

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-445/91-03
50-446/91-03

Operating License: NPF-87
Construction Permit: CPPR-127

Dockets: 50-445; 50-446

Licensee: TU Electric
Skyway Tower
400 North Olive Street, L.B. 81
Dallas, Texas 75201

Facility Name: Comanche Peak Steam Electric Station (CPSES)

Inspection At: CPSES, Glen Rose, Texas

Inspection Conducted: January 14-18, 1991

Inspectors: *Dwight D. Chamberlain* for 1-30-91
S. D. Butler, Resident Inspector, Waterford 3 Date

A. Singh for 1/30/91
A. Singh, Reactor Inspector, Test Programs Date
Section, Division of Reactor Safety

Approved: *Dwight D. Chamberlain* for 1-30-91
D. D. Chamberlain, Chief, Reactor Project Date
Section B, Division of Reactor Projects

Inspection Summary

Inspection Conducted January 14-18, 1991 (Report 50-445/91-03)

Areas Inspected: The inspection consisted of a special, announced inspection of the circumstances surrounding the apparent falsification of roving firewatch records which was discovered by the licensee on October 5, 1990, and documented in report PIR FX 90-2317. In addition, other elements of the licensee's fire protection program, required to be implemented by license condition 2.G., were reviewed.

Results: Within the areas inspected, two apparent violations were identified. The first involved failure to comply with Technical Specification (TS) 6.8.1.h, which requires procedures to be implemented and maintained covering the fire protection program implementation, specifically, training and implementation of

roving firewatches as compensatory actions for impaired fire protection equipment. The second apparent violation involved failure to comply with 10 CFR 50.9, which requires the licensee to maintain information (records) required by regulation or license condition complete and accurate in all material respects.

Other conclusions drawn by the inspectors were that, once the roving firewatch irregularities were identified to management, a commendable job was done to investigate the problem, identify the root and contributing causes, and propose corrective action to prevent recurrence. Secondly, based on the inspectors' observations of roving firewatches in progress, interviews with personnel, and cross-checking recent firewatch logs against security computer records, it was apparent that roving firewatches were being appropriately implemented at the time of this inspection. Finally, in our review of other aspects of the licensee's fire protection program, there were no indications of similar weaknesses.

Inspection Conducted January 14-18, 1991 (Report 50-446/91-03)

Areas Inspected: No inspection of CPSES, Unit 2, was conducted.

DETAILS1. PERSONS CONTACTEDTU Electric

- *O. Bhatti, Site Licensing
- *M. R. Blevins, Manager of Nuclear Operations Support
- *W. J. Cahill, Executive Vice President, Nuclear
- *J. J. Kelley, Plant Manager
- *D. M. McAfee, Manager, Quality Assurance (QA)
- *A. B. Scott, Vice President, Nuclear Operations
- *C. L. Terry, Director, Nuclear Overview
- *B. W. Wieland, Maintenance Manager
- *J. D. Seawright, Licensing Engineer
- *R. P. Baker, Licensing Compliance Manager
- *F. P. Miller, QA Specialist
- *J. W. Audas, Safeteam Manager
- *R. L. Pflueger, Safeteam
- *W. F. Grace, Safety Services Manager
- *R. L. Wakeman, Fire Protection Supervisor
- *B. T. Lancaster, Manager, Plant Support
- *G. J. Stein, Administrative & Technical Assistant (Maintenance)
- R. W. Whitehouse, Maintenance Services Organization Supervisor
- D. F. Schroeder, Maintenance Support (Westinghouse)

CASE

- *E. F. Ottrey, Monitoring Project Manager

NRC

- *W. D. Johnson, Senior Resident Inspector, Unit 1
- D. N. Graves, Resident Inspector, Unit 1
- R. M. Latta, Senior Resident Inspector, Unit 2
- S. D. Bitter, Resident Inspector, Unit 2

In addition to those listed above, the inspectors held discussions with various operations, maintenance, engineering, contractor technical support, and administrative members of the licensee's staff.

