

# TEXAS UTILITIES GENERATING COMPANY

2000 DRYAN TOWER DRIVE, DALLAS, TEXAS 75201-3450

R. J. GARY  
EXECUTIVE VICE PRESIDENT  
AND GENERAL MANAGER

June 28, 1983

TXX-3996

Mr. G. L. Madsen, Chief  
Reactor Project Branch 1  
U.S. Nuclear Regulatory Commission  
Office of Inspection and Enforcement  
611 Ryan Plaza Drive, Suite 1000  
Arlington, TX 76012

**JUN 29 1983**

Docket Nos.: 50-445  
50-446

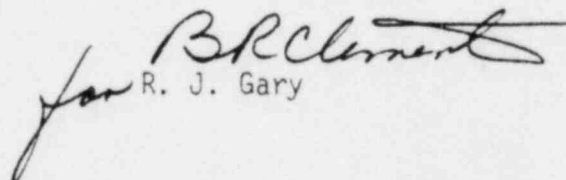
COMANCHE PEAK STEAM ELECTRIC STATION  
RESPONSE TO NRC NOTICES OF VIOLATION  
INSPECTION REPORT NO. 83-18/12  
FILE NO.: 10130

Dear Mr. Madsen:

We have reviewed your letter dated May 31, 1983 on the construction appraisal inspection conducted by the Office of Inspection and Enforcement and by Mr. R. G. Taylor regarding Comanche Peak, Units 1 and 2. We have responded to the findings listed in Appendix A of that letter.

To aid in the understanding of our response, we have repeated the requirements and your findings followed by our corrective actions. We feel the enclosed information to be responsive to the Inspector's findings. If you have any questions, please advise.

Very truly yours,

  
R. J. Gary

RJG:ln  
Enclosures

cc: NRC Region IV - (0 + 1)

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

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NOTICE OF VIOLATION

Texas Utilities Generating Company  
Comanche Peak Steam Electric Station

Dockets: 50-445/83-18  
50-446/83-12  
Permits: CPPR-126  
CPPR-127

Based on the results of an NRC inspection conducted during the period of February 14 - March 3, 1983, and in accordance with the NRC Enforcement Policy (10 CFR Part 2, Appendix C), 47 FR 9987, dated March 9, 1982, the following violations were identified:

1. Failure to Provide Adequate Procedures, Instructions, or Drawing for Installation of Major Items of Equipment

Criterion V of Appendix B to 10CFR 50 requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances.

Project Specification 2323-MS-101 requires in paragraph 4.7.2 that the manufacturers recommendations and instructions for the installation of equipment be complied with by the installer, and in paragraph 4.12.3 requires that all bolting attaching rotating or vibrating equipment to the building structure be provided with locking or with double nuts.

Contrary to the above, the Senior Resident Inspector (SRI) Construction determined by review of the "Construction Operations Traveler" for the installation of Heat Exchanger TCX-CSAHL01 that the recommendations by Westinghouse, the supplier, that the nuts attaching the component to the building be left loose to allow for thermal expansion were neither referenced nor included in the instructions and further verified that the nuts were fully tightened as installed. The NRC Construction Assessment Team (CAT) noted in NRC Inspection Report 50-445/83-18; 50-446/83-12 that various items of like equipment such as tanks sometimes had only one nut on the attachment bolts, sometimes similar tanks had double nuts, and some had a combination of single and double nuts on the same component.

This is a Severity Level V Violation. (Supplement II.D) (50-445/8324-01; 50-446/8315-01)

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

- a. The specification and the construction installation procedures for mechanical equipment installation have been revised to clarify bolting requirements for safety-related mechanical equipment.
- b. A reinspection program has been instituted to verify mounting details on all safety-related mechanical equipment.

CORRECTIVE STEPS WHICH WILL BE, OR HAVE BEEN TAKEN TO PRECLUDE RECURRENCE:

- a. Project specifications and the installation and inspection procedures have been revised to clarify installation requirements.
- b. Engineering, construction, and QA/QC personnel have been indoctrinated in the revised documents.

DATE OF FULL COMPLIANCE:

- a. Corrective action on revisions to specifications, procedures, and instructions, and indoctrination in the revisions have been completed.
- b. The reinspection program will be completed as soon as possible and no later than room completion.

2. Failure to Provide Adequate Maintenance of Materials and Equipment in Outdoor Warehouse Areas

Criterion XIII of Appendix B to 10 CFR 50 requires that measures shall be established to prevent damage or deterioration of stored equipment.

Brown & Root (B&R) Procedure MCP-10, "Storage and Storage Maintenance of Mechanical and Electrical Equipment," in paragraph 3.18 requires that materials to be stored outdoors shall be prepared for storage by the application of caps, preservatives or other means. Paragraph 3.11 requires that permanent carbon steel bolts supplied on equipment be protected with a suitable preservative.

