TOWER • 100 NORTH OLIVE STREET, L.B. 81 • DALLAS, TEXAS 75201

WILLIAM G. COUNCIL
EXECUTIVE VICE PRESIDENT

July 30, 1985
TXX-4513



Mr. D.R. Hunter, Chief
Reactor Project Branch 2
U.S. Nuclear Regulatory Commission
Office of Inspection & Enforcement
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Docket Nos.: 50-445
50-446

COMANCHE PEAK STEAM ELECTRIC STATION
RESPONSE TO NRC NOTICES OF VIOLATION
INSPECTION REPORT 84-26
FILE NO.: 10130

Dear Mr. Hunter:

In a response dated February 28, 1985 we responded to your letter of January 18, 1985 on the inspections of the Safeguards and Auxiliary Buildings conducted by C. R. Oberg, M. E. Skow and W. R. Bennett of activities authorized by NRC Construction Permit CPPR-126 for Comanche Peak Unit 1. In accordance with your discussions with Phillip Halstead on May 7, 1985 and June 10, 1985, we are now supplementing our February 28, 1985 response to provide additional information on actions taken.

This supplemental response should be considered in lieu of the February 28, 1985 response since this response is basically a duplication of our previous submittal with greater detail of actions taken included. If you have any questions, please advise.

Very truly yours,

W.G. Council
W.G. Council

WGC:tlg

Attachment

cc: NRC Region IV (0 + 1 copy)

Director, Inspection & Enforcement (15 copies)
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Mr. V.S. Noonan

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APPENDIX A

NOTICE OF VIOLATION

Texas Utilities Electric Company
Comanche Peak Steam Electric Station

Docket: 50-445/84-26
Construction Permit: CPPR-126

Based on the results of an NRC inspection conducted during the period of July 16 through September 28, 1984, and in accordance with the NRC Enforcement Policy (10 CFR Part 2, Appendix C), 49FR8583, dated March 8, 1984, the following violations were identified:

A. Failure to Provide QC Inspection Criteria and Minimum Separation

10 CFR Part 50, Appendix B, Criterion V states, in part, ". . . Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished."

IEEE-384 provides separation criteria of Class IE equipment and circuits. The Comanche Peak Steam Electric Station Electrical Erection Specification 2323-ES-100 provides for the implementation of the criteria of IEEE-384 (1974).

Section 4.4.6 of 2323-ES-100 states in part, "In no case shall any part of the conduit or the conduit support system come in direct contact with uninsulated equipment in the piping system or with pipe restraints or anchors."

QI-QP-11.3-29-1, Revision 16, paragraph 3.1.7, states in part, "In no case shall any part of the raceway or raceway support system come in direct contact with uninsulated equipment in the piping system or with pipe restraints or anchors unless otherwise approved by the owner."

QI-QP-11.1-28, Revision 25, paragraph 3.3.4.2, states in part, "There shall be an air gap (i.e., no contact) between electrical conduit/conduit supports and piping component support."

Section 4.11.32 of 2323-ES-100 specifies separation between conduits of different trains which, for the examples listed, is a minimum of one inch.

QI-QP-11.3-23, Section 3.9, specifies conduit separation between conduits of different trains which, for the examples listed, is a minimum of one inch.

QI-QP-11.3-23, Section 3.9, specifies conduit separation per drawing 2323-EI-1702-02, including several detailed sketches.

Contrary to the above,

1. Specifications and QC inspection procedures do not contain specific acceptance criteria for separation of redundant trains of flexible conduits.
2. The separation requirements between conduits as contained in the erection specifications ES-100 and implementing procedures had not been met.