*Denotes those attending the exit meeting on January 18, 1991.

2. ROVING FIREWATCH LOG IRREGULARITIES

This inspection was conducted to review licensee actions regarding their identification of apparent falsification of roving firewatch records. The background and review of licensee investigation results is provided below along with a discussion of the potential safety significance of the missed

firewatches and a discussion of licensee interim corrective actions. In addition, a discussion of review of other aspects of the licensee's fire protection program is provided.

2.1 Background

The licensee's fire protection program, as described by the fire protection report, was approved by the NRC in Supplement 21 to the safety evaluation report (NUREG-0797). This program allows the use of roving firewatches as compensatory measures for inoperable or degraded fire protection components or systems. At CPSES, roving firewatches were being performed by a contractor under the supervision of the licensee's maintenance services organization (MSO). In addition, the licensee has a fire protection group with overall responsibility for fire protection program implementation.

In August 1990, the licensee's fire protection group first became aware of potential problems in the area of roving firewatch implementation and recordkeeping based on log irregularities reported by one roving firewatch worker. As a result, the fire protection group requested one of their contractors, National Fire and Medical (NFM), to evaluate the situation to see if there was, in fact, a problem. MSO was not notified at this time. Although an NFM technician noted missing entries in a firewatch log in August 1990, the discrepancies were not reported until additional problems were noted on October 5, 1990. At that time, Operations Notification and Evaluation (ONE) Form FX 90-2282 was issued to document the NFM findings and inform plant management that Fire Watch Log Book 18 had two apparent false entries. Subsequent investigation by MSO and the contractor revealed that the entries were apparently falsified. In addition, by comparing other logs to security card reader printouts, numerous other irregularities in firewatch log entries were noted. When plant management assessed the potential scope of the problem, an additional ONE Form, FX 90-2317, was issued on October 19, 1990. This ONE Form was upgraded to Plant Incident Report PIR FX 90-2317 and a task team was chartered by the maintenance manager to investigate the problem and perform formal root cause analysis. The senior resident inspector was notified of the problem on October 19, 1990.

2.2 Review of Licensee's Task Team Findings and Immediate Actions

Investigation by the licensee revealed that between August 19 and October 19, 1990, there was a total of 575 missed firewatch rounds as determined by security card reader data. The majority of these occurred on swing shift between September 19-28, 1990. Immediate action by the licensee included taking disciplinary action for personnel involved with the firewatch log irregularities, reinstating backshift supervisors for the contractor employees performing the firewatches, and rotating the roving firewatches each hour between routes. Action was also taken to ensure that firewatch personnel were assigned no other duties while on firewatch which would prevent them from performing their rounds.

The licensee's task team concluded that the root causes for the inadequate implementation of roving firewatches as required by the fire protection report

and Station Administrative Procedure STA-738, "Fire Protection Systems/Equipment Impairments," were: (1) inadequate supervisory and oversight controls in place to ensure that all the requirements of the roving firewatch were being met, and (2) conflicting information between established practices, procedural guidance, and "lead/supervisory example," along with insufficient training which led to a lack of understanding and confusion about the requirements of the roving firewatch and its importance. Contributing causes which were identified by the licensee were categorized as: (1) misunderstanding of the requirements, (2) common practices in the performance of the roving firewatches (carried over from the construction contractor), (3) supervisory/lead worker example and influence, (4) program implementation weaknesses, and (5) delays in formally identifying concerns to management. Short-term and long-term corrective actions were proposed by the licensee in its task team report to address the root and contributing causes.

The inspectors reviewed the task team report and confirmed the licensee's findings by discussing the problem extensively with the task team leader, other members of the task team, and both licensee and contractor employees who were responsible for implementing and performing the compensatory measures required by the fire protection report. In addition, plant administrative procedures, required by TS 6.8.1.h to adequately implement the fire protection program, were reviewed, plant walkdowns were performed with firewatches and fire protection personnel, and recent records of roving firewatches were reviewed and compared to security card reader printouts.

