

APPENDIX

U. S. NUCLEAR REGULATORY COMMISSION  
REGION IV

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE

NRC Inspection Report: 50-445/83-49  
50-446/83-23

Dockets: 50-445; 50-446

Licensee: Texas Utilities Electric Company (TUEC)  
Skyway Tower  
400 North Olive Street  
Lock Box 81  
Dallas, Texas 75201

Facility Name: Comanche Peak Steam Electric Station (CPSES), Units 1 and 2

Appraisal Period: October 1, 1982 to October 31, 1983

Licensee Meeting: May 25, 1984

SALP Board: J. E. Gagliardo, Director, Division of Resident,  
Reactor Project and Engineering Programs  
R. L. Bangart, Director, Division of Vendor & Technical Programs  
E. H. Johnson, Chief, Reactor Project Branch 1  
S. B. Burwell, Licensing Project Manager, NRR  
D. M. Hunnicutt, Chief, Reactor Project Section A  
D. L. Kelley, Senior Resident Inspector--Operations  
R. G. Taylor, Senior Resident Inspector--Construction

Reviewed: E.H. Johnson 5/7/84  
*For* D. M. Hunnicutt, Chief Date  
Reactor Project Section A

Approved: E.H. Johnson 5/7/84  
E. H. Johnson, Chief Date  
Reactor Project Branch 1  
(SALP Board Chairman)

## I. Introduction

The NRC established a Systematic Assessment of Licensee Performance (SALP) program initially in 1980 and has refined the program at intervals until the present time. The SALP program is an integrated NRC staff effort to collect available observations and data. Emphasis is placed upon NRC understanding the licensee's performance in the functional areas listed in the body of this report and discussing and sharing this understanding with the licensee. SALP is an integrated part of the regulatory process used to assure licensee's adherence to the NRC rules and regulations. SALP is oriented toward furthering NRC's understanding of the manner in which: (1) the licensee management directs, guides, and provides resources for assuring plant safety; and (2) such resources are used and applied. The integrated SALP assessment is intended to be sufficiently diagnostic to provide meaningful guidance to licensee management related to quality and safety of construction, preoperational testing, and power operation.

The NRC SALP Board, which is composed of NRC personnel who are knowledgeable of the licensee activities, met on January 4, 1984, to review the collection of data and observations to assess the licensee performance in the selected functional areas.

This SALP report is the SALP Board's assessment of the licensee's safety performance at the CPSES, Units 1 and 2, during the period October 1, 1982, to October 31, 1983.

The results of the SALP assessments in the selected functional areas will be discussed with licensee management personnel at a meeting to be held on May 25, 1984.

## II. Criteria

Licensee performance is assessed in selected functional areas appropriate to the plant status during the assessment period. Each functional area represents an area significant to nuclear safety and its related environment and is a programmatic area within the NRC inspection program.

Evaluation criteria as listed below was used, as appropriate, in each of the functional area assessments:

1. Management involvement in assuring quality
2. Approach to resolution of technical or quality issues
3. Responsiveness to NRC initiatives
4. Enforcement history
5. Analysis and reporting of reportable events
6. Staffing (including management)
7. Training effectiveness and qualification

In addition, SALP Board members considered other criteria, as appropriate. Based upon the SALP Board assessment, each functional area evaluated is classified in one of three categories. The definition of the performance categories are:

Category 1: Reduced NRC attention may be appropriate. Licensee management attention and involvement are aggressive and oriented toward nuclear safety; licensee resources are ample and effectively used such that a high level of performance with respect to operational safety or construction is being achieved.

Category 2: NRC attention should be maintained at normal levels. Licensee management attention and involvement are evident and are concerned with nuclear safety; licensee resources are adequate and are reasonably effective such that satisfactory performance with respect to operational safety or construction is achieved.

Category 3: Both NRC and licensee attention should be increased. Licensee management attention or involvement is acceptable and considers nuclear safety, but weaknesses are evident; licensee resources appear to be strained or not effectively used such that minimally satisfactory performance with respect to operational safety or construction is being achieved.

### III. Summary of Results

In summary, the licensee's performance, as determined during the SALP Board meeting, is shown in the table below, along with the performance category from the previous SALP evaluation period:

<u>Functional Area</u>	<u>Performance Category</u> <u>10/1/82 to 10/31/83</u>	<u>Performance Category</u> <u>10/1/81 to 9/30/82</u>
A. Preoperational Testing	2	3
B. Emergency Preparedness	2	N/E
C. Radiological Controls		
1. Radiation Protection	2	N/E
2. Confirmatory Measurements	1	N/E
3. Radwaste Systems, Effluent Treatment, Releases, and Monitoring	2	N/E
4. Transportation, solid radwaste	1	N/E
5. Environmental Surveillance	1	N/E
D. Security and Safeguards	2	N/E
E. Soils and Foundation	N/E	N/E
F. Containment and Other Safety-Related Structures	2	2

<u>Functional Area</u>	<u>Performance Category</u> <u>10/1/82 to 10/31/83</u>	<u>Performance Category</u> <u>10/1/81 to 9/30/82</u>
G. Piping Systems and Supports (includes welding, NDE, and preservice inspection)	2	2
H. Safety-Related Components (includes vessel, internals, pumps, valves, etc.)	2	1
I. Support Systems (includes HVAC, radwaste, fire protection, fuel storage, etc.)	3	N/E
J. Electrical Power Supply and Distribution	2	1
K. Instrumentation and Controls	1	1
L. Training	2	N/E
M. Design and Design Change Controls	2	N/E
N. Quality Assurance-Preoperational Testing	2	N/E
O. Quality Assurance-Construction	2	N/E
P. Vendor Procurement Controls and Involvement	2	N/E
Q. Management Controls and Involvement	2	N/E
R. Licensing Activities	2	1

Note: The notation N/E indicates that the functional area was not evaluated.

The total NRC inspection effort during this SALP evaluation period consisted of 78 inspections reported in 46 NRC inspection reports involving a total of 6,498 hours onsite by NRC inspectors and subcontractors.

#### IV. Performance Analysis

##### A. Preoperational Testing

###### 1. Analysis

Preoperational testing has been inspected on a continuing basis during this reporting period. The inspection effort has been in preoperational test procedure review, preoperational test witnessing, preoperational test results evaluation, initial startup test procedure review, and evaluation of licensee organizational changes (identified in the previous SALP report). In addition, inspections were performed in the areas of fuel receipt preparation and fuel receipt (fuel receipt is continuing at this time).

Preoperational testing is approximately 67% field complete, and the preoperational test procedures have essentially been written, reviewed, and approved. The licensee's writing and approval of initial startup procedures continues.

During this evaluation period, two violations of Severity Level V were identified. These violations were:

- Failure to review and approve changes to a procedure. (83-0801).
- Failure to follow procedure in transmitting documents to the permanent storage facility. (83-4001).

A significant reduction in testing activities occurred after hot functional testing (HFT). At this time, the testing activities have not reached their previous level. The reduction was the result of a large amount of rework initiated by the licensee after HFT. Testing activities were not expected to increase during January 1984.

At the end of the last appraisal period the licensee placed the construction and preoperational testing functions under the responsibility of the assistant project general manager. The objective of this change was to improve the coordination of construction and testing activities. This change has had a positive affect on preoperational testing.

The rework has caused the licensee to re-evaluate completed preoperational (PT) and acceptance (AT) tests. The licensee has concluded that because of the amount of rework that has been done, some test results are now in question. As a result, the licensee has decided to re-run the control and interlock sections of 50 tests (PTs & ATs). In addition, four preoperational tests will be entirely re-run.

## 2. Conclusions

Management involvement is evident in the preoperational test program. Conservative and generally sound approaches are used to resolve technical issues.

The licensee is considered to be in a performance Category 2 in this area.

## 3. Board Recommendations

### a. Recommended NRC Actions

The level of NRC inspection effort in this area should remain the same.

b. Recommended Licensee Actions

Assure that test results continue to receive detailed review and that any additional rework does not invalidate completed tests.