The following conditions were identified:

1. Flexible conduits in the Safeguards and Auxiliary Buildings do not maintain the required one inch minimum separation between trains. For example, flexible conduit C13G20208 contacts C13011132, and the 1" airspace is not maintained between C13007415 and C13G07413.
2. Flexible conduits in the Safeguards and Auxiliary Buildings come in direct contact with uninsulated equipment in the piping system or with pipe restraints or anchors. Examples include:

<u>Flexible Conduit Number</u>	<u>Item Description</u>
◦ C13G07743	Flex rests on pipe bracket next to valve 1-HV-5365.
◦ C13G07744	Flex rests on pipe next to valve 1-HV-5365
◦ C14021161	Flex rests on pipe support for 1-MS-030 and 1-MS-268
◦ C13G12499	Flex rests on support for JB1S 455G
◦ C13G08781	Flex touches corner of support for valve 1-HV-4179
◦ C12005387	Flex touches pipe at elbow passing near valve 1-HV-8106
◦ C13015915	Flex resting on top of actuator for valve 1-HV-2188
◦ C13G21323	Flex touching flange of support next to valve 1-FV-2196
◦ C13G06734	Flex rests against unistrut below valve 1-FV-4537

- C12G04690 Flex conduit rest on fire pipe
- C13G06834 Flex wraps around adjacent support
- C14G20503 Flex rests on valve body
- C12002856 Flex contacts 1-HV-2480

Corrective Action Summary

The installation drawings did not contain a method for maintaining the required separation distance for flexible conduits to prevent inadvertent movement of these conduits. As a result separation violations after inspection occurred. To resolve this problem, DCA 20,721, Revision 1 was issued on September 18, 1984 against drawing E1-1702-02. This DCA contains an approved method for maintaining minimum separation distance between flexible conduits of different trains/channels.

To identify any other conduit separation problems in Unit 1, generic NCR's were issued. One NCR was issued for each of the buildings/areas where safety related flexible conduits are installed. Walkdowns of these buildings/areas by QC to identify separation deficiencies in violation of the criteria of QI-QP-11.3-29 are being conducted. Engineering will evaluate and disposition all findings, and craft will correct violations by use of mechanical separators as specified in DCA 20,721, Revision 1 as appropriate.

For the flexible conduit installations in Unit 2 which have yet to be installed the referenced DCA and changes identified in QI-QP-11.3-28, Revision 24 should preclude recurrence and provide detection by inspection. For previously installed flexible conduits in Unit 2 post construction inspection in accordance with QI-QP-11.3-40 would identify. Training of personnel to the latest revision of procedures is ongoing and is considered adequate for resolution of this problem.

It should be noted that flexible conduit to cable separation is being addressed by the Comanche Peak Response Team Action Plan Item VII.C.

B. Failure to Properly Inspect

10 CFR Part 50, Appendix B, Criterion X requires that the inspection program of activities affecting quality shall be established and conducted in a manner to verify conformance with the documented instructions, procedures, and drawings.

Procedure QI-QP-11.10-2, Revision 28, "Cable Tray Hanger Inspection", specified the inspection attributes for inspection assembly, configuration, location, welding, etc., for conformance with design drawings and documents.

Procedure QI-QAP-11.1-28, Revision 25, "Fabrication and Installation Inspection of Safety Class Component Supports," specifies the inspection attributes for inspecting fabrication, installation, material, dimensional control, welding, etc., for conformance with design drawings and documents.

Contrary to the above:

1. The NRC inspector identified one cable tray hanger, CTH 639, that was missing the diagonal brace called for on drawings 2323-EI-0601-01-S and 2323-S-901.
2. The NRC inspector identified one cable tray hanger, CTH 12416, that had the horizontal legs aligned north-south versus east-west as specified on drawing 2323-EI-0601-01S and FSE 00159 sheet 12416.
3. The NRC inspector identified one pipe support that was missing two welds as specified on drawing CT-1-014-015-S42K.

The following is a compilation of additional deficiencies by general category and the drawing or component where it was found.