Contrary to the above, the CAT identified various piping support components with dry and dirty bearings and with rusting bolts and pins. The SRI during a tour of the storage areas for pipe support components noted many instances where bolts and pins were rusted and a few instances where the support components were rusted through the paint and/or where the paint had chipped off.

This is a Severity Level V Violation. (Supplement II.D) (50-445/8324-02; 50-446/8315-02)

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

- a. Construction personnel have corrected the storage conditions to prevent further deterioration and a preservation program has been established to clean, preserve, and/or paint any items showing signs of dirt or corrosion.
- b. QC inspection instructions have been revised to specifically address the verification of the material condition of items prior to installation.

CORRECTIVE STEPS WHICH HAVE BEEN, OR WILL BE TAKEN TO PRECLUDE REPETITION:

- a. Outside storage areas will be monitored on a periodic basis by QA to assure the adequacy of the storage and preservation programs.

DATE OF FULL COMPLIANCE:

Corrective action is complete.

3. Failure to Remove Obsolete Drawings From Construction Work Areas

Criterion VI of Appendix B to 10 CFR 50 requires that only current drawings be used to accomplish work.

FSAR Section 17, paragraph 17.1.6 states that changed documents will be distributed to and used at all work locations.

B&R Procedure DCP-3, "CPSES Document Control Program" provides that all revised drawings will be distributed to users on a controlled basis and that each user is accountable for the currentness of his files.

Contrary to the above, a CAT inspector identified a group of drawings in the construction work area that contained approximately 23 percent drawings which were not of the proper revision. Further, the CAT inspector noted that some drawings were sufficiently illegible in the title and revision block areas of the drawing to prevent identification of the drawing and/or the revision level.

This is a Severity Level IV Violation. (Supplement II.D)  
(50-445-8324-03; 50-446/8315-03)

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

- a. The area in which the out-of-date drawings were located has been audited by Document Control Center personnel and all out-of-date or damaged drawings have been replaced with current revision.

CORRECTIVE STEPS WHICH WILL BE, OR HAVE BEEN TAKEN TO PRECLUDE REPETITION:

- a. A different process for reproducing drawings from microfilm is now in use which uses a more durable paper thereby prolonging the life of the drawings.
- b. The present document control system for distribution of controlled documents from DCC to field file custodians is being replaced by a "Satellite" system, staffed and controlled by the central DCC. These satellites will be responsible for controlling, replacing and issuing controlled documents.

DATE OF FULL COMPLIANCE:

- a. The out-of-date and illegible drawings have been corrected.
- b. All satellites are scheduled to be operational on or before August 1, 1983.

4. Failure to Provide Adequate Control of Ventilation System Fabrication

Criterion VII of Appendix B to 10CFR50, requires that measures be established to assure that materials, equipment, and services purchased through or from a contractor or subcontractor conform to the procurement documents. These measures must include as appropriate, source evaluations and inspections, generation of objective evidence of quality by the contractor or subcontractor, and assessment of the contractor or subcontractor's control of quality by the applicant.

Bahnson Service Company Contract, 35-1195-0526, which incorporates Gibbs & Hill, Inc. Specification 2323-MS-85, Section 2.1.4.d requires that all fabrication processes conducted by Bahnson Service Company shall be performed in accordance with dimensioned detail drawings.

Contrary to the above, it has been established by NRC inspections that subcontractor Bahnson Service Company, supplied:

- a. A substantial number of welds, approximately 40 percent, on supports for ventilation ducting that are smaller than specified by the design drawings.
- b. There were instances in which the bolting at duct joints was loose or missing and that gaskets in duct joints was missing or improperly installed.
- c. Five of the nine supports inspected had dimensional deficiencies.
- d. The Bahnson Service Company quality control records failed to reflect either of the above conditions.
- e. The licensee's audits and assessments of the subcontractor's control of quality failed to identify the above conditions.

This is a Severity Level IV Violation. (Supplement II.D)  
(50-445/8324-04; 50-446-8315-04)



- a. A substantial number of welds, approximately 40 percent, on supports for ventilation ducting that are smaller than specified by the design drawings.

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

A task force was established to inspect a sample of hangers, including weld size and length, to define the extent of the concern. On the basis of this study, a computer sort of the HVAC hangers was conducted by the HVAC support designer, Corporate Consulting and Development Co., Ltd. (CCL). This sort, assuming that all hangers had the worst case conditions identified by the task force, identified 239 hangers that would have loads in excess of 50% of OBE allowable stresses using combinations that include full SSE load. On the basis of the computer analysis, CCL has determined that all hangers meet the functional design requirements without modifications.

Of the aforementioned 239 hangers, 177 accessible hangers were included in a reinspection of a statistical sample of 280 hangers with the highest stress value. This reinspection of 280 hangers results in a 95% confidence level that at least 95% of the hanger population have welds larger than worst case conditions. The results of this reinspection have been transmitted to CCL for evaluation.

