

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

Docket Nos.: 50-445
50-446

License Nos.: NPF-87
NPF-89

Report No.: 50-445/96-13
50-446/96-13

Licensee: TU Electric

Facility: Comanche Peak Steam Electric Station, Units 1 and 2

Location: FM-56
Glen Rose, Texas

Dates: October 4-11, 1996

Inspector: Clifford A. Clark, Reactor Inspector

Approved By: Dr. Dale A. Powers, Chief, Maintenance Branch
Division of Reactor Safety

ATTACHMENTS:

Attachment 1: Partial List of Persons Contacted
List of Inspection Procedures Used
List of Documents Reviewed
Items Opened

Attachment 2: MOVs with Questionable Actuator Stud and Nut Fastener
Assemblies

EXECUTIVE SUMMARY

Comanche Peak Steam Electric Station, Units 1 and 2
NRC Inspection Report 50-445/96-13; 50-446/96-13

This inspection was performed using the guidance of NRC Inspection Procedure 73753, "Inservice Inspection," dated May 4, 1995, to determine whether the inservice inspection, repair, and replacement of Class 1, 2, and 3 pressure retaining components at Comanche Peak Steam Electric Station, Unit 1 and 2, were performed in accordance with Technical Specifications, the applicable ASME Code, correspondence between NRC and the licensee concerning relief requests, and requirements imposed by NRC/industry initiatives.

Maintenance

- Approved equipment/fastener configurations were not maintained on two valve actuators. This finding and the concern of whether approved fastener configurations may not have been maintained during the performance of maintenance activities in other areas on these actuators, valves, or other safety related equipment is an unresolved item for NRC review (Section M2).
- The inservice inspection program continued to be well implemented (Section M3).

Report Details

Summary of Plant Status

Unit 1 changed from Mode 1 to Mode 6, in preparation for refueling outage 1RF05, and Unit 2 was operating at 100% power during this inspection period.

II. Maintenance

M2 Maintenance and Material Condition of Facilities and Equipment

a. Inspection Scope (92902)

The inspector observed the material condition of the plant to determine the effectiveness of licensee's actions implemented to maintain the appropriate material condition of the plant.

b. Observations and Findings

During tours of various areas of the plant the inspector noted the following:

- Containment Spray Pump 1-02 recirculation Motor Operated Valve 1FV-4773-1 MO actuator limit switch compartment cover installation was missing two fastener assemblies, and Safety Injection Pump 1-02 crosstie Motor Operated Valve 1-8821B MO actuator limit switch compartment cover installation was missing one fastener assembly. The licensee issued a corrective action document (ONE Form 96-001057) to document these nonconformance fastener conditions.
- On October 7, 1996, the licensee's identified vendor (Limitorque Corporation) Technical Manual 661-76268-003[629], as applicable for the motor operated valves identified in Attachment 2 of this report. Referenced figures in this technical manual indicated that the valve actuator limit switch compartment covers were installed with either hex head or socket head cap screws, but did not indicate the number of fasteners installed, a part or piece number for **each** of the fasteners, or if a lockwasher was installed with each applicable fastener. Also, the technical manual figures did not indicate an approved limit switch compartment cover installation with stud and nut fastener assemblies. As a result of the limited, as-built design fastener information contained in the applicable technical manual, the design descriptions of various vendor provided actuator fastener assemblies could not readily be identified to the inspector. Approximately 16 motored operated valves, identified in Attachment 2, had at least one stud and nut fastener assembly installed in the valve actuator limit switch compartment cover.

- The actuator vendor noted that they employed two types of fastener hardware to assemble the housing covers and motors on the SMB series of actuators, either hex head cap screws SAE Grade 5, or socket head cap screws SAE Grade 8 (or strength equivalent). The SAE Grade 5 identification grade marking was not always readily apparent on the head of some of the hex head cap screws installed in various valve actuators identified in Attachment 2 of this report.
- Procedure MSE-CO-8805, "Limitorque Actuator Refurbishment for Type SMB-000/SMB/SB/SBD-00," Revision 0, Section 8.9.16, stated to "install limit switch compartment cover, gasket and mounting screws... ." This current valve actuator maintenance procedure failed to require the removal or installation of stud and nut fastener assemblies in the limit switch compartment cover.