B. Emergency Preparedness

1. Analysis

During the last month of the evaluation period, an emergency preparedness implementation appraisal was conducted at the CPSES. The appraisal consisted of an in-depth evaluation of the licensee's capabilities and readiness to maintain an emergency planning and response program in accordance with 10 CFR Parts 50.47, 50.54, and 10 CFR Part 50, Appendix E. The major appraisal areas evaluated by eight NRC inspectors were administration, organization, training, emergency facilities and equipment, procedures, coordination with offsite groups, drills, exercises, and walk-throughs.

At the end of the appraisal, the NRC staff summarized 32 significant deficiencies which must be satisfactorily addressed by the applicant prior to a favorable recommendation for issuance of an operating license. Also summarized were 107 improvement items which should be considered by the licensee for incorporation into the emergency preparedness program.

The results of the appraisal indicated that the licensee was committed to developing and implementing an effective emergency preparedness program. This commitment was evidenced by the degree of management involvement in the program, the commitment of resources, the effective coordination established among all organizations involved in emergency preparedness, and the level of importance assigned by the utility to this functional area.

2. Conclusions

The licensee is considered to be in performance Category 1 in this functional area. The licensee has made significant progress in the emergency preparedness area. In most cases, the deficiencies identified during the appraisal were due to procedures, equipment or facilities being incomplete at the time

of the appraisal. The licensee had developed an adequate schedule for completing the items in a timely manner. A high level of management attention is evident in this area.

### 3. Board Recommendations

#### a. Recommended NRC Actions

The licensee's performance in this area has been excellent, as demonstrated during the emergency preparedness appraisal. This may result in reduced NRC inspection effort during the appraisal followup. However, performance during an emergency exercise and under the additional requirements of an operating license has not been evaluated. The board recommends that NRC attention in this area be maintained at normal levels to determine the effectiveness of the emergency program implementation in the near-term operating and operating license phases.

#### b. Recommended Licensee Actions

The licensee should continue the program for tracking and correcting the significant deficiencies in a time frame consistent with the projected schedule for issuance of an operating license. Management should maintain the high level of effectiveness that has been demonstrated up to this point throughout the preoperational program implementation phase and assure that the quality of the program continues into the phase of plant operations. Emergency response personnel, particularly plant and corporate management, should receive training on any procedures and equipment added in response to the appraisal findings, or which were incomplete at the time of the appraisal.

### C. Radiological Controls

Six inspections were conducted during the assessment period regarding radiological controls by region-based radiation specialist inspectors. These six inspections included the following areas: radiation protection, radwaste management, confirmatory measurements, transportation activities, and environmental surveillance. The following specific areas are included within the general functional area of radiological controls:

## 1. Radiation Protection

### a. Analysis

Two inspections of this area were conducted during the assessment period. No violations or deviations were identified. The first inspection concentrated on the status of licensee's radiation program needed for operations and identified open items related to organization, personnel qualifications, training, exposure control, respiratory protection, surveys, ALARA, notifications and reports, radiation controls, equipment and supplies, instrumentation, facilities, startup surveys, audits, and procedures. The second inspection revealed that the licensee had established a tracking system to resolve the open items. In addition, the licensee had completed actions to close about half of the original open items. The licensee had also made significant progress toward completion of the remaining open items. Except for the concerns regarding radiation worker training, the licensee's projected completion dates for outstanding open items indicated that most items should be completed prior to issuance of an operating license.

The inspections in this area identified two concerns which include: (1) the lack of commercial reactor power plant experience among the health physics technicians, and (2) the lack of a comprehensive radiation protection training program for radiation workers. The licensee responded to the concern regarding health physics technicians with a commitment to have an adequate number of experienced technicians onsite prior to fuel loading. The concerns regarding the lack of a comprehensive radiation worker training program involve: the training program did not include some of the requirements of 10 CFR 19.12 and the recommendations of Regulatory Guide 8.27 and NUREG 0041; excessive use of waivers for class room training; the lack of qualified radiation protection instructors; and the content of some examination questions.

### b. Conclusions

The licensee has demonstrated an aggressive attitude toward the resolution of NRC concerns. A generally sound and thorough approach to assuring compliance with NRC requirements is evidenced. Based on the licensee's responsiveness for



health physics program items, it appears the licensee will be able to resolve the remaining NRC concerns prior to issuance of an operating license.

The licensee is considered to be in a performance Category 2 in this area.

c. Board Recommendations

(1) Recommended NRC Actions

The NRC inspection effort should emphasize the licensee's progress regarding their commitment to supplement the existing health physics staff with technicians having commercial reactor experience and the training program for radiation workers.

(2) Recommended Licensee Actions

Licensee management should conduct a thorough review of the radiation worker training program to ensure that the program will provide adequate training for all radiation workers. A continued effort is needed to ensure all remaining open items are resolved prior to issuance of an operating license.

2. Confirmatory Measurements, Chemistry/Radiochemistry

a. Analysis

One inspection of this area was performed during the assessment period. No violations or deviations were identified. Several NRC concerns identified as open items were noted. These open items involved organization, personnel qualifications, training, program description, sampling, effluent controls, QA/QC program, facilities, instrumentation, and implementing procedures.

It appears that the licensee has assembled an adequate staff, purchased sufficient equipment and instrumentation, and is in the process of completing implementing chemistry/radiochemistry procedures. The chemistry/radiochemistry staff is undergoing systems and specialty training. Most of the laboratory and counting room equipment and instrumentation is installed and calibrated. However, not all the instrument quality control procedures have been completed and the quality control program is not yet fully implemented.

b. Conclusions

Licensee management has demonstrated an aggressive attitude toward resolving NRC concerns. The licensee has made excellent progress in the chemistry/radiochemistry area considering the status of the plant construction and projected fuel load date.

The licensee is considered to be in a performance Category 1 in this area.

c. Board Recommendations

(1) Recommended NRC Actions

The next NRC inspection of this area should include an onsite visit with the mobile laboratory to perform confirmatory measurements on prepared calibration counting standards.

(2) Recommended Licensee Actions

Management should continue their high level of involvement to ensure that open items are resolved prior to issuance of an operating license.

3. Radwaste Systems, Effluent Treatment, Releases, and Monitoring

a. Analysis

Two inspections of this area were performed during this assessment period. No violations or deviations were identified. Several NRC concerns were identified in the initial inspection involving organization, training, control of effluent releases, air cleaning systems, monitoring instrumentation, QA/QC programs, and implementing procedures. During the second inspection, the NRC inspector was able to close out one open item, and noted that progress had also been made toward closeout of several other open items. The licensee has established a tracking system and completion dates for all outstanding open items. It was noted that several open items are not scheduled for completion until immediately prior to the scheduled fuel load date. The licensee's projected completion dates are consistent with scheduled construction and preoperational activities.

b. Conclusion

Considerable work remains to be completed in this area. However, work for many of these items would not be expected to start until the completion of construction activities. The items of major concerns include: training related to radwaste activities for maintenance personnel; installation and calibration of effluent, process, and area radiation monitors; testing of air cleaning systems; QA/QC programs; and completion of calibration, maintenance and operating procedures. However, a high level of management attention in this area is evident and the licensee has demonstrated responsiveness to NRC initiatives and a generally sound and thorough approach to the resolution of open items.

The licensee is considered to be in a performance Category 2 in this area.

c. Board Recommendations

(1) Recommended NRC Actions

The NRC inspection effort should continue to track scheduled completion dates.

(2) Recommended Licensee Actions

The licensee should continue the generally high level of management attention that has been evident in this area to ensure that open items are completed in a timely manner.

4. Transportation/Solid Radwaste

a. Analysis

Transportation activities were inspected twice during the assessment period. No violations or deviations were noted. The first inspection identified NRC concerns regarding assigned program responsibilities, operating procedures, training, and audits. The second inspection indicated that the licensee had completed work to close out concerns related to assigned program responsibilities, operating procedures, and training. Work had not been completed concerning the development of an audit plan and an audit checklist for transportation activities.

The solid radwaste program was also inspected twice during the assessment period. No violations or deviations were noted. The initial inspection identified concerns related to the preoperational tests, capability to transfer spent resins, an ALARA review, and acceptance criteria for free liquids. The second inspection revealed that an ALARA review to determine agreement with ANSI/ANS-55.1-1979 had been completed. Work was continuing to close the remaining open items. The second inspection also included an open item in that piping had been installed to allow the use of a portable solidification system.

