UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-4005

July 29, 2002

C. L. Terry, Senior Vice President
and Principal Nuclear Officer
TXU Energy
ATTN: Regulatory Affairs
Comanche Peak Steam Electric Station
P.O. Box 1002
Glen Rose, Texas 76043

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION - NRC INSPECTION REPORT 50-445/02-02; 50-446/02-02

Dear Mr. Terry:

On July 6, 2002, the NRC completed an inspection at your Comanche Peak Steam Electric Station, Units 1 and 2, facility. The enclosed report documents the inspection findings which were discussed on July 11, 2002, with Mr. D. Moore and members of your staff.

This inspection examined activities conducted under your licenses as they related to safety and compliance with the Commission's rules and regulations and with the conditions of your licenses. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the inspectors identified three issues of very low safety significance (Green). These issues were determined to involve violations of NRC requirements. Because of their very low safety significance and because they have been entered into your corrective action program, the NRC is treating these violations as noncited violations, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny these noncited violations, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region IV; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Comanche Peak Steam Electric Station.

The NRC has increased security requirements at Comanche Peak Steam Electric Station in response to terrorist acts on September 11, 2001. Although the NRC is not aware of any specific threat against nuclear facilities, the NRC issued an Order and several threat advisories to commercial power reactors to strengthen licensees' capabilities and readiness to respond to a potential attack. The NRC continues to monitor overall security controls and will issue temporary instructions in the near future to verify by inspection the licensee's compliance with the Order and current security regulations.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,

/RA/

William D. Johnson, Chief
Project Branch A
Division of Reactor Projects

Dockets: 50-445
50-446
Licenses: NPF-87
NPF-89

Enclosure:
NRC Inspection Report
50-445/02-02; 50-446/02-02

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ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Dockets:	50-445; 50-446
Licenses:	NPF-87; NPF-89
Report:	50-445;446/02-02
Licensee:	TXU Generation Company LP
Facility:	Comanche Peak Steam Electric Station, Units 1 and 2
Location:	FM-56, Glen Rose, Texas
Dates:	April 7 through July 6, 2002
Inspectors:	D. B. Allen, Senior Resident Inspector C. A. Clark, Reactor Inspector G. L. Guerra, Resident Inspector, South Texas Project J. M. Keeton, Project Engineer, Project Branch A W. M. McNeill, Reactor Inspector W. C. Sifre, Reactor Inspector A. A. Sanchez, Resident Inspector M. P. Shannon, Senior Health Physicist
Accompanying Personnel:	J. M. Mateychick, Reactor Inspector G. Miller, Reactor Inspector
Approved by:	W. D. Johnson, Chief, Project Branch A Division of Reactor Projects
Attachment:	Supplemental Information

SUMMARY OF FINDINGS

Comanche Peak Steam Electric Station, Units 1 and 2
NRC Inspection Report 50-445/02-02; 50-446/02-02

IR 05000445-02-02; IR 05000446-02-02;TXU Energy; on 04/07/2002-07/06/2002; Comanche Peak Steam Electric Station; Units 1 & 2. Integrated Resident & Regional Report: Access Control to Radiologically Significant Areas.

The inspection was conducted by resident inspectors, a senior health physicist, regional reactor inspectors, and a regional project engineer. The inspection identified three Green noncited violations. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using IMC 0609, "Significance Determination Process." Findings for which the Significance Determination Process does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector Identified Findings

Cornerstone: Occupational Radiation Safety

- Green. The NRC inspectors determined that the Comanche Peak Steam Electric Station personnel failed to monitor and assign the deep-dose equivalent to the part of the whole body exposed to the highest radiation field during reactor head disassembly work on April 2, 2002. The failure to account for the highest whole body exposure is a violation of 10 CFR 20.1201(c). This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the Comanche Peak Steam Electric Station's corrective action program as Smart Form SMF-2002-1332.

  The safety significance of this finding was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no overexposure or substantial potential for an overexposure and the ability to assess dose was not compromised. The issue was more than minor because a failure to assign exposure to the part of the whole body receiving the highest exposure has a credible impact on safety and the occurrence had the potential to involve a worker's unplanned dose if radiation levels had been significantly greater (Section 2OS1).

- Green. Between April 8-11, 2002, the NRC inspectors identified approximately 10 workers assigned to different areas of the radiologically controlled area who were not informed of the radiological conditions in their work area. The failure to inform workers of the radiological conditions in their work area is a violation of 10 CFR 19.12(a). This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the Comanche Peak Steam Electric Station's corrective action program as Smart Form SMF-2002-1272.

  The safety significance of this finding was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no overexposure or substantial potential for an overexposure and the ability to assess dose was not compromised. The issue was more than minor because the failure to inform a worker of the radiological conditions in an assigned work area has a credible impact on safety and the occurrence had the potential to involve a worker's unplanned dose if radiological conditions had been significantly greater (Section 2OS1).

- Green. On April 10, 2002, the NRC inspectors observed that a radiation protection technician did not stop work when radiological airborne conditions exceeded 1.0 Derived Air Concentration. Radiation Work Permit 2002-2223, Task 2, Revision 1, used to perform this task stated, in part, "if airborne activity levels exceed 1.0 DAC stop work." The failure to follow radiation work permit requirements is a violation of Technical Specification 5.4.1.a. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the Comanche Peak Steam Electric Station's corrective action program as Smart Form SMF-2002-1330.

  The safety significance of this finding was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no overexposure or substantial potential for an overexposure and the ability to assess the dose was not compromised. The issue was more than minor because a failure to follow radiation work permit radiological requirements has a credible impact on safety and the occurrence had the potential to involve a worker's unplanned dose if radiological conditions had been significantly greater (Section 2OS1).

