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

REGION IV

Report: 50-445/81-10; 50-446/81-10

Dockets: 50-445; 50-446 Category A2

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

Facility Name: Comanche Peak, Units 1 and 2

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

Inspection Conducted: July 20-23, 1981

Inspector: _____ 8-7-81
A. R. Johnson, Reactor Inspector, Engineering & Materials Section Date

Approved: _____ 8-7-81
R. E. Hall, Acting Chief, Engineering & Materials Section Date

Inspection Summary

Inspection on July 20-23, 1981 (Report: 50-445/81-10; 50-446/81-10)
Areas Inspected: Routine, unannounced inspection of safety-related construction activities pertaining to installation, inspection and documentation of safety-related instrumentation installations for components and systems. The inspection involved 36 inspector-hours by one NRC inspector.
Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

Principal Licensee Personnel

R. G. Tolson, TUGCO, Site QA Supervisor
*B. C. Scott, TUGCO, Quality Engineering Supervisor
*R. E. Camp, TUGCO/EDS Nuclear, Lead Startup Engineer
*R. K. Wirth, TUGCO, QE Instrumentation and Control Engineer
W. Mahan, TUGCO, QE Electrical Engineer
*C. G. Creamer, TUSI, Project Instrumentation and Control Engineer
*T. G. Wardlow, TUSI/B&R, Instrumentation Engineer
R. Michaels, TUGCO, QE Engineer
W. Cromeans, TUGCO, Turnover and Document Control
D. Llewellyn, TUGCO/B&R, NCR Co-ordinator/Document Control
F. Yeager, TUGCO, Field Document Control

The NRC inspector also interviewed other licensee and contractor personnel during the course of the inspection.

*Denotes those attending the exit interview.

2. Safety-Related Instruments and Instrument Tubing Installations

a. Observation of Completed Work

The NRC inspector inspected a total of 13 safety-related instrument and associated instrument tubing installations, which had been completed and turned over to the licensee (TUGCO), to ensure that installations were in accordance with FSAR, TUSI/B&R specifications and drawings, TUGCO/B&R quality instructions and procedures, and industry standards. These installations were portions of safety-related systems involved in Post Accident Monitoring (PAM) and Normal Plant Process (NPP) control.

Neither RPS or ESFAS instrument installations have been completed for turnover to date. The instruments were inspected for proper type, tagging, range, rating, location, cleanliness, physical protection, documentation of environmental or seismic qualification, and review of QC inspection records (manufacturer's record sheets and instrument installation checklist). The instrument tubing installations were inspected for proper location, routing, safety identification, material traceability, alignment, leveling, separation, freedom of movement, and physical protection. The respective QC inspection records were also reviewed by the NRC inspector (e.g., manufacturer's record sheets, component modification cards, design change authorities, inspection reports, etc.).

The NRC inspector observed the line slope for the drain line, upstream of the isolation valve for each of the four Refueling Water Storage Tank Level sensing installations (1-LT-930, 1-LT-931, 1-LT-932, and 1-LT-933) exceeded the 1¼" maximum allowance as specified in TUGCO Quality Instruction QI-QP-11.8.1, Revision 8, paragraph 8.1.C. TUGCO engineering, having made an evaluation, determined that there was no basis for restricting gravity drain line slopes to the 1¼" maximum dimension, and agreed to change the drawings and specifications to conform with the "as built" configuration.

The following instruments and instrument installations were inspected:

1-LT-930	Refueling Water Storage Tank Level	PAM
1-LT-931	Refueling Water Storage Tank Level	PAM
1-LT-932	Refueling Water Storage Tank Level	PAM
1-LT-933	Refueling Water Storage Tank Level	PAM
X-PT-5855	Control Room Pressure	PAM
X-PT-5856	Control Room Pressure	PAM
1-TE-5402	Containment Temperature	PAM
1-TE-5403	Containment Temperature	PAM
1-LS-6712	Chiller Water Tank Level	NPP
1-LS-6713	Chiller Water Tank Level	NPP
1-FIS-4650	Component Cooling Water Flow to Chillers	NPP
1-LS-3375A	Diesel Fuel Level	NPP
1-LS-3375B	Diesel Fuel Level	NPP

The following governing quality instructions and procedures were reviewed by the NRC inspector:

TUGCO QI-QP-11.8.1, Revision 8

TUGCO QI-QP-16.0.4, Revision 0

B&R QI-QAP-11.1.33, Revision 0

B&R 35-1195-ICP-4, Revision 4

B&R QI-QAP-11.1.24, Revision 5

The following governing seismic tubing support placement packages were reviewed by the NRC inspector:

Gibbs & Hill, Inc. 2323-I001, August 21, 1979

Gibbs & Hill, Inc. 2323-I002, November 1, 1979

No violations or deviations were identified.

b. Observation of Completed Work With Instrument Certification Incomplete

The NRC inspector inspected two safety-related instrument and instrument tubing installations for the Post Accident Monitoring Condensate Storage Tank levels, which had been completed, turned over to the licensee (TUGCO), and which were currently in service. The instrument assemblies and installation were for the Rosemount Level Transmitter, Model 1153. The documentation delineating adherence to IEEE Standard 323 (Environmental Qualification) and IEEE Standard 344 (Seismic Qualification) had not yet been submitted, or approved, from the instrument manufacturer, thus rendering the certification for these instruments incomplete. NCR E-80-00088, dated January 27, 1981, had been issued by the licensee (TUGCO) to this effect. The NRC inspector reviewed the Class IE Equipment Qualification Milestone Status Report and verified that the identification and tracking method used for certifying instruments was adequate.