CORRECTIVE STEPS WHICH WILL BE, OR HAVE BEEN TAKEN TO PRECLUDE RECURRENCE:

Welding personnel have undergone requalification and all inspectors have been retrained. The training program for inspectors has been improved to provide an increased emphasis on practical inspection aspects. This includes reindoctrination and training in the use of inspection hardware including fillet gauges. The obtained proficiency level has been assessed by both Bahnson QA and by experienced welding inspection personnel as part of a TUGCo audit. The level of inspector proficiency is now considered adequate.

In addition, Bahnson has assigned a QA Manager to the CPSES site. A new Level III QC Inspector has been assigned to provide closer day-to-day supervision and direction to the inspection force.

In addition, Bahnson Corporate QA and TUGCo QA will conduct audits of CPSES on a more frequent basis. TUGCo QA will perform audits of Bahnson on a quarterly basis placing emphasis on welding activities and configuration control, until all corrective actions are adequately implemented.

DATE OF FULL COMPLIANCE:

The CCL analysis of the reinspection results is expected to be complete by July 1, 1983. Requalification, training and assignment of new personnel have been completed.

- b. There were instances in which the bolting at duct joints was loose or missing and that gaskets in duct joints was missing or improperly installed.

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

This concern is attributed to a failure to restore HVAC systems after startup air balancing activities. A reinspection of HVAC duct under an upgraded inspection program, defined by duct inspection procedure QCI-CPSES-003, is in progress to assure all systems have been restored to design requirements.

CORRECTIVE STEPS WHICH WILL BE, OR HAVE BEEN TAKEN TO AVOID FURTHER VIOLATIONS:

Bahnson has issued DFP-TUSI-013 which requires inspection and signoff to close Startup Work Authorizations (SWA's) and Startup Work Permits (SWP's). Bahnson QA has been added to distribution for SWA's and SWP's.

DATE OF FULL COMPLIANCE:

The reinspection is expected to be complete July 1, 1983. Bahnson Procedures QCI-CPSES-003 and DFP-TUSI-013 are issued and in effect.

- c. Five of the nine supports inspected had dimensional deficiencies.

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

Bahnson Service Co. (BSC) Procedure QCI-CPSES-014, Revision 0, now requires QC inspection and verification of hanger as-built drawings, including hanger location, configuration, member size and length. Indoctrination and training of inspectors to this procedure have been completed. This procedure was implemented on the reinspection of the statistical sample discussed in Item a. above, and the results transmitted to CCL for analysis.



CORRECTIVE STEPS WHICH WILL BE, OR HAVE BEEN TAKEN TO PRECLUDE RECURRENCE:

The BSC inspectors have been trained and indoctrinated to the requirements of Procedure QCI-CPSES-014.

Both Bahnson Corporate QA and TUGCo QA will provide an increased level of QA audit activity and emphasize configuration control in their audits.

In addition, the Bahnson QA Engineer at CPSES has been replaced by a QA Manager, and a Level III QA Inspector has also been assigned to the Bahnson site QA organization.

DATE OF FULL COMPLIANCE:

The CCL analysis of the reinspection results is expected to be complete by July 1, 1983. All other corrective actions are complete.

- d. The Bahnson Service Company quality control records failed to reflect either of the above conditions.

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

Procedure QCI-CPSES-003 has been revised to require the use of a Ductwork Installation Checklist and a Discrepancy Report, together with BSC drawings to conduct ductwork inspections. This procedure now provides a checklist for documentation of reinspection and closeout of observed deficiencies. The procedure further requires the retention of these documents as QA records. The procedure was issued and reindoctrination and training of inspectors has been completed. This procedure is being used in the reinspection program discussed in Item (a.) above.

CORRECTIVE STEPS WHICH WILL BE, OR HAVE BEEN TAKEN TO PRECLUDE RECURRENCE:

BSC Procedure QCI-CPSES-003, Rev. 1 has been issued. The BSC inspectors have been reindoctrinated and trained to the requirements of the revised procedure.

BSC Corporate QA and TUGCo QA will audit this activity on an on-going basis to verify compliance with this procedure.

DATE OF FULL IMPLEMENTATION:

Corrective action is complete.

- e. The licensee's audits and assessments of the subcontractors control of quality failed to identify the above conditions.

CORRECTIVE STEPS WHICH HAVE BEEN TAKEN AND THE RESULTS ACHIEVED:

In addition to active participation of the aforementioned corrective actions, TUGCo QA, Dallas has performed two audits of Bahnson activities. The audit teams have included qualified weld inspectors.

CORRECTIVE STEPS WHICH WILL BE, OR HAVE BEEN TAKEN TO PRECLUDE REPETITION:

TUGCo QA will provide an increased level of QA audit activity. The audit teams will be supplemented with certified welding inspectors, as appropriate, to provide increased emphasis in hardware related activities.

TUGCo QA will use certified weld inspectors as appropriate on audits of contractors where TUGCo QA does not perform or supervise physical inspection of work activities.

DATE OF FULL COMPLIANCE:

Audits were conducted on Bahnson during March and April. The increased audit activity will continue on an ongoing basis to assure adequate implementation.