The licensee had developed a tracking system and projected completion dates for all open items.

b. Conclusions

Although considerable work remains to be completed in the solid radwaste area, the licensee has established a schedule, which will complete the remaining open items well in advance of the projected fuel load date. Most of the previously identified open items associated with transportation activities have been completed. A high level of management attention in this area is evident, and has resulted in technically sound and timely resolution of NRC open items.

The licensee is considered to be in a performance Category 1 in this area.

c. Board Recommendations

(1) Recommended NRC Actions

The NRC inspection effort should continue to track the licensee's progress on open items.

(2) Recommended Licensee Actions

Management attention should continue to ensure all open items are completed prior to issuance of an operating license. A review of existing procedures is necessary to ensure that transportation procedures are revised to contain the new requirements in 10 CFR 20.311 and 10 CFR 61.

## 5. Environmental Surveillance

### a. Analysis

The licensee's environmental surveillance program for the construction and preoperational phases was inspected during this assessment period. No violations or deviations were identified. Seven open items involving job descriptions, QA audits, training, and air sampling were identified. This inspection also determined that the licensee had completed the environmental surveillance requirements contained in the Final Environmental Statement and construction permit.

The licensee's proposed radiological environmental surveillance program for plant operations was also reviewed to determine agreement with the new Radiological Effluent Technical Specifications (NUREG 0472). The licensee's proposed program was in close agreement with NUREG-0472.

### b. Conclusions

The licensee has an excellent environmental surveillance program for construction and preoperational testing. Management attention is evident in this area.

The licensee is considered to be in a performance Category 1 in this area.

### c. Board Recommendations

#### (1) Recommended NRC Actions

This area should be inspected prior to fuel loading to verify that the environmental surveillance program contained in the Radiological Technical Specifications has been implemented.

#### (2) Recommended Licensee Actions

Management attention should be directed to ensuring that the radiological Technical Specifications are effectively implemented.

## D. Security and Safeguards

### 1. Analysis

The preoperational preparation of this facility to meet the requirements of 10 CFR 73 has been inspected by regional-based NRC physical security inspectors. No violations or deviations

were identified during this review period. There is an approved plan for the temporary storage of fuel until authorized loading occurs. The NRC office of Nuclear Material Safety and Safeguards has approved the site security plan.

Some concerns were identified to the licensee during this assessment period with regard to assessment and detection aids at the Comanche Peak site. The installed closed circuit television system, as reviewed, would not adequately view the protected area. The perimeter monitoring system was noted to be inadequate in some areas. The licensee promptly resolved the issues by upgrading the camera system and altering the perimeter monitors to remove the inadequacy.

The NRC inspectors also reviewed the licensee's approved "Guard Training and Qualification Plan," Appendix B to 10 CFR Part 73, and verified that full implementation is in process in accordance with 10 CFR 73.55(b)(4).

Concerns with regard to information noted in four security officer's background checks was also discussed, at length, with the licensee. These problems were later corrected.

## 2. Conclusions

The physical security program development has been effectively pursued and management involvement is evident. The licensee has shown initiative and has taken timely, and generally technically sound, steps to resolve these issues.

The licensee is considered to be in performance Category 2 in this area.

## 3. Board Recommendations

### a. Recommended NRC Actions

NRC inspection effort in this functional area should continue at the present level.

### b. Recommended Licensee Actions

Licensee management should continue aggressive oversight of the safeguards program.

E. Soils and Foundations

There were no NRC inspections performed of this functional area during the appraisal period since the activities were very limited. This area was not evaluated during this review.

F. Containment and Other Safety-Related Structures

1. Analysis

The principal activities in this functional area during the review period has consisted of performance of the Unit 1 containment building Structural Integrity Test and the Integrated Leak Rate Test along with the application of protective coatings to the interior of the building. The balance of the major activities ordinarily associated with this area such as the erection of structural and reinforcing steel; and the placement of concrete were essentially completed during earlier review periods. During the review period, there were three inspections performed by the NRC Region-based reactor inspectors and one by the Construction Appraisal Team. One of the region-based inspections was primarily directed toward the tests mentioned above, while the others were directed toward the protective coatings and followup on the Construction Appraisal Team inspection. No violations or deviations were identified in this functional area during these inspections.

In regard to the Structural Integrity Test and the Integrated Leak Rate Test, the testing procedures were well developed and well implemented. The licensee successfully marshalled the considerable equipment and measurement devices for the tests. The licensee also made adequate provisions to allow the required examinations of the exterior of the building during the tests such that inclement weather did not affect the health or safety of the people performing the examinations.

In the area of protective coatings, the licensee has been undertaking an extensive reinspection program of painted areas. This program was in response to previous findings that inspection records were inadequate or were missing. During this appraisal period an investigation into alleged intimidation of coatings QC inspectors was conducted. The results of this investigation and the subsequent decision by the NRC to propose a civil penalty for this item came after the end of the appraisal period. Although the coatings program constitutes a small percentage of the licensee's activities in this functional area, the deficiencies identified in this area have detracted from the otherwise high level of performance for this functional area.

## 2. Conclusion

Although management attention is evident in this area, problems have arisen within the area of protective coatings that have demonstrated that some weaknesses exist and further improvements in performance are possible.

The licensee is considered to be in performance Category 2 in this area.

## 3. Board Recommendations

### (1) Recommended NRC Actions

Although most activities in this functional area are complete, the NRC should concentrate on evaluating the adequacy of the licensee's coatings program and the inspection thereof.

### (2) Recommended Licensee Actions

A high level of management attention is needed to assure that weaknesses noted in the coatings program have been adequately resolved.

## G. Piping Systems and Supports (including welding, NDE and preservice inspection)

### 1. Analysis

Ten inspections were performed in this functional area during the period. These inspections included piping installation, support design and installation, welding, NDE, and preservice inspection. Approximately 45% of the total NRC inspection effort at the site has been directed at this area. Overall, inspection findings have not indicated any significant problems. Six violations were identified in this area as follows:

- Failure to Provide Adequate Maintenance of Materials and Equipment in Outdoor Storage Areas (Principally directed toward pipe support components) (Severity V - 8318; 8312)
- Failure to Follow Procedures for Documenting a Base Metal Repair (Severity V - 8315; 8309)
- Failure to Satisfy Density Requirement For Radiographs (Severity V - 8315; 8309)



- Failure to Provide an Adequate Inspection Program for Pipe Supports (Severity IV - 8323)
- Failure to Provide Adequate Instructions for Tightening Sway Strut Jam Nuts (Severity IV - 8323)
- Failure to Follow Procedures for Weld Fitup (Severity V - 8307)

In addition to the above findings by the NRC in this functional area, the licensee reported the following items under the requirements of 10 CFR 50.55(e):

- By letter dated April 21, 1983, the licensee reported finding that the quality of welds attaching brackets to valve operators was indeterminate and, therefore, the seismic event capability could not be assured. These were vendor supplied items.
- By letter dated August 9, 1983, the licensee reported finding that certain relief valves were specified with set points that disregarded piping system back-pressure at the discharge port of the valves. Valves involved were in the spent fuel cooling system and could have caused failure of both redundant systems.
- By letter dated June 21, 1983, the licensee reported finding that nonsafety piping included in the component cooling system could jeopardize the functioning of the system in a seismic event.

## 2. Conclusion

There has been substantial management interest and involvement in this highly important functional area throughout the entire reporting period. In regard to the programs for installation, welding, NDE, and preservice inspection of piping, the SALP Board believes that the licensee performance has been excellent. In regard to the pipe support subfunctional areas, the Board believes that the licensee has performed well, notwithstanding the apparent number of NRC findings relating to this activity. Overall, the Board judges that the licensee's performance has been in Category 2 in this functional area.

### 3. Board Recommendations

#### a. Recommended NRC Actions

Reduced NRC inspection effort might normally have been considered for this overall functional area since the construction effort is nearly complete. However, the NRC Region IV has made commitments during the licensing hearing process regarding turn-over inspections which will require a continued strong inspection effort in this area.

#### b. Recommended Licensee Actions

The licensee should continue high level management attention to the turnover inspection program.