The inspectors confirmed that lack of adequate management involvement in the May 1990 turnover of roving firewatch responsibilities from Brown and Root to Westinghouse significantly contributed to the problems that were identified in October 1990. Inadequate guidance, procedural or otherwise, combined with inadequate formal training for the personnel and their supervision responsible for performing the firewatches, necessitated a carryover of "common practices" by Brown and Root employees who were transferred to Westinghouse. These "common practices" were eventually picked up by Westinghouse employees. Report review and employee interviews indicated that personnel received little, if any, useful training on how the firewatches were to be performed, how the logs were to be kept, the fact that the logs were a formal record, or the significance of their task. Procedure STA-729, "Control of Transient Combustibles, Ignition Sources and Fire Watches," lacked the necessary guidance on any of these matters and, since it was relied upon by the fire protection group to implement the requirements and guidance for both implementation of the program and training of firewatches, neither was accomplished properly. In that the lack of adequate training for the roving firewatches required by STA-729 and the lack of adequate guidance in STA-729 for firewatch responsibilities and recordkeeping contributed to the noncompliance with STA-738 requirements caused by the missed firewatches, these are all considered to be examples of an apparent violation of TS 6.8.1.h. This TS requires written procedures to be implemented covering fire protection program implementation.

During the licensee's task team investigation, numerous examples of apparent false entries in roving firewatch logs were identified by the licensee. These are examples of a second apparent violation of regulatory requirements. 10 CFR 50.9 requires that the licensee maintain information required by regulation or license condition complete and accurate in all material respects.

2.3 Safety Significance of Missed Firewatches

The inspectors reviewed the status of fire protection equipment in areas where the roving firewatch logs were found to have irregularities. The areas affected were: emergency diesel generator rooms, electrical auxiliary room, and auxiliary feedwater pump rooms. With the exception of the electrical auxiliary room at Elevation 852 feet, there was apparently no impaired fire protection equipment. In the area of 852 feet in the electrical auxiliary room, all systems were in service, but the firewatch was established due to impaired fire doors. During the times in question, when roving firewatches were missed, no actual fire occurred; however, if a fire had occurred, the licensee had the ability to shut down the plant safely by alternate methods. The inspectors' review indicated that there appeared to be minor safety significance for the missed firewatches in the above mentioned areas.

2.4 Review of Interim Corrective Action

The licensee identified a large number of contractor personnel who were involved in the firewatch log irregularities and subsequently initiated disciplinary action. The inspectors learned that personnel that had been terminated were subsequently reinstated after receiving a suspension. The inspectors discussed this matter with the licensee and some of the employees involved and reviewed interim training that was provided to ensure that measures had been taken to provide adequate firewatch coverage until all proposed corrective actions could be completed. The inspectors were satisfied that interim training and personnel actions, combined with other immediate and short-term corrective action that had been taken, were adequate to provide the roving firewatch coverage required by the fire protection report until all corrective action could be completed.

3. REVIEW OF OVERALL FIRE PROTECTION PROGRAM

The inspectors also reviewed other areas of the fire protection program to ensure that the licensee had maintained an overall effective program. The areas that the inspector reviewed included emergency lighting, penetrations/barriers, fire pumps, fire doors, detection and suppression systems, and other fire protection equipment. The review covered administrative procedures, surveillance records, and results and training. The review did not detect any missed surveillances and determined that established frequencies were met. The inspectors also toured the plant to inspect fire protection equipment. The inspector reviewed manual hose station installations and portable extinguishers at various locations throughout the plant. The inspectors also reviewed the equipment located at several buildings in the yard area. All installations and equipment were found to be acceptable and consistent with that identified in the fire protection report.

4. Exit Meeting

The inspection scope and findings were summarized on January 18, 1991, with those persons indicated in paragraph 1 above. The licensee acknowledged the inspectors findings. The licensee did not identify as proprietary any of the materials provided to, or reviewed by, the inspectors during this inspection.