The licensee noted that they believed the subject valve actuators were provided to Comanche Peak by the vendor with some of the stud and nut fastener assemblies installed in the limit switch compartment covers. The licensee noted that they would contact the valve actuator vendor to obtain written documentation for updating the applicable vendor technical manuals in the following areas:

- The description (size, type, and material identification) of all approved as-built fastener assemblies provided by the vendor to mount the actuator limit switch compartment covers, on the motor operated valves actuators shipped to Comanche Peak.
- The description (size, type, and material identification) of the fastener assemblies the vendor currently approves and/or provides for replacement of the motor operated valve actuator limit switch compartment cover fasteners.

NRC will review the licensee actions taken to verify the approved design fastener configurations for the actuator limit switch compartment cover fasteners as an inspection followup item (445/9613-01).

The inspector noted that the actuators installed on Valves 1FV-4773-1 MO and 1-8821B MO, that were observed with the nonconforming missing fastener configurations, had various past maintenance activities performed where the subject limit switch compartment covers and associated fasteners (along with other actuator/valve fasteners) were removed. The licensee noted that it was their expectation that during the performance of any maintenance activities, the approved equipment configuration would be maintained and/or restored. This included equipment fasteners which should be reinstalled or replaced with fasteners of an approved material and configuration.

The fact that fasteners were missing on the two valves actuators identified above, raised the concern that approved fastener configurations may not have been maintained during maintenance activities in other areas on these actuators, valves, or other safety-related equipment.

The licensee updated the NRC on the latest actions implemented to address this unresolved item during an October 16, 1996 followup telephone conference call. Based on the information available as of October 16, 1996, the inspector could not determine the scope of this fastener problem during this inspection. This is an unresolved item (445/9613-02).

c. Conclusions

Although the above observed examples of nonconforming fastener configurations on the valve actuator limit switch compartment covers were of minor safety significance, they indicated potential problems with fasteners installed in other safety-related equipment locations. Except for the examples of nonconforming fastener configurations noted above, the general material condition of other plant areas observed appeared to be good.

M3 Maintenance Procedures and Documentation

a. Inspection Scope (73753)

The inspector reviewed the documents identified in Attachment 1 during the review of inservice inspection activities. The inspector reviewed these documents to determine if they had been developed in accordance with regulatory requirements and the applicable ASME code requirements.

b. Observations and Findings

The inservice inspection examinations were scheduled to be performed in accordance with the Unit 1 ASME Section XI inservice inspection program Plan, First Interval, Second Period, and Second Outage (96) schedule. The Unit 1 inservice inspection program Plan was written in accordance with the requirements of the 1986 Edition of the ASME Boiler and Pressure Code, Section IX, and no addenda. The inspector found that the documents (procedures, records, reports, and personnel certifications) reviewed had been developed in accordance with licensee procedures, regulatory requirements, and applicable ASME code requirements.

c. Conclusions

The inspector concluded that the inservice inspection procedures and documents were well developed for the identified tasks.

M4 Maintenance Staff Knowledge and Performance

a. Inspection Scope (73753)

As a result of various outage schedule changes as Unit 1 came down for the refueling outage, the inspector was only able to witness a total of six liquid penetrant tests and ultrasonic tests performed on welds.

b. Observations and Findings

The inspector observed both penetrant tests and ultrasonic tests properly performed by qualified nondestructive examination personnel on containment spray system piping welds (identification numbers TBX-2-2537-5, 6, and 7).

c. Conclusions

The inspector concluded that the observed nondestructive examinations were performed in accordance with the appropriate procedures.

III. Engineering

E2 Engineering Support of Facilities and Equipment

E2.3 Review of Final Safety Analysis Report Commitments

A recent discovery of a licensee operating their facility in a manner contrary to their Final Safety Analysis Report description highlighted the need for a special focused review that compares plant practices, procedures, and/or parameters to the Final Safety Analysis Report descriptions. While performing the inspection discussed in this report, the inspector reviewed Sections 5.2.4 and 6.6 of the Final Safety Analysis Report associated with the inservice inspection program. The inspector did not identify any discrepancies between the Final Safety Analysis Report and the reviewed inservice inspection program activities.

V. Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management at the conclusion of the inspection. The licensee acknowledged the findings presented. The licensee updated the NRC on the latest actions implemented to address the unresolved item discussed in Section M2 of this report during an October 16, 1996 followup telephone conference call.

The inspector asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENT 1

PARTIAL LIST OF PERSONS CONTACTED

Licensee

O. Bhatti, Senior Regulatory Compliance Engineer
J. DeBonis, Inservice Inspection Engineer
D. Davis, Nuclear Overview Manager
R. Mays, Codes and Standards Mechanical Engineering Supervisor
J. Muffett, Station Engineering Manager
J. Ragan, Codes and Standards Site Level III Examiner
D. Snow, Regulatory Affairs Senior Specialist
C. Terry, Group Vice President, Nuclear Production
R. Walker, Regulatory Affairs Manager

Hartford Steam Boiler and Inspection Company

J. Hair, Authorized Nuclear Inservice Inspector

NRC

T. Gody, Senior Resident Inspector

LIST OF INSPECTION PROCEDURES USED

IP 73753 Inservice Inspection
IP 92902 Followup - Maintenance

LIST OF DOCUMENTS REVIEWED

Procedures

<u>Procedure</u>	<u>Revision</u>	<u>Title</u>
ISI Schedule	0	Comanche Peak Unit 1 Inservice Schedule; Scheduled Components; First Period, Second Period, Second Outage (96RF)
TX-ISI-8	4	VT-1 and VT-3 Visual Examination
TX-ISI-11	6	Liquid Penetrant Examination
TX-ISI-70	6	Magnetic Particle Examination
TX-ISI-210	3	Ultrasonic Examination Procedure for Welds in Ferritic Steel Vessels

TX-ISI-212	4	Ultrasonic Examination Procedure of Nozzle Inner Radius Sections
TX-ISI-214	1	Ultrasonic Examination Procedure for Welds in Piping Systems and Vessels
TX-OPS-101	5	Preservice and Inservice Examination Documentation
STA-109	2	Conduct of Maintenance
STA-703	8	Inservice Inspection Program
NOE-EVAL 95-000033	0	Nuclear Overview Department Evaluation Report

Inservice Inspection Report

Unit 2, First Interval, First Period, Second Outage (2RFO2)

Inservice Inspection Summary Report

Unit 2, First Interval, First Period, Second Outage (2RFO2)

ISI Examination Reports Issued for the Current Unit 1 Refueling Outage (1RFO5)

TBX-1120-(1-3, 1-4) / PT
TBX-1120-(2-1, 2-3, 2-4) / UT
TBX-1180-(2-3, 2-4, 2-1WS, 2-2WS) / PT
TBX-2-2537-(5, 6, 7) / PT
TBX-2-2537-(5, 6, 7) / UT
TBX-2-2564-(42, 45, 46) / PT
TBX-2-2566-(2, 3) / PT
TBX-2-2567-(50, 51) / PT
TBX-2-2568-(24, 31, 32) / PT
TBX-2-2573-1 / PT
TBX-2-2573-1 / UT

Contractor Examiner Certifications

WesDyne International
Sonic Systems International, Inc.

ITEMS OPENED

50-445/9613-01	IFI	review of Limitorque operator design fastener
50-445/9613-02	URI	equipment/fastener configurations were not maintained

ATTACHMENT 2

MOVS WITH QUESTIONABLE ACTUATOR STUD AND NUT FASTENER ASSEMBLIES

1-8802B-MO (SBD/00)
1-8806-MO (SB/00)
1-8807A-MO (SB/00)
1-8807B-MO (SB/00)
1-8814A-MO (SMB/00)
1-8814B-MO (SMB/00)
1-8821fj-MO (SB/00)
1-8835-MOV (SBD/00)

1-HV-4395-MO (SMB/000)
1-HV-4396-MO (SMB/000)
1-FV-4773-1MO (SMB/00)
1-HV-6076 MOV (SMB/000)
1-HV-6077 MOV (SMB/000)
2-HV-4699-MO (SB/00S)
2-HV-4708-MO (SB/00S)
2-HV-6084-MO (SB/00)