### H. Safety-Related Components (includes vessel, internals, pumps, valves, etc.)

#### 1. Analysis

The majority of the licensee's activities in this functional area were completed well before this assessment period. The NRC did however conduct two inspections in this area, primarily directed to the securing of equipment to the structural mounts. One violation was identified that had generic implications in that it was found that the A/E failed to provide adequate information to installation personnel as to the bolting requirements for equipment mounting. In turn, installation personnel did not properly note the equipment vendor instructions for securing equipment to the mounts. (Severity Level V-8318). The licensee has addressed the generic implications of this violation through an inspection program to determine that all equipment is secured to mounts as required.

In addition, the licensee reported three deficiencies under the requirements of 10 CFR 50.55(e) as follows:

- By letter dated February 25, 1983, the licensee reported that he had been notified by Westinghouse that certain motor operated valves might give a full closed remote indication when the valves were not fully closed.
- By letter dated July 7, 1983, the licensee reported finding that the heat exchanger involved in the above violation was also "bolt bound" in that had the nuts been loose as required by the manufacturer, the exchanger still could not have expanded in the design direction due to interference by the bolt in the mounting hole.

-- By letters dated February 15 and September 7, 1983, the licensee reported various findings regarding parts within a group of check valves could become disengaged and therefore, not function as intended. Further, the licensee reported finding linear indications in a swing arm and base metal degradation under welds also in the interior of the valve that may have caused the valves to malfunction.

2. Conclusion

There are adequate controls for the installation of equipment. But for certain shortcomings the licensee's performance in this area would be excellent. The performance flaws include not fully defining how rotating equipment was to be finally secured to foundations to eliminate detrimental vibration, and some instances of incomplete review of the manufacturer's recommendations for mounting equipment. The licensee's performance is considered to be in Category 2 in this area.

3. Board Recommendations

a. Recommended NRC Actions

Since nearly all of the equipment assigned to this functional area has been installed in both units, the NRC inspection effort in this area should continue at its present level except for verification that proper mounting of equipment to the foundations has occurred. This particular effort should be emphasized in the inspection required to closeout the above violation.

b. Recommended Licensee Actions

Continue management attention to ensure that manufacturer's recommendations are properly incorporated into the plant design, construction and operating documents including maintenance procedures.

I. Support Systems (include HVAC, radwaste, fire protection, fuel storage, etc.)

1. Analysis

The NRC has conducted four inspections in this functional area during the review period. Two violations were identified dealing with HVAC supports and with the fuel storage/refueling pool. These were as follows:

- Failure to implement an effective QA program for the installation of the HVAC system in that supports had significant quantities of undersized welds; duct system joints had numbers of instances of loose and missing bolting; gaskets were missing or incomplete at duct joints. (Severity IV - 8318)
- Failure to implement a QA program in regard to the fabrication of support posts for underwater lights installed in the refueling pools and fuel storage pools. (Severity V - 8303)

In addition, the licensee reported two deficiencies in accordance with 10 CFR 50.55(e). These were as follows:

- By letter dated May 31, 1983, the licensee informed the NRC that it had been discovered that the anchoring of the new fuel storage racks had been improperly implemented. A new design was developed and installed and was examined by the SRIC prior to use of the storage racks.
- By letter dated September 26, 1983, the licensee reported that during startup testing it was found that temperatures in excess of established parameters were experienced in the reactor vessel annulus. The licensee reported that it is planned to increase the cooling capacity for the area and to remove air flow restrictions in the area.

In response to the first violation above, the licensee inspected HVAC support welds to determine the worst case condition. The HVAC designer has in turn determined that under worst case loading, the load on the worst case weld is still well within the allowable strength limits. As noted below, NRC review of this analysis is required. The assorted problems with the duct joints were attributed to lack of proper interface between the startup organization and the contractor for HVAC installation.

## 2. Conclusion

The licensee's performance in the functional area must be considered to be in Category 3 since their audit programs failed to identify the HVAC problem discussed above.

### 3. Board Recommendations

#### a. Recommended NRC Actions

Since the HVAC system installation in both Units 1 and 2 are essentially complete, the Board can make no recommendations on adjustments in the NRC inspection program. The design of HVAC support welds will need verification by the NRC. NRC inspection should include review of the completion of the HVAC during one or more final completion inspections.

#### b. Recommended Licensee Actions

Increased management attention is needed in licensee/contractor interfaces for construction activities that remain to ensure this type of problem does not recur.

### J. Electrical Power Supply and Distribution

#### 1. Analysis

Seven NRC inspections were made of this functional area during the assessment period. A portion of these inspections were directed to electrical cable installation and termination with the balance of the inspection effort directed toward mechanical systems supporting the cabling such as tray and conduit. No violations were noted in regard to the cable installation and terminations. Two violations were noted in regard to support systems as follows:

- Two cable tray supports were identified that were not in conformance to the design drawings. (Severity IV - 8323)
- Hilti bolt spacing requirements were violated on one conduit support. (Severity IV - 8323)

In addition, the licensee reported one deficiency in accordance with the requirements of 10 CFR 50.55(e) as follows:

- Clips attaching cable tray to cable tray supports that utilize high strength bolting by design were found in some instances to have normal strength bolts installed or where the high strength bolts had been installed, they had not been tightened in accordance with specifications.

The licensee elected early in the project to provide engineering correction of identified separation problems after the majority of the electrical work was completed. This method of providing

case basis resolution requires a detailed examination of the raceway installation late in the construction phase. Not all required examinations and corrective actions were completed by the end of the assessment period. QC verification is proceeding in parallel with the corrective efforts.

2. Conclusions

The licensee's controls in the functional area have generally been adequate. The ultimate effectiveness of these controls will be judged by NRC review following completion of the licensee's separation review program. The Board considers the licensee's performance in this functional area to be in Category 2 for this period.

3. Board Recommendations

a. Recommended NRC Actions

The NRC should perform a final selective examination of the raceway systems to provide necessary assurance that separation issues have been properly addressed.

b. Recommended Licensee Actions

The licensee should continue close management oversight of the inspection and resolution of electrical separation problems.

K. Instrumentation and Controls

1. Analysis

The NRC conducted two inspections in this functional area during the review period. One of these was devoted to the electrical cable installation and termination for instrumentation, while the other covered the entire area including the process connection, instrumentation devices and associated electrical cabling. This latter inspection also examined the activities related to instrumentation calibration. No violations were identified in this area. The licensee reported one item in accordance with 10 CFR 50.55(e) as follows:

- By letter dated November 30, 1983, the licensee reported finding that there was the potential for an undetectable failure in the solid state protection system that could have prevented actuation of protection systems in the event of accident.

## 2. Conclusion

Significant management attention is evidenced in this area. Resolutions to problems have been technically sound and thorough. The licensee controls and programs in this overall area have been found to be effective and properly implemented. The licensee's performance in this area is considered to be in Category 1.

## 3. Board Recommendations

### a. Recommended NRC Actions

The Board recommends that the NRC continue with present inspection program as it pertains to Unit 2 since much work has yet to be done. Unit 1 effort is essentially complete and therefore, requires little additional inspection effort.

### b. Recommended Licensee Actions

The licensee should continue the current high level of management attention in this area.

## L. Training

### 1. Analysis

There was one inspection of training conducted by region-based inspectors during this appraisal period. The inspection found that there were 26 people in the training department and that there were 9 additional positions not filled. Five of the unfilled positions were for simulator instructors, however the simulator had not yet been installed. Required training records were being maintained, however, it was noted that there was no automatic recall system in use for identifying individuals who missed training. Selected lesson plans were reviewed and found to be of good quality, although several in the operator training area were apparently written at a basic level and did not integrate current plant procedures or draft technical specifications. STA training was comprehensive and appeared to meet the recommendations of Appendix C to NUREG-0737. There were training laboratories in use for both electrical maintenance and instrument and control technicians. General employee training had been started at the time of the inspection. Most procedures for training were found to be in draft form at the time of the inspection.

## 2. Conclusion

The licensee training department is adequately staffed and training programs have been started in required areas, however, the system of documentation needs more development, particularly, to ensure that periodic refresher training requirements for individuals can easily be tracked.

The licensee is considered to be in performance Category 2 in this functional area.

## 3. Board Recommendations

### a. Recommended NRC Actions

The NRC should continue inspection of training activities at the present level.

### b. Recommended Licensee Actions

Licensee management should ensure measurement of training effectiveness in order to address weak areas identified. Additionally, records should be codified and lesson plans upgraded in the operations area.