B. Licensee identified violations

Violations of very low safety significance, which were identified by Comanche Peak Steam Electric Station personnel, have been reviewed by the inspectors. Corrective actions taken or planned by Comanche Peak Steam Electric Station personnel have been entered into their corrective action program. These violations and corrective action tracking numbers are listed in Section 4OA7 of this report.

Report Details

Summary of Plant Status

Unit 1 operated at essentially 100 percent power for the duration of the inspection report period.

Unit 2 began the report period in Mode 6, preparing to offload the nuclear fuel. The sixth Unit 2 refueling outage (2RF06) ended on May 5 at 1:59 p.m. when the generator output breakers were closed. The unit achieved approximately 100 percent power on May 9. On May 11, power was reduced to approximately 60 percent due to smoke observed coming from main feedwater Pump 2A. The smoke was due to residual lubricating oil on the turbine insulation, and power was returned to approximately 100 percent on May 14. On June 6, the unit tripped at 7:24 p.m. when a card failure in the generator electronic protection system caused a main generator trip. The card was replaced and the unit returned to approximately 100 percent power on June 8. On June 21, a maintenance tagout isolated a level switch on feedwater Heater 2-5B, resulting in an indicated high level in the feedwater heater and a subsequent secondary plant transient. Reactor power was reduced to approximately 88 percent. After restoring the feedwater heaters, power was returned to approximately 100 percent in the same shift. The unit operated at essentially 100 percent power for the remainder of the report period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

The inspectors reviewed Station Administrative Procedure STA-634, “Extreme Temperature Equipment Protection,” Revision 3, and Abnormal Operating Procedure ABN-907, “Acts on Nature,” Revision 9. The inspectors evaluated whether they adequately addressed actions that should be taken to protect safety-related equipment during extreme summer temperatures and severe weather, such as thunderstorms, high winds, and tornados. The inspectors interviewed the Extreme Temperature Protection Coordinator about the implementation of the program. On June 28, 2002, the inspectors conducted a walkdown of the protected area to assess the threat to risk significant systems from wind-generated missile hazards, due to material stored in the open.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors conducted partial walkdowns of the following three risk-significant systems to verify that they were in their proper standby alignment as defined by system operating procedures and system drawings. During the walkdowns, inspectors examined component materiel condition. In addition, the inspectors evaluated the effectiveness of the Comanche Peak Steam Electric Station (CPSES) problem identification and resolution program in resolving issues which could increase event initiation frequency or impact mitigating system availability.

- Unit 2 Train B emergency diesel generator during the Train A outage maintenance work on April 19, 2002
- Unit 1 Train A emergency diesel generator while Train B emergency diesel generator was out of service for jacket water cooler cleaning and inspection on May 15, 2002
- Unit 2 Train A containment spray system on June 17, 2002, while Train B containment spray Pump 2-04 was out of service to repair the pump packing leak

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

a. Inspection Scope

The inspectors assessed the CPSES control of transient combustible materials, the materiel condition and lineup of fire detection and suppression systems, and the materiel condition of manual fire equipment and passive fire barriers during tours of the following seven risk-significant areas. The CPSES fire preplans and Fire Hazards Analysis Report were used to identify important plant equipment, fire loading, detection and suppression equipment locations, and planned actions to respond to a fire in each of the plant areas selected. Compensatory measures for degraded equipment were evaluated for effectiveness.

- Fire Area AA21F - Auxiliary building 852-foot elevation on April 8, 2002
- Fire Zone 1SB15 - Unit 1 containment access corridor on April 22, 2002
- Fire Area 2SE18 - Unit 2 safeguards building 852-foot elevation Switchgear B on April 29, 2002
- Fire Area 2CA - Unit 2 containment building, all elevations, during Refueling Outage 2RF06
- Fire Area 2SE16 - Unit 2 safeguards building 832-foot elevation electrical equipment room on June 17, 2002
- Fire Zone 1SD9 - Unit 1 safeguards building 810-foot elevation Switchgear A on June 24, 2002

- Fire Area 1SE18 - Unit 1 safeguards building 852-foot elevation Switchgear B on July 3, 2002

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

The inspectors conducted an inspection of flood protection measures at CPSES. This included a review of flood analysis documentation and calculations to determine areas in the plant susceptible to flooding from internal sources. Based on that review and a review of the CPSES probabilistic risk assessment summary document, a walkdown was performed on June 24, 2002, which included the Units 1 and 2 safeguards building Rooms 78, 79, and 82 on the 810-foot elevation (flood zones 1SB8 and 2SB8) to assess the adequacy of flood protection measures regarding a postulated flood. The walkdown included determining whether mitigating systems defined in the flood analysis were in place and functional.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

The inspectors observed the inspection and cleaning of two risk-significant heat exchangers cooled by the station service water system, the Unit 1 Diesel Generator 1-01 jacket water cooler on May 29, 2002, and the Unit 2 component cooling water Heat Exchanger 2-01 on June 25, 2002. The inspectors reviewed the service water system fouling monitoring program test data and results for the jacket water coolers for both trains of diesel generators on both units from December 2000 to May 2002. The test results were reviewed for inclusion of instrument uncertainties and comparison to appropriate criteria used to determine when these heat exchangers should be cleaned. The frequency of testing was compared to the program requirements.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection Activities - Unit 2 (71111.08)

.1 Performance of Nondestructive Examination (NDE) Activities

a. Inspection Scope

The inspectors observed both the CPSES NDE personnel and contractor personnel (Wesdyne) perform the ASME Code Section XI specified examinations listed below:

System	Component/Weld Identification	Examination Method
Auxiliary Feedwater	TCX-2-2403-22 - 25 4 Pipe to Elbow welds	Ultrasonic Examination
Safety Injection	TCX-2-2535-H1 and H2 7 attachment welds	Penetrant Examination
Reactor Coolant	TCX-1-1100-1 Reactor Vessel Lower Shell Longitudinal Weld	Remote Ultrasonic Examination

During the performance of each examination, the inspectors verified that the correct NDE procedure was used, procedural requirements or conditions were as specified in the procedure, and test instrumentation or equipment was properly calibrated and within the allowable calibration period. The inspectors also verified that indications revealed by the examinations were compared against the reports of previous examinations and the ASME code-specified acceptance standards and appropriately dispositioned.

b. Findings

No findings of significance were identified.