<u>Category</u>	<u>Component or Drawing</u>	<u>Number of Items</u>
Welding	MS-1-026-010-S75	1
	AF-1-026-005-S33R	1
	Inst. Rack CP-1-EIPRLI-31	2
Dimensions	AF-1-026-003-S33R	1
	MS-1-026-010-S75K	1
	MS-1-025-009-R75K	1
	CC-1-234-700-C53R	1
	CC-1-238-004-C53R	1
	CC-1-236-700-C53R	1
	CS-1-AB-208A-001	2
	CS-1-564-706-A33R	1
	AF-1-035-037-Y33R	1
	AF-1-035-034-Y33R	1
	MS-1-028-047-S43K	1
	CC-1-011-034-A63K	1
General	AF-1-103-036-S53K	1
Workmanship	Inst. Rack CP-1-EIPRLI-31	1
	A-FT-2458	1
	C14010056-2	1
TOTAL ITEMS		22

The above are examples identified by the NRC inspectors where items were installed by the craft to conditions other than those specified by the identified design documents, QC inspections had been completed, and the QC inspectors failed to identify these conditions. The inspection report details these findings.

This is a Severity Level IV Violation. (Supplement II.D) (445/8526-02)

Corrective Action Summary

Item B.1

The condition, as described for CTH-639, was identified on and corrected per disposition of nonconformance report M-84-100470 (closed 10/1/84).

To assure the acceptability of cable tray hangers in Unit 1 and Unit 2, an as-built (design analysis and field verification) program for hangers has been initiated. This issue has been identified in the Comanche Peak Reponse Team Action Plan as Item VIII.

Item B.2

The condition, as described for CTH-12416, was identified on and corrected per disposition of nonconformance report M-84-100476 (closed 10/2/84).

Refer to Item B.1 for corrective steps to preclude repetition.

Item B.3

The condition, as described for pipe support CT-1-014-015-S42K was identified on and corrected per disposition of nonconformance report M-14722. The subject welds, a continuation of a side weld 2" around the top and bottom corners on the base plate, were required for analysis since the hiltis installed on the side opposite the weld could not be used to qualify the support. The weld is designed to take 100% of the shear. Since the hiltis were properly installed, however, the support would not have failed during normal system operation.

The following is a compilation of additional deficiencies by general category, the drawing or component where it was found and the responses to these deficiencies.

Category: **WELDING**

Component or Drawing: MS-1-026-010-S75K - Additional weld on Item 3 and 11, were not shown on the drawing.

Response:

There was no requirement to show additional welds not required by design on the drawing. These welds were annotated on the VCD inspection conducted on 6/23/83, and are part of the as-constructed history package. To preclude further question, however, QI-QAP-11.1-28 has been revised to reflect that Engineering will show all as-installed welds for Unit 2, regardless of their significance to the design analysis.

Component or Drawing: AF-1-206-005-S33R - I-beam weld gap is incorrect

Response

Fit-up gap is within permissive tolerance, and weld size was increased to provide the required reinforcement when fit-up exceeded 1/16" gap.

Component or Drawing: Inst. Rack CP1-EIPRLI-31 - Undersize welds

Response

The condition, as described for instrument rack CP1-EIPRLI-31, was identified on and corrected per disposition of nonconformance report I-84-100493 (closed 1/25/85). The disposition of this nonconformance report called for reinspection of all Unit 1 instrument racks, this was concluded and deficiencies corrected prior to closure of the nonconformance report.

In Unit 2, Engineering is currently evaluating all instrument racks for acceptance, deletion, and/or repair (reference nonconformance reports I-84-200384 and I-84-200385). Upon completion of this review, and subsequent repair, QC will verify acceptability.

Category: **DIMENSIONS**

Component or Drawing: AF-1-026-003-S33R - Grout too thick

Resonse:

QC has reinspected this support and finds the grout to be slightly greater than 1" but less than 1-1/8" thick. Sufficient embedment has been obtained and the VCD has been revised to reflect grout thickness.