An automatic recall system should be implemented to flag personnel who need refresher training or who missed required initial training.

## M. Design and Design Control

### 1. Analysis

Portions of two NRC inspections examined various aspects of the licensee's QA program for design and design change controls which also includes the distribution of documents and the withdrawal of obsolete documents from the users. The licensee has had a long established and complex system for accomplishing changes to issued engineering documents, such as drawings. This system involves the issuance of individually serialized change documents referred to as component modification cards (CMC). This has required maintaining a separate log for each base document that has been revised to assure that the user has all of the changes that have been made. Their accounting system has been difficult to maintain since the logs must be maintained manually. The licensee has recently taken significant steps to alleviate problems such as providing users outstanding changes thereto. Another improvement that has occurred is the incorporation of the CMCs into the parent drawing for final "as-built" condition.



The NRC inspections in this area revealed two deficiencies as follows:

- Failure to follow procedures for design review in that mathematical calculation packages contained errors that were not identified in the check review. (Severity V 8230)
- Failure to remove obsolete and illegible drawings from construction work areas. (Severity IV 8318)

## 2. Conclusion

While the licensee has made significant improvements in his design and design change control programs, these improvements only began to be effective in the latter portion of the review period. Taken as whole for the review period, the licensee performance is considered to be in Category 2.

## 3. Board Recommendations

### a. Recommended NRC Actions

The NRC should continue to evaluate this functional area through the "as-built" (room turnover) inspections to assure that the licensee meets his commitments.

### b. Recommended Licensee Actions

The licensee should assure that the design drawing package program continues to be practiced without compromise. The licensee should also continue his efforts to update the parent design drawings to reflect field changes CMCs.

## N. Quality Assurance - Preoperational Testing

### 1. Analysis

The licensee has established a separate quality assurance plan for the preoperational testing phase. The preoperational testing phase quality assurance requirements and controls are described in the CPSES Startup Quality Assurance Plan. There were no specific inspections of the licensee's startup quality assurance program during this reporting period. However, quality assurance aspects are considered during the inspection of the various preoperational testing activities.

There were no violations issued in this functional area during this reporting period. However, it is felt that had a final quality assurance review of records transfer been required, the violation associated with the startup records would not have occurred.

## 2. Conclusions

There is evidence of management attention in this area. Audits and reviews by the Quality Assurance department of preoperational test activities are adequate. It was concluded that satisfactory performance is being achieved in the preoperational quality assurance area.

The licensee is considered to be in performance Category 2 in this area.

## 3. Board Recommendations

### a. Recommended NRC Actions

NRC inspection will continue at the present level in the preoperational testing area. Specific attention will be given to final records retention and transfer since the function is expected to increase as testing nears completion.

### b. Recommended Licensee Actions

The overall implementation of the preoperational quality assurance effort is considered adequate and should be continued at the present level. However, a more vigorous involvement, in the form of an independent review, of the final preoperational test data packages to ensure that all required documents to support test acceptance are retained for permanent storage should be undertaken.

## 0. Quality Assurance - Construction

### 1. Analysis

The NRC did not conduct specific inspections dedicated to quality assurance. All of the NRC inspections, however, examining various facets of the licensee's QA program as it affects the above functional areas relating to construction. These inspections included examination of such items as the qualifications of the QC personnel, the control of nonconformances, the distribution of documents, etc. The NRC findings in each of the preceding functional areas also are indicative of the performance in this area. The licensee has had

approximately 450-500 personnel assigned to performing various activities in this functional area (examples: inspections, audits, quality document reviews, etc.). Approximately 90 percent of these personnel are employed at the construction site with the balance assigned to the licensee's corporate headquarters. These latter persons generally perform audits of vendor and site activities or perform inspections in vendor facilities supplying components to the site.

The licensee has developed procedures and instructions that cover QA activities. These procedures and instructions provide detailed information to the personnel on the product characteristics to be examined, the acceptance criteria for each characteristic and what to do in the case that a characteristic is found to be other than acceptable. Instructions are also provided on how to document findings.

The licensee has experienced various problems in the QA area where the personnel performing inspections did not interpret the instructions in the same light as the writers of the instructions intended. There have also been occasions when inspection personnel disagreed with the instructions provided them which has given rise to charges of improprieties on the part of the licensee.

## 2. Conclusion

Management attention has been evident in this area. Activities have generally been performed in accordance with established procedures and satisfactory performance has been achieved.

The licensee is considered to be in performance Category 2 in this area.

## 3. Board Recommendations

### a. Recommended NRC Actions

The NRC should continue to inspect in this area through the routine inspection program at the present level.

### b. Recommended Licensee Actions

The licensee should continue to further improve the procedures and instructions provided to the QA/QC personnel. The licensee should also attempt to stabilize the QA/QC work force such that the force becomes continuously more proficient with less need for training.

P. Vendor Procurement Controls

1. Analysis

The NRC conducted one inspection in this specific functional area and several other inspections that relate to this area. In addition, licensee identified deficiencies in vendor furnished equipment were considered.

The deficiencies identified during NRC inspections that relate to this area are:

- Improper documentation of the certification of vendor inspectors. (Severity V 8225)
- Vendor audit files failed to provide a complete record of the audit plans, checklists, and followup required by procedures. (Severity V 8225)
- Failure to satisfy density requirements for radiographs. (Severity V 8315; 8309)
- Failure to provide adequate instructions for tightening of jam nuts on sway struts. (Severity IV 8323)

In addition to the NRC findings, the licensee reported the following items bearing on this overall area in accordance with 10 CFR 50.55(e).

The licensee reported that the quality of welds attaching brackets to valve operators were indeterminate and therefore could fail during seismic event.

The licensee reported that a vendor reported that certain motor operated valves could indicate a fully closed position when the valves were not closed.

The licensee reported finding loose parts in check valves and that other parts in the valves could come loose during operation that could affect the safety functions of the valves.

2. Conclusions

The licensee's vendor procurement control program has been generally effective. Some weaknesses have been evident as noted in the analysis above. Several steps to improve the program have been recently taken, however, the effectiveness of these steps will be apparent only in the future. The licensee is considered to be in performance Category 2 in this area.

### 3. Board Recommendations

#### a. Recommended NRC Actions

The NRC should continue to monitor the licensee's activities in this area at a normal level. Consideration should be given to the fact that most of the efforts in this area will be directed toward replacement or spare parts for already purchased components.

#### b. Recommended Licensee Actions

The licensee should continue his efforts to train and upgrade the personnel in the vendor procurement control section of the QA department. The licensee should also devote effort to identify those quality elements of various products that are most likely to be over looked by the vendor.

### Q. Management Controls and Involvement

#### 1. Analysis

The licensee has placed TUEC employees in the key areas of site operations, including engineering, construction, and QA. As an example, the supervisors of each of the onsite discipline engineering groups are licensee employees who are also degreed engineers.

The licensee has also placed onsite a corporate officer to manage the site activities. This officer is the vice president and general manager for the project. This officer has an assistant who is also the project engineering and construction manager as well as the manager of startup testing activities. All of the persons in various supervisory positions report to the assistant project manager except for the site QA supervisor who reports to the QA manager in the corporate offices.

The project general manager and his assistant provide a weekly briefing to the corporate officers. These officers have been observed to frequently visit the site to view the status of construction and to assist in the resolution of major problems.

#### 2. Conclusion

The licensee's level of involvement and the degree of control over the site activities is considered to be in performance Category 2.

3. Board Recommendationsa. Recommended NRC Actions

NRC attention to this area will continue through the routine inspection program.

b. Recommended Licensee Actions

The licensee should continue to be fully involved and in full control over all site activities.

R. Licensing Activities

See Attachment 1.