.2 ASME Code Section XI Repair and Replacement Activities

a. Inspection Scope

CPSES personnel reported that there have been 19 repair and replacement activities since the last refueling outage. The inspectors reviewed a sample of the 4 files listed in the attachment of the code repair and replacement activities and verified that the activities were in compliance with ASME Code.

b. Findings

No findings of significance were identified.

.3 Steam Generator Tube Integrity

a. Inspection Scope

The inspectors reviewed NDE of steam generator tubes in Unit 2 Steam Generators 2 and 3. The inspector reviewed the training and qualification/certifications records for contractor Level II and III nondestructive examiners. The inspectors also reviewed the steam generator tube selection and examination results.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalifications (71111.11)

a. Inspection Scope

The inspectors observed two training sessions in the control room simulator and attended the posttraining critiques. The scenario on June 6, 2002, included a reactor coolant leak which progressed to a large break and subsequently to the transition to hot leg recirculation. The scenario on June 16, 2002, included loss of a safety-related electrical bus, losses of various support systems, and ultimately a large break loss-of-coolant-accident, with failure of both low pressure emergency core cooling system pumps. Simulator observations included formality and clarity of communications, group dynamics, the conduct of operations, procedure usage, command and control, and activities associated with the emergency plan.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

.1 Maintenance Effectiveness

a. Inspection Scope

The inspectors independently verified that CPSES personnel properly implemented 10 CFR 50.65, “Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,” for six equipment performance problems, including:

- Smart Form SMF-2002-1105, Refueling water storage tank to centrifugal charging pump supply Valve 2-LCV-112D did not fully open while filling the volume control tank from the refueling water storage tank on April 3, 2002

- Smart Form SMF-2002-1212, During performance of OPT-221B, preferred supply Breaker 2EA2-1 to the Unit 2 Train B safety-related 6.9 kV bus failed to close on April 7, 2002

- Smart Form SMF-2002-1666, Emergency Diesel Generator 2-01 jacket cooling water leak on April 29, 2002

- Smart Forms SMF-2002-1358, 1414, 1423, 1464, 1493, 1613, Failures of several relief valves in different systems to lift at the appropriate setpoints on April 16 thru May 2, 2002

- Smart Form SMF-2002-1875, Safety injection Pump 2-01 lube oil cooler station service water outlet relief Valve 2SW-0435 failed to lift during as-found set pressure testing on May 9

- Unit 1 and 2 Auxiliary Feedwater Systems Unavailability Reports and Functional Failure Reliability Reports for the last 24 months were reviewed on May 15-21, 2002

The inspectors reviewed whether the structures, systems, or components (SSCs) were properly characterized in the scope of the Maintenance Rule Program and whether the SSC failure or performance problem was properly characterized. The inspectors assessed the appropriateness of the performance criteria established for the SSC (if applicable).

b. Findings

No findings of significance were identified.

.2 Periodic Evaluation Reviews

a. Inspection Scope

The inspectors reviewed the CPSES report documenting the performance of the last maintenance rule periodic effectiveness assessment. This periodic evaluation covered the period from August 1, 1999, to June 15, 2001.

The inspectors verified that the CPSES program had monitored risk-significant functions associated with SSCs using reliability and unavailability. Additionally, the performance of non risk-significant functions were monitored using plant level criteria.

The inspectors reviewed the conclusions reached by the CPSES personnel with regard to the balance of reliability and unavailability for specific maintenance rule functions. This review was conducted by examining the CPSES personnel's evaluation of all risk-significant functions that had exceeded performance criteria during the evaluation period.

The inspectors also examined the CPSES personnel's evaluation of program activities associated with the placement of maintenance rule program risk-significant functions in Categories (a)(1) or (a)(2). Additionally, the inspectors reviewed the periodic evaluation conclusions reached by CPSES personnel for the following systems: diesel generator and auxiliaries, reactor coolant, auxiliary feedwater, service water, residual heat removal, and safety injection.

b. Findings

No findings of significance were identified.

.3 Identification and Resolution of Problems

a. Inspection Scope

The inspectors evaluated the use of the corrective action system within the maintenance rule program for issues identified in the top 15 risk significant systems. This review was accomplished by the examination of a sample of the corrective action documents (Smart Forms), maintenance work items, Maintenance Rule Review Panel meeting minutes, and other documents listed in the attachment. The purpose of this review was to establish that the corrective action program was entered at the appropriate threshold for the purposes of:

- Implementation of the corrective action process when a performance criterion was exceeded

- Correction of performance-related issues or conditions identified during the periodic evaluation

- Correction of generic issues or conditions identified during programmatic assessments, audits, or surveillances

The inspectors verified that the identification of problems and implementation of corrective action were acceptable.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation (71111.13)

a. Inspection Scope

The inspectors reviewed six selected activities regarding risk evaluations and overall plant configuration control. The inspectors discussed emergent work issues with work control personnel and reviewed the potential risk impact of these activities to verify that the work was adequately planned, controlled, and executed. The activities reviewed were associated with:

- Outage risk assessment and management assessment during Refueling Outage 2RF06

- Establishing plant conditions and repair of leaking conoseal joint on instrument column 75 during Unit 2 restoration from Refueling Outage 2RF06

- Corrective maintenance activities to evaluate damage, repair oil leaks, and replace oil soaked insulation as necessary on turbine-driven main feedwater Pump 2-01 on May 10-14, 2002, following a forced power reduction because of smoke coming from the pump

- Failure and subsequent replacement of Unit 2 Inverter IV2PC3 cooling fan concurrent with planned maintenance and surveillance testing of containment spray Pump 2-01 on May 28

- Transfer of Unit 1 Inverter 1EC1 to its backup ac source and subsequent failure to transfer back to its normal dc supply, concurrent with planned outage for maintenance and testing of the motor-driven auxiliary feedwater Pump 1-01 on May 30, 2002.