No violations or deviations were identified.

The instrument tubing installation for the two safety-related Condensate Storage Tank Level instruments (Rosemount Model 1153) were inspected by the NRC inspector for proper location, routing, safety identification, material traceability, alignment, leveling, separation, freedom of movement, and physical protection. The NRC inspector also reviewed the respective QC inspection records (manufacturer's record sheets, component modification cards, design change authorities, inspection reports, etc.).

The governing quality instructions, quality procedures, and seismic tubing support/support placement packages, listed in paragraph 2.a above were used as acceptance criteria by the NRC inspector during the above inspection activity.

The NRC inspector observed that both instrument tubing drain lines were physically deformed from their respective seismic supports as a result of the adjacent construction activities and/or traffic through the instrument installation areas. Both instrument facilities were currently in temporary-use service at this time, during the construction phase, and were operated by the licensee (TUGCO). The protective covers employed prior to turnover had been removed once

the equipment was placed in temporary service. Damage to these instrument installations would appear to require replacement/repair of the instrument tubing and a documented reinspection on the part of the operating utility (TUGCO), prior to permanent use.

The NRC inspector also observed that a heat trace system had been installed and employed after turnover by the licensee as evidenced by no record on the QC Instrument Installation Checklist (MSR) prior to turnover. The NRC inspector determined that the heat trace system was not safety-related, and that it had been installed by the licensee as an interim measure until the compartment doors to the outside environment were installed.

The NRC inspector found that no licensee (TUGCO) procedures had yet been issued, regarding instrument installations, to address the responsibilities, activities, and documentation requirements of the operating utility (TUGCO), after release and turnover of the safety-related instrument systems, subsystems, and components by the construction utility (TUSI). No licensee (TUGCO) procedures were found to delineate and control the activities to maintain, remove, repair, modify, assemble/disassemble permanent plant instrumentation equipment, after release/turnover to TUGCO.

This matter is considered as an unresolved item pending clarification of applicable requirements and commitments.

c. Observation of In-Process Work

The NRC inspector inspected ten safety-related instrument and instrument tubing installations, which had completed fabrication, and were currently in service, but were not released for turnover in that the QC records were incomplete (e.g., instrument installation checklists (MRSs) did not have complete QC signoff on all items). These ten safety-related instrument facilities employed temporary instruments (not certified for safety-related application), calibration, and had been installed to facilitate the interim operation of the Service Water Pumps and Component Cooling Water Heat Exchangers during the construction phase to provide construction air conditioning. The QC records for these instrument installations are being retained at the Field Control Center until QC signoff and turnover at some later date after which they will be forwarded to the permanent record storage (QA vault).

Ten safety-related instrument tubing installations were inspected by the NRC inspector for proper location, routing, safety identification, material traceability, alignment, leveling, separation, freedom of movement, and physical protection. The respective QC inspection records were also reviewed by the NRC inspector (e.g., manufacturer's records sheets, component modification cards, design change authorities, inspection reports, etc.).

The following instrument installations were inspected:

X-PS-4290	Service Water Pump Pressure
X-PS-4291	Service Water Pump Pressure
X-PS-4296	Service Water Pump Pressure
X-PS-4297	Service Water Pump Pressure
1-PT-4252	Station Service Water Pump Pressure
1-PT-4253	Station Service Water Pump Pressure
1-FT-4535A	Component Cooling Water Heat Exchanger Flow
1-FT-4536B	Component Cooling Water Heat Exchanger Flow
1-FT-4537A	Component Cooling Water Heat Exchanger Flow
1-FT-4537B	Component Cooling Water Heat Exchanger Flow

The governing quality instructions, quality procedures, and seismic tubing support/support placement packages, listed in paragraph 2.a above were used as acceptance criteria by the NRC inspector during the above inspection activity.

No violations or deviations were identified.

3. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items or items of violation. An unresolved item relating to post turnover protection of permanent instrumentation is discussed in paragraph 2.a.

4. Exit Interview

The NRC inspector met with the licensee representatives (denoted in paragraph 1) and Mr. R. G. Taylor (NRC Resident Reactor Inspector) at the conclusion of the inspection on July 23, 1981. The NRC inspector summarized the purpose, scope and findings of the inspection. The NRC inspector also discussed possible ingredients of a licensee program which would correct the problems related to the above noted unresolved item.