V. Supporting Data and SummariesA. Report Data1. Violations

<u>Functional Areas</u>	<u>Violations Severity Levels</u>					<u>Deviations</u>
	I	II	III	IV	V	
a. Preoperational Testing						2
b. Emergency Preparedness						
c. Radiological Controls						
1. Radiation Protection						
2. Confirmatory Measures						
3. Radwaste						
4. Transportation						
5. Environmental Surveillance						
d. Security and Safeguards						
e. Soils and Foundation						
f. Containment and Safety-Related Structures						
g. Piping Systems and Supports (includes welding, NDE, and preservice inspection)				2		4
h. Safety-Related Components (includes vessels, internals, pumps, and valves)						1
i. Support Systems (includes HVAC, Radwaste, fire)						

<u>Functional Areas</u>	<u>Violations Severity Levels</u>					<u>Deviations</u>
	I	II	III	IV	V	
protection, and fuel storage)				1	1	
j. Electric Power Supply and Distribution				2		
k. Instrumentation and Controls						
l. Vendor Procurement					2	
m. Design Control				1	1	
n. Quality Assurance - Preoperational Testing						
o. Quality Assurance - Construction						
p. Vendor Procurement Controls						
q. Management Controls				1	3*	

\*Duplicate of violations noted in other functional areas which can also be considered indicative in this area.

2. Construction Deficiency Reports - Items reportable in accordance with 10 CFR 50.55(e)

The licensee formally reported ten separate items during the review period. These items have been discussed in the appropriate functional areas in Section IV.B.(4) of this report. A considerable number of additional items were initially reported as "potential" items which were for the most part deemed to be nonreportable by the licensee. These will be reviewed by NRC inspectors for appropriateness of the licensee's decision of nonreportability and whether the actions taken to correct each condition was appropriate for the situation.

3. 10 CFR Part 21 Reports

The licensee has not filed any reports under Part 21 but has responded to several such reports received from his vendors by conversion to either formal 10 CFR 50.55(e) reports or the "potentially" reportable items. Two of the ten formal reports are the result of Part 21 reports. (Reference: Section IV.B.(4)4.a and IV.B.(4)7.a, for examples)

B. Licensee Activities

1. Construction Progress

Construction of both units continued without interruption during the review period. The licensee calculates that Unit 1 was 97% complete with Unit 2 calculated to be 65% complete as of the end of October 1983. As previously noted, a major milestone was achieved during the period when the licensee conducted the Unit 1 containment structural integrity test and the integrated leak rate test.

## 2. Preoperational Progress

The startup testing is approximately 67% field complete, and the preoperational test procedures have essentially been written, reviewed, and approved. The writing and approval of initial startup procedures continues.

A significant reduction in testing activities occurred after hot functional testing (HFT). At this time, the testing activities have not reached their previous level. The reduction was the result of a large amount of rework initiated by the licensee after HFT. Testing activities are not expected to attain their previous level before the end of 1983.

## C. Inspection Activities

### 1. Construction Appraisal Team Inspection

During this appraisal period, an inspection by the Construction Appraisal Team (CAT) was performed at CPSES on January 24-February 4, 1983, and February 14-March 3, 1983, (NRC Inspection Reports 50-445/83-18 and 50-446/83-12). The areas inspected and results are listed below:

- a. Electrical and Instrumentation Construction  
Three potential enforcement findings
- b. Mechanical Construction  
Three potential enforcement findings
- c. Welding/Nondestructive Examination  
One potential enforcement findings
- d. Civil and Structural Construction  
One potential enforcement findings
- e. Procurement, Storage, and Material Traceability  
One potential enforcement finding
- f. Quality Control Inspector Effectiveness  
Two potential enforcement findings
- g. Quality Assurance  
Three potential enforcement findings
- h. Design Change Controls and Corrective Action System  
Two potential enforcement findings



Based on an initial review by the Region IV staff of the above potential enforcement findings, four were determined to be violations. These were transmitted to the licensee by letter dated May 31, 1983. Briefly they were:

- Failure to provide adequate procedures, instructions, or drawings for installation of major items of equipment. (Severity Level V, Supplement II.D).
- Failure to provide adequate maintenance of materials and equipment in outdoor warehouse areas. (Severity Level V, Supplement II.D.)
- Failure to remove obsolete drawings from construction work areas. (Severity Level IV, Supplement II.D.)
- Failure to provide adequate control of ventilation system fabrication. (Severity Level IV, Supplement II.D.)

Further review of the potential enforcement findings by the Region IV staff from June 27-September 16, 1983, (NRC Inspection Reports 50-445/83-28 and 50-446/83-14) resulted in no additional violations.

2. Application of the NRC Independent Measurements Program to Comanche Peak

During a portion of April and May of 1983, the NRC Independent Measurements Mobile Van was dispatched to Comanche Peak to conduct a route inspection assessment of the licensee's QA/QC program as it pertains to the nondestructive examination of welds and the adjacent base metals. The inspection involved 700 inspector-hours and included a review of the licensee's program and procedures, review of pertinent records, and re-examination of welds already accepted by the licensee as complying with requirements. Two violations were identified during the inspection, one of which involved inadequate documentation of a repair made to base metal adjacent to a weld. The other involved improper density relationships between the radiographic penetrometer and the weld zone. Both were considered to be Severity Level V Violations. In addition, the inspectors identified six items which were considered to be unresolved matters. Five of these items dealt with possible procedural or records deficiencies involving subcontractor activities that could not be adequately resolved during the inspection period. The remaining item involved the possibility that a vendor of valves employed at Comanche Peak and other nuclear power plants was employing inadequate radiographic procedures or techniques. All of these matters remain to be resolved.

D. Investigations and Allegations

1. One NRC investigation was completed during this assessment period. The subject of this investigation was intimidation of B&R quality control personnel. (NRC Inspection Report 50-445/83-50; 50-446/83-24)
2. The NRC review of allegations received during the assessment period have resulted in eight separate special inspection reports and have required the utilization of 305 inspector mandays of effort exclusive of that required for the generation of the reports. A substantial portion of the allegations resulted from either limited public appearance statements or formal appearances before the Atomic Safety and Licensing Board (ASLB) hearings on the request of an operating license for CPSES. The general topic of these special inspections are discussed below:
  - NRC Inspection Report 50-445/82-26; 50-446/82-14: This report dealt with 19 broad allegations made by Messrs. Walsh and Doyle before the ASLB. The allegations for the most part involved the design aspects of pipe support devices. No violations or deviations were identified during the course of the special inspection.
  - NRC Inspection Report 50-445/82-29; 50-446/82-15: This report dealt with allegations received regarding deficiencies in the electrical work at CPSES. No violations or deviations were identified in the course of the investigation.
  - NRC Inspection Report 50-445/83-03; 50-446/83-01: This inspection dealt with several unassociated allegations from two different allegers. During the course of the inspection, one violation was identified regarding the lack of fabrication controls relative to support posts for underwater lights.
  - NRC Inspection Report 50-445/83-07; 50-446/83-04: This report dealt with special inspection of improprieties in the welding of pipe supports; welding of pipe; and application of protective coatings. One violation was identified in regard to excessive fitup gap during the welding of a pipe support.
  - NRC Inspection Report 50-445/83-12; 50-446/83-07: This report dealt with the allegations made by a Mr. Yost relative to certain aspects of the design programs for pipe and pipe supports. The report was also a continuation of the special inspection of the NRC Inspection Report 50-445/82-26; 50-446/82-14 effort previously described. No violations or deviations were identified.

- NRC Inspection Report 50-445/83-19; 50-446/83-13: This report dealt, in part, with inspection of allegations made pertaining to protective coating applications. No violations or deviations were identified.
- NRC Inspection Report 50-445/83-24; 50-446/83-15: This report dealt, in part, with special inspection effort devoted to various allegations received before the ASLB and by letter from the intervenor to various NRC offices. Although four violations were identified in the report, none pertained to the inspection of the allegations.
- NRC Inspection Report 50-445/83-27: This report dealt with a special inspection of seven allegations received from R. L. Messerly and an additional allegation received from an unidentified source. During the course of the special inspection, no violations or deviations were identified.
- NRC Inspection Report 50-445/83-34; 50-446/83-18: This report dealt with allegations that the reactor vessel outer wall had been in contact with the containment vessel shield wall and that a secret meeting had taken place related to this matter. The special inspection revealed that the reactor vessel had not touched the containment shield wall but perhaps the reflective insulation had. It was also determined that no secret meeting on this subject had occurred. No violations or deviations were identified.