- Packing leakage and subsequent failure of packing on Unit 1 centrifugal charging pump recirculation Valve 1-8111 on June 10 and 11, 2002

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors selected five operability evaluations conducted by CPSES personnel during the report period involving risk-significant systems or components. The inspectors evaluated the technical adequacy of the operability determinations, determined whether appropriate compensatory measures were implemented, and determined whether all other pre-existing conditions were considered, as applicable. Additionally, the inspectors evaluated the adequacy of the CPSES problem identification and resolution program as it applied to operability evaluations. Specific operability evaluations reviewed are listed below.

- Smart Form SMF-2002-1666, Evaluation of Emergency Diesel Generator 2-01 jacket cooling water leak on long-term operability on April 30, 2002

- Quick Technical Evaluation QTE-2002-1754-01, Operability evaluation of Unit 2 turbine-driven auxiliary feedwater pump following retest after the pump tripped on overspeed during response time testing conducted on May 1, 2002

- Smart Forms SMF-2002-1476, Operability evaluation of Unit 2 pressurizer power-operated relief Valve 2-PCV-0455A misassembled and failing stroke length and SMF-2002-001486, Operability evaluation of 2-PCV-0455A while in service with a deformed diaphragm casing

- Smart Form SMF-2001-2983, Operability of auxiliary feedwater system in Mode 3 with the high pressure chemical feed system aligned to more than one steam generator at a time

- Evaluation EVAL-2002-1473-01, Operability of Unit 2 control rod guide tube support pin assembly and potential consequences of a loose part (the split pin nut) on the reactor coolant system as a result of the discovery of a split pin nut locking device in the steam generator hot leg during Refueling Outage 2RF06

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (71111.16)

a. Inspection Scope

The inspectors reviewed the open operator workaround list items contained in the plan of the day. The inspectors interviewed operators and reviewed the CPSES condition reporting system (Smart Forms) for additional degraded or nonconforming conditions that could complicate the operation of plant equipment. The individual and cumulative effects on mitigating systems and the operator's ability to implement abnormal or emergency procedures were evaluated.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors reviewed Permanent Plant Modification DMA 00-0142, including Smart Form SMF-2000-0142 and associated 10 CFR 50.59 screenings. CPSES is a two-unit site that shares common systems between the units. Portions of the dc electrical systems are shared. CPSES personnel initiated this change to meet the intent of Regulatory Guide 1.81, section C1, regarding the sharing of dc systems at multi-unit sites. Field wiring changes in dc electrical buses were effected. The modification also necessitated a change to the Updated Final Safety Analysis Report to take an exception to Regulatory Guide 1.81. The modification provided CPSES personnel with the ability to power the common dc loads from either unit.

b. Findings

No findings of significance were identified.

1R19 Postmaintenance Testing (71111.19)

a. Inspection Scope

The inspectors witnessed or reviewed the results of six postmaintenance tests for the following maintenance activities:

- Replacement of the Emergency Diesel Generator 2-02 governor on April 16, 2002
- Replacement of the ground detection relay for the Emergency Diesel Generator 2-02 on April 29, 2002
- Repair of jacket cooling water leak on Emergency Diesel Generator 2-01 on April 29, 2002
- Readjustment of component cooling water flows through the Unit 2 residual heat removal heat exchangers and containment spray heat exchangers on April 25-29, 2002, following implementation of Design Modification DMA 99-1397-2, "CCW Butterfly Valve Cavitation"
- Repair of packing leak on Valve 1-8111, repair of centrifugal charging pump minimum flow valve, and reinstallation of motor-operated actuator on June 11, 2002
- Repair of pump shaft leakage on Unit 2 containment spray Pump 2-04 on June 20, 2002

In each case, the associated work orders and test procedures were reviewed against the attributes in Inspection Procedure 71111, Attachment 19, to determine the scope of the maintenance activity and determine if the testing was adequate to verify equipment operability.

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities (71111.20)

a. Inspection Scope

The inspectors evaluated CPSES Unit 2 refueling outage (2RF06) activities to ensure that: risk was considered when deviating from the outage schedule, the plant configuration was controlled in consideration of facility risk, mitigation strategies were properly implemented, and Technical Specification requirements were implemented to maintain the appropriate defense-in-depth. Specific outage activities reviewed and/or observed by the inspectors include:

- Defense-in-depth and mitigation strategy implementation
- Containment closure capability
- Decay heat removal
- Electrical power sources
- Spent fuel pool inventory, cooling and chemistry controls
- Core offload and reload activities
- Midloop activities, including nozzle dam removals and steam generator manway installations
- Containment cleanup and closeout
- Unit heatup and startup

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors evaluated: the adequacy of periodic testing of important nuclear plant equipment, including aspects such as preconditioning; the impact of testing during plant operations; the adequacy of acceptance criteria, including test frequency and test equipment accuracy, range and calibration; procedure adherence; record keeping; the restoration of standby equipment; test failure evaluations; jumper control (if applicable); and the effectiveness of the CPSES problem identification and correction program. The following six surveillance test activities were observed by the inspectors:

- Unit 2, OPT-521B, "Emergency Core Cooling System Check Valve Operability," Revision 1, for check valves in Group 2 of the procedure; 2-8546, 2-8815, 2-8926, 2-8481A/B, 2SI-8819A/B/C/D, 2SI-8900B, 2SI-8905B, 2-8949B, and 2-8841A on April 22, 2002
- Unit 2 centrifugal charging pump performance and flow balance (OPT-523B, Revision 0) on April 22, 2002
- Unit 2, Train A diesel generator integrated testing (OPT-432B, Revision 3, Train A Safety Injection Test; OPT-431B, Revision 3, Train A Safety Injection with Loss of Offsite Power Test; and OPT-430B, Revision 3, Train A Diesel Generator 24-Hour Load Run and Loss of Offsite Power Test) on April 24 and 25, 2002

- Unit 2, local leak rate testing of residual heat removal to cold leg injection isolation Valves 2-8809A and 2-8809B (OPT-862B, Revision 3 and OPT-863B, Revision 4) on April 28 and 29, 2002

- Unit 2, Train B containment spray system operability test (OPT-205B, Revision 9) on June 11, 2002

- Unit 2, turbine-driven auxiliary feedwater pump operability test (OPT-206B, Revision 12, section 8.3.3) on June 28, 2002

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed the emergency exercise conducted on May 15, 2002, with the Blue team responding. Observations were conducted in the simulator control room, technical support center, operations support center, and emergency operations facility. The drill provided opportunities for security response, emergency classification, and offsite notifications during the scenario. This evaluation included reviewing the scenario and drill objectives, observing CPSES personnel performance in the emergency facilities, reviewing the CPSES critique notes, and discussing observations and CPSES personnel's findings with the emergency preparedness manager.

b. Findings

No findings of significance were identified.

2 RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

a. Inspection Scope

The inspectors interviewed radiation workers and radiation protection personnel involved in high dose rate and high exposure jobs during Refueling Outage 2RFO6 operations to assess the CPSES exposure control programs. The inspectors also conducted plant tours within the radiologically controlled area and conducted independent radiation surveys of selected work areas. The following items were reviewed and compared with regulatory requirements:

- Nuclear Overview Department Reports EVAL-2001-013 and 2001-039 and Radiation Protection Department Self-Assessment Reports SA-2001-016, SA-2001-017, SA-2001-019, SA-2001-027, SA-2001-050, SA-2001-063, and SA-2001-064

- Area postings and other controls for airborne radioactivity areas, radiation areas, high radiation areas, locked high radiation areas, and very high radiation areas

- Radiological surveys involving airborne radioactivity areas and high radiation areas

- Locked high radiation area key control program

- Access controls, surveys, and radiation work permits for the following three significant high dose work areas during Refueling Outage 2RFO6: Radiation Work Permit (RWP) 2002-2301, "Implementation of FDA-00-002596-01 During 2RFO6," RWP 2002-2400, "2RFO6 Primary Steam Generator Activities," and RWP 2002-2600, "Refueling Activities During 2RFO6"

- ALARA prejob briefing for lower internals removal

- Dosimetry placement when work involved a significant dose gradient

- Controls involved with the storage of highly radioactive items in the spent fuel pool

- A summary of operational radiation protection corrective action documents written since April 1, 2001 (11 of these documents were reviewed in detail: Smart Forms SMF-2000-3185, SMF-2001-0772, SMF-2001-1687, SMF-2001-1722, SMF-2001-2079, SMF-2001-2170, SMF-2001-2184, SMF-2001-2958, SMF-2002-0078, SMF-2002-0117, and SMF-2002-0763)

b. Findings

.1 Failure to assign dose to the highest whole body receptor

A noncited violation with very low safety significance (Green) was identified for a failure to assign the deep-dose equivalent to the part of the whole body receiving the highest exposure.

On April 10, 2002, the NRC inspectors determined that the licensee failed to monitor the part of the whole body exposed to the highest radiation field during reactor head disassembly work on April 2, 2002. From a review of survey information used to plan the work, the inspectors noted that radiation levels were as high as 100 millirem per hour at the head and 25 millirem per hour at the waist. However, whole body dosimetry was positioned on the chest rather than the head.

The safety significance of this finding was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no overexposure or substantial potential for an overexposure and the ability to assess dose was not compromised. The issue was more than minor because a failure to assign exposure to the part of the whole body receiving the highest exposure has a credible impact on safety and the occurrence had the potential to involve a worker's unplanned dose if radiation levels had been significantly greater.

10 CFR 20.1201(c) states, in part, that the assigned deep-dose equivalent must be for the part of the whole body receiving the highest exposure. The failure to account for the highest whole body exposure is a violation of 10 CFR 20.1201(c). This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the CPSES corrective action program as Smart Form SMF-2002-1332 (NCV 50-446/0202-01).

.2 <u>Failure to inform workers of the radiological conditions</u>

A noncited violation with very low safety significance (Green) was identified for a failure to inform radiation workers of the radiological conditions in their work area.

During tours of the radiologically controlled area between April 8-11, 2002, the inspectors identified approximately 10 workers assigned to different areas who were not informed of the radiological conditions in their work area. For example, on April 10, 2002, the inspectors interviewed an individual assigned to perform work in the Train B emergency core cooling system valve room (located on the 790-foot elevation of the Unit 2 safeguards building) and determined that the individual did not know that work area radiation levels were as high as 30 millirem per hour. Additionally, after reviewing the posted area radiological survey map with the individual, the inspectors concluded that this individual was not able to ascertain the radiation levels from the survey map.