Component or Drawing: MS-1-026-010-S75K - Upper bolt holes reamed on Items 4 and 5

Corrective Steps:

Support was originally inspected as MS-1-026-010-S72K, and reclassified to "S75K". The upper bolt holes are reamed and NCR M-15150 has been initiated for Engineering disposition.

Component or Drawing: MS-1-026-009-R75K - The VCD calls for a 1 1/16" base plate hole for the upper right hilti; a 1 1/2" hilti is installed.

Corrective Steps

This was an obvious drafting error as all four locations had existing 1 1/2" Richmond Inserts, as reflected in Item 8 of BOM. NCR M-15151 has been initiated for Engineering disposition against VCD MS-1-026-009-S75K.

Component or Drawing: CC-1-043-013-A43K - VCD calls for 7'3" from rear bracket plate to wall; actual is 7'5".

Corrective Steps

The above support was acceptable as the subject dimension has a tolerance of $\pm 2"$ based on pipe location (re., QI-QAP-11.1-28, paragraph 3.3.7). NCR M-14744 was issued in response to the NRC concern however, and the VCD was revised to reflect the as-constructed dimension.

Component or Drawing: CC-1-234-700-C53K - Sheet 2 Section C-C lower attachment bolt spacing discrepancy (conflicting dimensions).

Corrective Steps:

Distance from attachment centerline to bolt hole centerline, as shown on the VCD, is an obvious drawing error, as the cumulative dimensions are not possible on the 8" x 12" plate, assuming the minimum 2" edge distance is maintained. NCR M-15147 was initiated for TUGCO Results Engineering disposition against VCD CC-1-234-700-C53R; this NCR has been closed based on the issuance of TUGCO Operations NCR 84-0267 which has also been closed following revision of the drawing to reflect as-built conditions.

Component or Drawing: CC-1-238-004-C53R - Structural separation dimensional discrepancy.

Corrective Steps:

The location of the strut end brackets, upper and lower, determines the structural loading, and have working point tolerances of $\pm 1"$. Accordingly, NCR M-15148 was initiated for TUGCO Results Engineering disposition against support CC-1-238-004-C53R; this NCR has been closed based on the issuance of TUGCO Operations NCR 84-0268 which has also been closed following revision of the drawing to reflect as-built conditions.

Component or Drawing: CC-1-236-700-C53R - The vertical distance from the pipe centerline is dimensioned to the bottom of an associated support and not to its own support (i.e., required 5" overlap is not reflected).

Corrective Steps:

The dimensioning on the attached VCD is an obvious drafting error, as the 5" overlap is specified in view A-A, and exists in the as-constructed condition. Accordingly, NCR M-15149 was initiated for TUGCO Results Engineering disposition against VCD CC-1-236-700-C53R; this NCR has been closed based on the issuance of TUGCO Operations NCR 84-0269 which has also been closed following revision of the drawing to reflect as-built conditions.

Component or Drawing: CS-1-AB-208A-001 - (a) 3 1/2" dimension from edge of Item 1 to the bracket centerline is actually 1 5/8"; (b) 12" reference dimension is actually 9 7/8".

Response:

- (a) As constructed, the support was acceptable as the above dimension has a tolerance of $\pm 2"$ since it is by definition a reference dimension to a ghosted support (re: QI-QAP-11.1-28, paragraph 3.3.6).
- (b) The above dimension has a tolerance of $\pm 2"$; using a tape measure between the hypothetical centerline of an end bracket and the hypothetical centerline of the support pin, both of which are on different planes, the reference dimension is acceptable within standard metrological accuracy. NCR M-14713 was issued in response to the NRC concern however, and the VCD was revised to reflect the as-constructed dimension.

Component or Drawing: CS-1-564-706-A33R - The 2'8" dimension between the wall and centerline of Item #2 is actually 2'9-5/8" (i.e., 5/8" greater than permitted tolerance).

