U. S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCMENT

REGION IV

Report No. 50-445/78-15; 50-446/78-15

Docket No. 50-445; 50-446 Category A2

Licensee: Texas Utilities Generating Company
2001 Bryan Tower
Dallas, Texas 75201

Facility Name: Comanche Peak, Units 1 & 2

Inspection at: Comanche Peak Steam Electric Station, Glen Rose, Texas

Inspection conducted: September 5-15, 1978

Inspector: W. A. Crossman 9/29/78
for R. G. Taylor, Resident Inspector, Projects Section Date

Approved: W. A. Crossman 9/29/78
W. A. Crossman, Chief, Projects Section Date

Inspection Summary:

Inspection September 5-15, 1978 (Report No. 50-445/78-15; 50-446/78-15)
Areas Inspected: Routine inspection by Resident Inspector of safety related construction activities including review of procedures and inspection of implementation relative to installation of seismic Category I, HVAC hangers; Unit 1 containment reinforcing steel installation and Cadwelding; installation and welding of safety related and reactor coolant piping. The inspection involved fifty inspector-hours by one NRC inspector.
Results: No items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

Principal Licensee Employees

R. G. Tolson, TUGCO Site QA Supervisor
*J. V. Hawkins, TUGCO/G&H Product Assurance Supervisor
G. C. Clancy, TUGCO QA Specialist
R. V. Fleck, TUGCO/G&H Civil Inspection Supervisor
*J. B. George, TUSI Project General Manager

Other Personnel

B. C. Scott, Brown & Root QA Manager
D. McDonald, Bahnson Service Co. Project QA Engineer
L. R. Walker, Brown & Root QA Auditor

The IE resident inspector also interviewed other contractor employees during the course of the inspection.

*denotes those attending the management meeting.

2. General Construction Area Tours

The IE resident inspector toured one or more plant areas several times weekly during the reporting period to observe the progress of safety related installation work and general construction practices including housekeeping. Two tours were conducted during a portion of the licensee's second shift to observe the type of work involved, the level of effort and the construction practices utilized. The work was found to be largely in the civil area, primarily erection of reinforcing steel with a limited amount of safety related pipe fitup and welding in progress. The work force appeared to be one-quarter to one-third that of the day shift. Although the licensee is not committed to comply with industry housekeeping standards such as ANSI N45.2.3, "Housekeeping During the Construction Phase of Nuclear Power Plants," it appears that he is complying with the intent in that the housekeeping is generally consistent with such standards

No items of noncompliance or deviations were identified.

3. Installation of Seismic Category I HVAC System

The IE resident inspector became aware that substantial construction activities were not being done by Brown & Root during an interview with a welder working on a support structure in the common Control

Room area. The welder stated that he was an employee of Bahnson Service Company, had been qualified to weld by Bahnson and was issued all materials by Bahnson.

The IE resident inspector inquired of the TUGCO QA staff as to the basis for the work, QA requirements, etc. The IE resident inspector was informed that Bahnson had been contracted to do the work described by Project Specification 2323-MS-85, "HVAC Ducts, Louvers and Accessories." The specification requires Bahnson to design, furnish materials and install the complete plant HVAC duct work and related supports including those defined as seismic, Category I. The specification further requires that Bahnson have a quality assurance system meeting the requirements of 10 CFR 50, Appendix B and several ANSI N45.2 daughter standards.

The IE resident inspector obtained a controlled copy of the "Bahnson Quality Field Procedures Manual." The IE resident inspector selected the following procedures for review:

a. 8.001 Revision 0, "Identification and Control of Materials"

b. 9.001 Revision 0, "Control of Welding Process"

c. 10.001 Revision 0, "Inspection Control"

d. 15.001 Revision 0, "Nonconformance Control"

e. 5.001 Revision 0, "Instructions, Procedures & Drawings"

The IE resident inspector subsequently verified that all structural steel being utilized is purchased and certified to ASME SA-36, the welding is being done to one Weld Procedure, BSC-20, which utilizes the SMAW process with E-7018 and E-8018 rod. The procedure has been qualified to the requirements of ASME, Section IX and AWS D.1.1 as have the welders themselves. The welders are issued heat traceable rods each day in heated portable rod ovens from a controlled and calibrated central rod oven. Each support is inspected and documented on an inspection report after a visual inspection by Bahnson quality control personnel.

No items of noncompliance or deviations were identified.

4. Unit 1 Containment Wall Structure

The IE resident inspector selectively examined reinforcing steel mechanical splices (Cadwelds) in the containment wall at an approximate elevation of 960'. The splices examined were identified as

AFV-169, DKV-38, EIH-1, EIH-2, EIH-3, CKV-114, CKV-119, OV-240, APV-202, FLV-41, APV-202, ELV-40, DGD-34 and CDD-57. These splices represent a cross section of the total splicing crews who have worked in the area and a selection of verticial, horizontal and diagonal splices, all in number 18 bar size. Each of the splices fulfilled the requirements of ASME Section III, Division 2 and the Project Specification 2323-SS-11, "Cadweld Connectors for Reinforcing Steel," as to fill and apparent centering of the bar ends in the splice sleeve. The IE resident inspector reviewed the qualification and production test records for splicers AF, OV, AP, CD and DG. The documents revealed that testing has been accomplished consistent with the requirements of the above indicated code and specification.

In conjunction with above inspection of mechanical splices, the IE resident inspector verified that the reinforcing steel in place was of the correct size and grade and spaced in accordance with Reinforcing Steel Specification 2323-SS-10 and drawing 2323-SI-0505, Revision 13, "Reactor Building Containment Wall Outline and Reinforcement." Diagonal steel and shear bars were in the process of being installed.

No items of noncompliance or deviations were identified.

5. Safety Related and Reactor Coolant Pipe Installation and Welding

The IE resident inspector observed two welds being made in safety related stainless steel piping. These were FW-5 as identified on isometric drawing CT-1-SB-17-0 and FW-19 as identified on drawing BR-X-AB-54-3. The first weld is in the containment spray piping system while the second is in the boron recovery system. Both welds were being made within the parameters of Weld Procedure 88023, Revision 3 as modified by Interim Change Notice 3. Modifications to the procedure were found to be in the variables identified by ASME, Section IX as nonessential such as voltage, amperage and welding speed of travel. The changes, which in effect increase heat input, are still within the maximum heat input requirements indicated by FSAR, Chapter 6.1B. The IE resident inspector verified that Weld Procedure 88023 had been properly qualified as documented on Procedure Qualification Record 0808AA204, Revision 3. The two welders were also verified to have been qualified to the GTAW process in the thickness ranges involved.

The IE resident inspector verified that weld rod heats 741262 and 04184 used in joints FW-5 and FW-19, respectively, had been tested and certified in accordance with ASME, Sections III and II (SFA5.9).

During general plant inspection tours, the IE resident inspector observed the methods of handling and protecting safety related and reactor coolant pipe. These practices, such as keeping the stainless pipe protected from carbon steel temporary supports, keeping open ends tightly capped, restricting the use of grinders and wire brushes to a specific material were found to be consistent with good industry practice.

No items of noncompliance or deviations were identified.

6. Management Interview

The IE resident inspector met with the licensee representatives (denoted in paragraph 1) on September 15, 1978, to discuss the IE resident inspector's observations and findings.