The safety significance of this finding was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no overexposure or substantial potential for an overexposure and the ability to assess dose was not compromised. The issue was more than minor because not informing a worker of the radiological conditions in the work area has a credible impact on safety, and the occurrence had the potential to involve a worker's unplanned dose if radiological conditions had been significantly greater.

10 CFR 19.12(a) states, in part, that all individuals who in the course of employment are likely to receive in a year an occupational dose in excess of 100 millirem shall be kept informed of the storage, transfer, or use of radiation and/or radioactive material. The failure to inform workers of the radiological conditions in their work area is a violation of 10 CFR 19.12(a). This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the CPSES corrective action program as Smart Form SMF-2002-1272 (NCV 50-446/0202-02).

.3 Failure to follow radiation work permit requirements

A noncited violation with very low safety significance (Green) was identified for a failure to follow radiation work permit requirements.

On April 10, 2002, the inspectors observed that a radiation protection technician did not stop work when radiological airborne conditions exceeded 1.0 Derived Air Concentration (DAC). From a review of the continuous air monitor digital display, the inspectors determined that the display indicated 1.56 DAC. The individual was performing the work under RWP 2002-2223, Task 2, Revision 1. Worker and radiation protection personnel instructions for the above RWP stated, in part, "if airborne activity levels exceed 1.0 DAC stop work."

The safety significance of this finding was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised. The issue was more than minor because a failure to follow the RWP radiological requirements has a credible impact on safety, and the occurrence had the potential to involve a worker's unplanned dose if radiological conditions had been significantly greater.

Technical Specification 5.4.1.a. requires procedures for the Radiation Work Permit System. Section 5.4 of Procedure STA-656, "Radiation Work Control," Revision 11, states that radiation workers are responsible for reading and following the appropriate RWP requirements. The failure to follow RWP requirements is a violation of Technical Specification 5.4.1.a. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the CPSES corrective action program as Smart Form SMF-2002-1330 (NCV 50-446/0202-03).

On July 23, 2001, CPSES personnel identified a second example of a violation for the failure to follow RWP requirements, see Section 4OA7 for details.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Mitigating Systems

a. Inspection Scope

The inspectors reviewed a sample of performance indicator data submitted by CPSES personnel regarding the mitigating systems cornerstone to verify that the CPSES data was reported in accordance with the requirements of NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 2. The sample included data for January and February of 2002 for both units for the following performance indicators:

- Safety system unavailability, emergency ac power system
- Safety system unavailability, high pressure injection system

- Safety system unavailability, AFW heat removal system
- Safety system unavailability, residual heat removal system

b. Findings

No findings of significance were identified.

.2 Occupational Exposure Control Effectiveness

a. Inspection Scope

The inspectors reviewed corrective action program records for high radiation areas, locked high radiation areas, and unplanned exposure occurrences for the past 12 months to confirm that these occurrences were properly recorded as performance indicators. Radiologically controlled area exit transactions with exposures greater than 100 millirem for the past four quarters were reviewed. Selected examples were investigated to determine whether they were within the dose projections of the governing RWPs.

b. Findings

No findings of significance were identified.

.3 Radiological Effluent Technical Specification/Offsite Dose Calculation Manual Radiological Effluent Occurrences

a. Inspection Scope

The inspectors reviewed radiological effluent release program corrective action records, licensee event reports, and annual effluent release reports documented during the past four quarters to determine if any doses resulting from effluent releases exceeded the performance indicator thresholds.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

a. Inspection Scope

The inspectors reviewed the Unit 2 turbine-driven auxiliary feedwater pump maintenance history for the past 2 years to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. The review specifically involved 14 risk-significant corrective action documents (Smart Forms) that had been issued between May 15, 2000, and May 15, 2002. The inspectors evaluated the Smart Forms to determine that the CPSES problem identification activities were complete and accurate and that maintenance effectiveness and operability issues were appropriately evaluated and dispositioned. Also, the CPSES personnel's efforts in establishing the scope of problems, generic implications, and common cause were evaluated by reviewing pertinent work orders, engineering requests, and action plans. The inspectors' reviews were performed to determine if CPSES personnel had completed the corrective actions in a timely manner, commensurate with the risk associated with the issue.

b. Findings

No findings of significance were identified.

4OA3 Event Followup

.1 Unit 2 generator and reactor trip on June 6 due to card failure in generator electronic protection system

a. Inspection Scope

The inspectors were notified that the Unit 2 reactor tripped at 7:24 p.m. on June 6, 2002, when a card failure in the generator electronic protection system caused a main generator trip. The inspectors interviewed the operators, reviewed the operator logs, and reviewed the posttrip evaluation performed by the licensee. The inspectors evaluated the response of the major plant control systems and safety-related systems of the trip by comparison to the plant design for similar transients. The inspectors reviewed the impact of equipment deficiencies identified during the plant trip and CPSES personnel's actions to resolve the deficiencies prior to restart. The system engineer for the main generator was also interviewed for the cause of the trip and corrective actions to prevent recurrence.

b. Findings

No findings of significance were identified.

.2 Unit 2 transient on June 21 due to isolation of feedwater Heaters 2-5B and 2-6B

a. Inspection Scope

The inspectors interviewed operators and reviewed the operator's logs, selected plant parameters following the transient, applicable plant drawings, and Smart Form SMF-2002-2277, which documented the cause of the transient. The inspectors compared the operators' actions taken in response to the transient to those required by procedures and training. The initiating causes were reviewed for contribution from personnel error. The inspectors also reviewed the corrective actions taken to confirm they addressed the root causes.

b. Findings

No findings of significance were identified.