#### E. Escalated Enforcement Actions

##### 1. Civil Penalties

By letter dated August 29, 1983, the NRC notified the licensee of a Proposed Imposition of Civil Penalty pursuant to determination by the Secretary of Labor of a violation of Section 210 of the Energy Reorganization Act of 1974, as amended. Civil penalty was imposed by the NRC under the provisions of 10 CFR 50.7(c). This matter is presently being held in abeyance pending a ruling by the Federal District Court on the issue underlying.

Details of this proposed action are contained in EA 83-64.

##### 2. Orders

None

##### 3. Confirmation of Action Letters

None

#### F. Management Conferences

None

ENCLOSURE 1 - NRR SALP EVALUATION

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

Applicant: Texas Utilities Electric Company

NRR Project Manager: S. B. Burwell

I. Introduction

This report presents the results of the NRR Evaluation of the applicant's performance of licensing activities during the period October 1, 1982 through September 30, 1983. It is intended to provide input to the systematic assessment of licensee performance (SALP) review process as described in the NRC Manual Chapter NRC-0516.

The method of evaluation was: (1) select licensing activities which involved significant staff involvement; (2) obtain comments from staff members who had significant contact with the applicant or its work product for these activities; (3) characterize each licensing activity by a performance category for applicable performance attributes as defined in Manual Chapter NRC-0516; and (4) assign an overall performance rating based on the performance attributes, with appropriate consideration of the significance of individual activities.

II. Summary of Results

The performance of Texas Utilities in the functional area of licensing activities is rated Category 2. Management involvement and attention to details is aggressive and concerned with nuclear safety. Resources are adequate and effective in all licensing areas. Responses are generally technically sound, thorough and timely. However, in three instances, the applicant's course of action caused inefficient expenditures of staff resources.

III. Criteria

The evaluation criteria given in Table 1 of NRC Manual Chapter Appendix NRC-0516 were used for this evaluation. These criteria are given in the body of this report under Section II, Criteria.

For NRR licensing activities during this period two of the attributes were not applicable to the NRR review during the construction phase, and two of the attributes lacked sufficient activity to support an overall conclusion about the applicant's performance. These were enforcement

history, reporting and analysis of reportable events, and staffing and training respectively. Therefore, the composite rating is based on the following attributes:

- Management involvement in assuring quality
- Approach to resolving technical issues
- Responsiveness to NRC initiatives

#### IV. Performance Analysis

During the reporting period the applicant's licensing activities were primarily directed at responding to outstanding items identified in the SER and its supplements, obtaining NRC approval for modifications to the Westinghouse Model D-4/D-5 steam generators, the initiation of the Independent Assessment Program (IAP), and resolving the Technical Specifications for Comanche Peak Unit 1. Outstanding items receiving significant activity were environmental equipment qualification, seismic equipment qualification, emergency preparedness program, fire protection program, preservice inspection program, postaccident sampling plan, pipe break damage analysis, alternate shutdown system, heavy loads, human factors control room design, initial low-power testing, emergency operating procedures, quality assurance program and safeguards program.

The NRR staff's evaluation of Texas Utilities performance under each of the criteria follows:

##### A. Management Involvement in Assuring Quality

Applicant's management involvement and attention to details are aggressive and directed toward early resolution of the license open items. The applicant's assignment of resources are ample and used in such a manner that a high level of expertise is brought to bear on design and procedural issues needing resolution prior to licensing.

##### B. Approach to Resolution of Technical Issues from a Safety Standpoint

The applicant understands the technical issues and responses are generally sound and thorough. The applicant does not comply blindly, but studies each NRC question or position for impact on this plant.

##### C. Responsiveness to NRC Initiatives

In a majority of cases the applicant has provided timely and thorough responses to NRC positions and requests for information. The applicant has been cooperative and efficient in responding to follow-on questions

and requests for clarification. However, in three instances the applicant's course of action caused inefficient expenditures of staff resources.

- (1) After meetings in November and December, 1982, the NRC advised the applicant in March 1983 that it required an independent review of its design and construction. After an additional meeting, the applicant proposed a program with a very limited scope in June 1983, which was found unacceptable by the staff. In September 1983, the applicant submitted a proposed program which the staff approved.
- (2) At the start of the evaluation period, the applicant maintained that the fuel load date for Unit 1 was June 1983. In March 1983, Texas Utilities advised that the fuel load date was September 1983. On July 8, 1983, Texas Utilities advised that the new fuel load date was December 1983. On December 16, 1983, Texas Utilities changed the fuel load date for Unit 1 to "midyear 1984".
- (3) In June 1983 the applicant submitted a description of the modifications to the steam generator and feedwater systems proposed to permit unrestricted use of the Model D-4 (Unit 1) and D-5 (Unit 2) steam generators. The applicant requested a special expedited evaluation on the Comanche Peak docket. The other owners of Westinghouse nuclear steam supply systems utilizing the Model D-4, D-5, and E steam generators formed a group named the Counterflow Steam Generator Owners Review Group (CSGORG). That group submitted a report evaluating the proposed modifications which permitted the NRC staff to issue a generic SER related to the proposed modifications. The generic SER resulted in reductions in the NRC resources required to review the modifications proposed by each of the members of the CSGORG.

Although the above three instances do not relate to the quality of design or construction at Comanche Peak, these actions do impact the scheduling of staff resources and cause inefficient expenditures of staff resources.

#### D. Enforcement History

This attribute is not applicable to the NRR review during the construction phase.

E. Reporting and Analysis of Reportable Events

This attribute is not applicable to the NRR review during the construction phase.

F. Staffing (Including Management)

This attribute was not rated because it lacked sufficient activity to support an overall conclusion about the applicant's performance.

G. Training and Qualifications

This attribute was not rated because it lacked sufficient activity to support an overall conclusion about the applicant's performance.

V. Conclusion

Based on the evaluation of three attributes for Texas Utilities' performance on significant activities in the functional area of licensing, an overall rating of Category 2 is determined. Although this rating of Category 2 is less than that given for the prior SALP report, it does not appear to represent a significant decline in the applicant's capability or performance. It does reflect that licensing activities during the present SALP cycle were directed at more difficult open items. In addition, the level of interaction between the applicant and staff was significantly reduced in many areas such that Texas Utilities was not given opportunities to demonstrate all of their capabilities. For those activities evaluated, the applicant demonstrated that its resources are adequate in all licensing areas, and that management involvement and attention to details are concerned with nuclear safety. The applicant's course of action in three instances caused inefficiencies in the application of staff resources.

VI. Board Recommendations

The applicant should ensure that the information needed to resolve open and confirmatory items discussed in the SER is provided on a schedule conforming to its projected fuel load date. This will enable the staff to efficiently allocate its resources so that the review of the license application can be completed on a schedule that is consistent with the projected fuel load date. In addition, should unforeseen events mandate changes in the projected fuel load date, announcement of that change in a timely manner will improve the efficiency of the licensing review process.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

FEB 06 1984

Docket Nos.: 50-445  
and 50-446

MEMORANDUM FOR: Darrell G. Eisenhut, Director  
Division of Licensing

THRU: Thomas M. Novak, Assistant Director  
for Licensing  
Division of Licensing

B. J. Youngblood, Chief  
Licensing Branch No. 1  
Division of Licensing

FROM: S. B. Burwell, Project Manager  
Licensing Branch No. 1  
Division of Licensing

SUBJECT: SALP - COMANCHE PEAK

The Enclosure is the NRR SALP report for the Texas Utilities Electric Company. This report is based primarily upon a survey of selected reviewers who have had a significant contact or involvement with the applicant over the evaluation period. We also solicited comments from involved division directors, and from the SALP Board during a meeting on January 4, 1984, on an earlier draft of this report. We have incorporated comments from your office and from the SALP Board. The SALP Board expressed a preference for a single evaluation (rather than the SALP report input and a supporting evaluation prepared earlier) and we have modified the NRR SALP report input accordingly. The SALP Board intends to make the NRR input an Appendix similar to the SALP report on Louisiana Power & Light Company (Waterford) dated October 11, 1983.

*S. B. Burwell*

S. B. Burwell, Project Manager  
Licensing Branch No. 1  
Division of Licensing

Enclosure: As stated

cc: J. Collins, Region IV  
P. Check, Region IV  
E. Johnson, Region IV  
R. Mattson, DSI  
R. Vollmer, DE  
E. Jordan, DEPER  
J. Partlow, DOASIP



APR 27 1984

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

Applicant: Texas Utilities Electric Company

NRR Project Manager: S. B. Burwell *SBB*

### I. Introduction

This report presents the results of the NRR Evaluation of the applicant's performance of licensing activities during the period October 1, 1982 through October 31, 1983. It is intended to provide input to the systematic assessment of licensee performance (SALP) review process as described in the NRC Manual Chapter NRC-0516.