Corrective Steps:

NCR M-14712 was initiated; Engineering evaluated the as-constructed condition and revised the VCD to show the 2'9-5/8" dimension.

Component or Drawing: AS-1-035-037-Y33R - 1" baseplate material specified on the drawing is actually 1 1/4"

Corrective Steps:

NCR M-14680 was initiated to identify the $+ 1/4"$ variance. It should be noted that until early 1981, the Engineering Specification and project procedures permitted the installation of heavier members by craft. This latitude was generically removed due to the "stiffness" conservatism in the Class 1 stress problems; however, heavier members in Class 2 and 3 stress problems do not invalidate analysis assumptions. The VCD has been revised to show the heavier member.

Component or Drawing: AF-1-035-034-Y33R - Baseplate north side dimensions are not as specified on the drawing, for baseplate holes with respect to the attachment centerline.

Corrective Steps:

NCR M-14678 was issued against the only dimension out of tolerance, the location of the NW anchor bolt hole, which was moved for proper anchor bolt installation but not reflected on the drawing. The $13/16"$ variance from the permissive tolerance, was in the conservative direction for edge distance, evaluated by Engineering and the VCD was revised accordingly.

Component or Drawing: MS-1-028-047-S43K - Upper right hilti placement dimension was out of tolerance.

Corrective Steps:

NCR M-14842 was initiated to identify the deficiency. The NCR was dispositioned by Engineering to revise the VCD to reflect the as-constructed dimension..

Component or Drawing: CC-1-011-034-A63K - VCD calls for 2'7" from wall to snubber, actual is 2'5-1/2".

Response:

The above support was acceptable, as the subject dimension has a tolerance of $\pm 2"$ based on pipe location (re: QI-QAP-11.1-28, paragraph 3.3.7). NCR M-14745 was issued in response to the NRC concern however, and the VCD was revised to reflect the as-constructed dimension.

Component or Drawing: C140100056-2 - Nut and Hilti Bolt not flush.

Response:

The condition, as described for conduit support C140100056-2, was identified on and corrected per disposition of nonconformance report M-84-100471 (closed 10/4/84). CMC 100703, Revision 3 was issued to allow the specific nut in question to be a maximum of 0.05 inches above flush.

It is considered that this condition was erroneously over looked by the original inspector. Preventive steps are being taken through the normal training and surveillance program.

Category: **GENERAL WORKMANSHIP**

Component or Drawing: AF-1-103-036-S53K - Snubber not level and pipe clamp resting on floor penetration.

Corrective Steps:

The subject support is a strut and the correct number should be AF-1-103-026-S53R. It is believed that the pipe clamp location was inadvertently moved during construction activities in the area after final acceptance by QC on the Hanger Inspection Report; this caused the snubber installation angle to be incorrect. The clamp was returned to its design installation angle, in accordance with NCR M-14756 correcting this problem.

As a result of the above action, the clamp no longer rests on the floor penetration.

Component or Drawing: I-FT-2488 - Minimum Air Gap Violated.

Corrective Steps:

The condition was described for instrument tube from I-FT-2488(HP), actually should be identified as tube from I-FT-2458.

The condition was corrected during normal inspection processes, and was documented on Inspection Report I-1-00545-4 (closed 9/27/84). No further action is considered necessary in that it could not be determined if the minimum air gap was present at the time of the original inspection or it had been caused by subsequent work in the area.

CONCLUSION

The NRC inspection of 178 supports represented the inspection of 1651 welds and 5144 configuration attributes. Based on the items identified deficient in relation to the total population, improvement in this area can still be made. Therefore, the procedure for fabrication and installation inspection of safety class component supports was revised to require a more detailed recording of information obtained during the inspection. This action and the actions identified above should preclude recurrence of the type deficiencies noted. For Unit 2, the supports are being inspected to these more detailed requirements. Completion of this reinspection effort is scheduled to complete prior to completion of ASME Certification of Unit 2 Systems.