4OA5 Other Activities

Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles (NRC Bulletin 2001-01)(Temporary Instruction 2515/145)

This Temporary Instruction provided guidelines to verify compliance with licensee commitments to NRC Bulletin 2001-01, "Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles." As identified in the Temporary Instruction, Comanche Peak Unit 2 falls within the category of plants that have a low susceptibility to primary water stress corrosion cracking. Consequently, the inspectors used the criteria for evaluating low susceptible plants to conduct this inspection.

a. Inspection Scope

The inspectors performed this performance-based evaluation and assessment to ensure that the NRC had an independent review of the condition of the reactor vessel head and vessel head penetrations. The inspectors assessed the effectiveness of the licensee examinations of the vessel head penetrations. Specifically, the inspectors: (1) observed a large representative sample of the visual inspection under the upper tier of reflective metallic insulation via video camera delivered by remotely controlled crawler, (2) reviewed a video tape of the visual inspection of the 17 penetrations under the lower tier of insulation via video probe, (3) assessed the condition of the reactor vessel head through the video inspections, (4) assessed the physical difficulties in performing the inspection, including any debris, dirt, boron, or other viewing obstructions, (5) interviewed the examiners, (6) assessed the licensee's ability to distinguish small boron deposits on the reactor head, (7) evaluated the quality and resolution of the examination equipment, (8) reviewed completed records, (9) verified that the licensee documented deficiencies in their corrective action process, and (10) assessed the overall effectiveness of the process used to perform the bare metal visual examination.

The inspectors reviewed the following documents during this inspection:

- NRC Bulletin 2001-01, "Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles," dated August 3, 2001

- Comanche Peak Steam Electric Station Response to NRC Bulletin 2001-01, "Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles," TXX-01145, dated August 31, 2001

- NRC Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity," dated March 18, 2002

- Comanche Peak Steam Electric Station Response to NRC Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity," TXX-02067, dated April 2, 2002

- Comanche Peak Steam Electric Station 30-Day Response to NRC Bulletin 2002-01, “Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity,” TXX-02103, dated June 3, 2002

- Comanche Peak Steam Electric Station 30-Day Response to NRC Bulletin 2002-01, “Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity,” TXX-02112, dated June 13, 2002

b. <u>Findings</u>

The inspectors identified no findings of significance. The inspectors concluded that the licensee inspected 100 percent of the general surface area of the reactor vessel head and all penetration tube bases at the reactor vessel head outer surface. The clarity and resolution of the examination equipment combined with the training, qualification, and procedures ensured that the examiners could detect small boron deposits. The inspectors have provided the following details of the inspection as required by Temporary Instruction 2515/145.

.1 Examination

The licensee’s examiners were certified in accordance with CPSES procedures to meet ASME Section XI for VT-2 Level II or III. The site personnel were assisted by several individuals from Diablo Canyon who provided the crawler and were preparing for the Unit 1 Diablo Canyon reactor vessel head inspection.

The examination of the reactor vessel head penetration nozzles was coordinated by a scan plan to ensure full coverage of all penetrations. One individual drove the crawler or moved the articulated video probe according to the scan plan. A second individual verified the location on the scan plan and voice overlaid the video tape with tape counter index value for the nozzle quadrant(s) being reviewed. The third individual independently verified the location on a second scan plan and documented the digital tape counts. The resulting record established a baseline which could be used for comparison for future examinations of the head nozzles. The examiners established an indexing routine that evaluated the vessel head penetration nozzles in quadrants. The inspectors concluded that the scan plan implemented during the examinations ensured that the licensee had inspected all nozzles 360° around the nozzle circumference.

The examiners used an articulated video probe to reach the 17 peripheral penetrations located under the lower tier of insulation and a crawler for the remainder of the vessel head penetrations.

The inspectors verified that the Reactor Vessel Head Visual Inspection Plan provided: (1) explicit descriptions of the types of boric acid indications that might be identified, (2) appropriate descriptions of the conduct of the examination (i.e., use of the scan plan), and (3) sufficient guidance to satisfy licensee commitments for inspection of the vessel head penetration nozzles and the general surface of the reactor vessel head. The inspectors concluded that the plan combined with the training had provided adequate guidance for the examiners to identify, disposition, and resolve deficiencies.

The inspectors reviewed the in-process sheet used to document the inspections. The work package accurately documented the condition of the reactor vessel head and documented the examination of each vessel head penetration. In addition to this documentation, the licensee had videotaped the examination process and had indexed the penetrations.

The inspectors noted that the high resolution video equipment enabled the examiners to easily discern the type of debris (e.g., metal shavings) located at the vessel head penetration area. The inspectors determined that the camera on the crawler provided excellent resolution and allowed Jaeger J-1 images to be easily discerned.

.2 Condition of the reactor vessel head

The results of the examination are contained in TXX-02103, Comanche Peak Steam Electric Station 30-Day Response to NRC Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity," dated June 2, 2002 and are summarized below:

The examination determined that the reactor vessel head outer surface was uniformly coated with a thin layer of loose, gray dust. This coating was a very thin layer and did not obstruct the view of the outer surface of the metal. A definitive conclusion was reached that the outer surface of the reactor vessel head was sound. Most penetration tube bases exhibited little or no accumulation of debris in or near the annular gap and those with minor amounts did not exhibit characteristics indicative of leakage from within the annulus. Minor evidence of drips and runs indicative of low temperature, outage-related spills were observed on a number of tubes with no consequential associated accumulation of boric acid deposits. A few tube bases exhibited a narrow pile of small, randomly-shaped particles, generally with metallic appearance against the uphill segment of the tube circumference. The largest such accumulation of debris, extending less than 1/4 inch radially from the tube wall and around approximately 1/3 of the tube circumference, was manually disturbed with a prod and clearly identified as loose metal chips and wire brush bristles.