The method of evaluation was: (1) select licensing activities which involved significant staff involvement; (2) obtain comments from staff members who had significant contact with the applicant or its work product for these activities; (3) characterize each licensing activity by a performance category for applicable performance attributes as defined in Manual Chapter NRC-0516; and (4) assign an overall performance rating based on the performance attributes, with appropriate consideration of the significance of individual activities.

### II. Summary of Results

The performance of Texas Utilities in the functional area of licensing activities is rated Category 2. Management involvement and attention to details is aggressive and concerned with nuclear safety. Resources are adequate and effective in all licensing areas. Responses are generally technically sound, thorough and timely.

### III. Criteria

For NRR licensing activities during this period two of the evaluation criteria were not applicable to the NRR review during the construction phase, and two of the evaluation criteria lacked sufficient activity to support an overall conclusion about the applicant's performance. These were enforcement history, reporting and analysis of reportable events, and staffing and training respectively. Therefore, the composite rating is based on the following evaluation criteria:

- Management involvement in assuring quality
- Approach to resolving technical issues
- Responsiveness to NRC initiatives

APR 27 1984

#### IV. Performance Analysis

During the reporting period the applicant's licensing activities were primarily directed at responding to outstanding items identified in the SER and its supplements, obtaining NRC approval for modifications to the Westinghouse Model D-4/D-5 steam generators, the initiation of the Independent Assessment Program (IAP), and resolving the Technical Specifications for Comanche Peak Unit 1. Outstanding items receiving significant activity were environmental equipment qualification, seismic equipment qualification, emergency preparedness program, fire protection program, preservice inspection program, postaccident sampling plan, pipe break damage analysis, alternate shutdown system, heavy loads, human factors control room design, initial low-power testing, emergency operating procedures, quality assurance program and safeguards program.

The NRR staff's evaluation of Texas Utilities performance under each of the criteria follows:

##### A. Management Involvement in Assuring Quality

Applicant's management involvement and attention to details are aggressive and directed toward early resolution of the license open items. The applicant's assignment of resources are ample and used in such a manner that a high level of attention is brought to bear on design and procedural issues needing expedited resolution. Reviews are generally timely, thorough and technically sound.

At the start of the evaluation period, the applicant maintained that the fuel load date for Unit 1 was June 1983. In March 1983, Texas Utilities advised that the fuel load date was September 1983. On July 8, 1983, Texas Utilities advised that the new fuel load date was December 1983. On December 16, 1983, Texas Utilities changed the fuel load date for Unit 1 to "midyear 1984".

##### B. Approach to Resolution of Technical Issues from a Safety Standpoint

The applicant understands the technical issues and responses are generally sound and thorough. The applicant does not comply blindly, but studies each NRC question or position for impact on this plant. Conservatism is generally exhibited and approaches are viable and generally sound and thorough.

##### C. Responsiveness to NRC Initiatives

In a majority of cases the applicant has provided timely responses to NRC positions and requests for information. Responses to technical issues are sometimes incomplete in necessary detail. The applicant has been cooperative and efficient in responding to follow-on questions and requests for clarification.

The staff met with the applicant in November and December 1982, to determine if an independent design/construction program should be implemented at Comanche Peak. As a result of the Construction Assessment Team (CAT)

APR 27 1984

findings and a large number of questions concerning design control and other allegations on the plant, the applicant was advised in March 1983, that an independent review of its design and construction program was needed. After an additional meeting, the applicant proposed a program with a very limited scope in June 1983, which was found unacceptable by the staff. In September 1983, the applicant submitted a proposed program which the staff approved.

D. Enforcement History

This attribute is not applicable to the NRR review during the construction phase.

E. Reporting and Analysis of Reportable Events

This attribute is not applicable to the NRR review during the construction phase.

F. Staffing (Including Management)

This attribute was not rated because it lacked sufficient activity to support an overall conclusion about the applicant's performance.

G. Training and Qualifications

This attribute was not rated because it lacked sufficient activity to support an overall conclusion about the applicant's performance.

V. Conclusion

Based on the evaluation of Texas Utilities' performance on significant activities in the functional area of licensing, an overall rating of Category 2 is determined. Although this rating of Category 2 is less than that given for the prior SALP report, it does not appear to represent a significant decline in the applicant's capability or performance; however, the applicant was reluctant to propose an adequate design/construction verification program. It does reflect that licensing activities during the present SALP cycle were directed at more difficult open items, and items which require interaction with ongoing construction and startup testing activities. For those activities evaluated, the applicant demonstrated that its resources are adequate in the licensing areas, and that management involvement and attention to details are concerned with nuclear safety.

VI. Board Recommendations

The applicant should ensure that the information needed to resolve open and confirmatory items discussed in the SER is provided on a schedule conforming to an accurately projected fuel load date. This will enable the staff to efficiently allocate its resources so that the review of the license application can be completed on a schedule that is consistent with the projected fuel load date.

## R. Licensing Activities

### 1. Analysis

During the reporting period the applicant's licensing activities were primarily directed at responding to outstanding items identified in the SER and its supplements, obtaining NRC approval for modifications to the Westinghouse Model D-4/D-5 steam generators, and resolving the Technical Specifications for Comanche Peak Unit 1. Outstanding items receiving significant activity were environmental equipment qualification, seismic equipment qualification, emergency preparedness program, fire protection program, preservice inspection program, postaccident sampling plan, pipe break damage analysis, alternate shutdown system, heavy loads, human factors control room design, initial low-power testing, emergency operating procedures, quality assurance program and safeguards program.

Applicant's management involvement and attention to details are aggressive and directed toward early resolution of the license open items. The applicant's assignment of resources are ample and used in such a manner that a high level of attention is brought to bear on design and procedural issues needing expedited resolution. Reviews are generally timely, thorough and technically sound.

At the start of the evaluation period, the applicant maintained that the fuel load date for Unit 1 was June 1983. In March 1983, Texas Utilities advised that the fuel load date was September 1983. On July 8, 1983, Texas Utilities advised that the new fuel load date was December 1983. On December 16, 1983, Texas Utilities changed the fuel load date to Unit 1 to "midyear 1984".

The applicant understands the technical issues and responses are generally sound and thorough. The applicant does not comply blindly, but studies each NRC question or position for impact on this plant. Conservatism is generally exhibited and approaches are viable and generally sound and thorough.

In a majority of cases the applicant has provided timely responses to NRC positions and requests for information. Responses to technical issues are sometimes incomplete in technical detail. The applicant has been cooperative and efficient in responding to follow-up questions and requests for clarification.

The staff met with the applicant in November and December 1982, to determine if an independent design/construction program should be implemented at Comanche Peak. As a result of the Construction Assessment Team (CAT) findings and a large number of questions concerning design control and other allegations on the plant, the applicant was advised in March 1983, that an independent review of its design and construction program was needed. After an additional meeting, the applicant proposed a program with a very limited scope in June 1983, which was found unacceptable by the staff. In September 1983, the applicant submitted a proposed program which the staff approved.

APR 27 1964

2. Conclusion

Based on the evaluation of Texas Utilities' performance on significant activities in the functional area of licensing, an overall rating of Category 2 is determined. Although this rating of Category 2 is less than that given for the prior SALP report, it does not appear to represent a significant decline in the applicant's capability or performance; however, the applicant was reluctant to propose an adequate design/construction verification program. It does reflect that licensing activities during the present SALP cycle were directed at more difficult open items, and items which require interaction with ongoing construction and startup testing activities. For those activities evaluated, the applicant demonstrated that its resources are adequate in the licensing areas, and that management involvement and attention to details are concerned with nuclear safety.

3. Board Recommendations

The applicant should ensure that the information needed to resolve open and confirmatory items discussed in the SER is provided on a schedule conforming to an accurately projected fuel load date. This will enable the staff to efficiently allocate its resources so that the review of the license application can be completed on a schedule that is consistent with the projected fuel load date.