One specific peripheral tube exhibited a local, distributed deposit of reddish brown material extending down the tube wall from above and out onto the reactor vessel head. The material was scrapped with a nut on a 1/4-inch threaded rod, clearly demonstrating the friable nature of the loosely adherent deposit and providing a dimensional reference indicating the deposit was relatively thin, generally on the order of 1/16 inch. In addition, the reactor vessel head surface was clearly demonstrated to be sound. This penetration contained core exit thermocouple leads and was closed with a mechanical conoseal. This mechanical joint was observed to be leaking during heatup from Refueling Outage 2RF02 and was reworked prior to the return to power operations. The minor deposit of material observed in this inspection was judged insufficient to inhibit subsequent inspections, the current condition was sufficiently documented to support the comparison with future observations, and therefore no further cleaning was undertaken.

A sample of the dust observed to generally coat the reactor vessel head outer surface was obtained from the crawler and its umbilical cord. The material was analyzed and determined to consist of mostly calcium and magnesium, with a trace amount of boron. These results are consistent with concrete dust.

.3 Capability to identify and characterize small boron deposits

The inspectors concluded that the examiners and equipment used during the examinations could reliably detect and accurately characterize any identified leakage. The inspectors verified that the examiners used equipment with appropriate resolution. During evaluation of the videotapes of the vessel head penetrations, the inspectors noted that the Super VHS equipment provided excellent clarity that allowed for a complete evaluation. The inspectors found it easy to distinguish the size, type, consistency and configuration of any identified debris.

.4 Identified materiel deficiencies that required repair

None.

.5 Impediments to effective examinations and/or ALARA issues

The inspectors concluded that, in general, the licensee encountered no impediments to performing a 100 percent bare metal examination of the reactor vessel head and penetration nozzles. The inspectors noted that the licensee used a remotely controlled crawler to examine the vessel head under the upper tier of insulation and an articulated video probe for the peripheral penetration under the lower tier of insulation. With these tools the licensee was able to perform an effective examination and minimize the radiation exposure to personnel.

4OA6 Meetings, Including Exit

Exit Meeting Summary

The inspectors presented the results of the inspection of inservice inspection activities to Mr. D. Reimer, Technical Support Manager, at the conclusion of the inspection on April 11.

The inspectors presented the results of the radiation safety inspection to Mr. S. Ellis, Operations Manager, and other members of licensee management at the conclusion of the inspection on April 12.

The inspectors presented the results of the maintenance rule inspection to Mr. R. Flores, Deputy to Vice President of Engineering, and other members of licensee management on June 14.

The inspectors presented the resident inspection results to Mr. D. Moore, Plant Manager, and other members of licensee management at the conclusion of the inspection on July 11.

The inspectors asked the CPSES personnel at each meeting whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

4OA7 Licensee Identified Violations

The following violations of very low significance (Green) were identified by CPSES personnel and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as noncited violations (NCV).

	NCV Tracking Number	Requirement Licensee Failed to Meet
1.	NCV 50-446/0202-03	Technical Specification 5.4.1.a. requires procedures for the RWP system. Section 5.4 of Procedure STA-656, “Radiation Work Control,” Revision 11, states that radiation workers are responsible for reading and following the appropriate RWP requirements. On July 23, 2001, CPSES personnel identified that a worker failed to follow RWP requirements. This violation is being treated as a noncited violation and is in the CPSES corrective action program, reference Smart Form SMF-2001-1722. The safety significance of this violation was determined to be very low (Green) by the Occupational Radiation Safety Significance Determination Process because there was no overexposure or substantial potential for an overexposure and the ability to assess the dose was not compromised.
2.	NCV 50-445/0202-04	Technical Specification 5.7.2.a. requires high radiation areas with dose rates greater than 1 rem per hour at 30 centimeters from a radiation source to be locked or continuously guarded to prevent unauthorized entry. On December 18, 2001, CPSES personnel identified that the Unit 1 containment door was unlocked and unguarded for approximately 18 hours. Dose rates in the area were as high as 6 rem per hour. This violation is being treated as a noncited violation and is in the CPSES corrective action program, reference Smart Form SMF-2001-2958. The safety significance of this violation was determined to be very low (Green) by the Occupational Radiation Safety Significance Determination Process because there was no overexposure or substantial potential for an overexposure and the ability to assess the dose was not compromised.

ATTACHMENT

Supplemental Information

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Alldredge, Supervisor, Radiation Protection - ALARA
M. Blevins, Deputy to Senior Vice President & Principal Nuclear Officer
D. Bozeman, Manager, Emergency Planning
S. Bradley, Supervisor, Health Physics
J. Curtis, Manager, Radiation Protection
S. Ellis, Manager, Operations
R. Flores, Deputy to Vice President of Engineering
B. Hise, Supervisor, Safety Services
J. Kelley, Vice President, Nuclear Engineering and Support
R. Kidwell, Licensing Engineer
B. Mays, Engineering Programs Manager
D. Moore, Plant Manager
D. O'Connor, Supervisor, Radiation Protection
T. Payne, Maintenance Rule Coordinator
S. Swilley, Eddy Current Engineer
R. Walker, Manager, Regulatory Affairs
D. Wilder, Manager, Radiation and Industrial Safety
C. Wilkerson, Senior Licensing Engineer

NRC

D. Allen, Senior Resident Inspector
A. Sanchez, Resident Inspector

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed During this Inspection

50-446/0202-01	NCV	Failure to assign dose to the highest whole body receptor (Section 2OS1)
50-446/0202-02	NCV	Failure to inform workers of the radiological conditions (Section 2OS1)
50-446/0202-03	NCV	Two examples of a failure to follow RWP requirements (Sections 2OS1 and 4OA7)
50-445/0202-04	NCV	Failure to lock or continuously guard a locked high radiation area (Section 4OA7)

PARTIAL LIST OF DOCUMENTS REVIEWED

Procedures

NUMBER	DESCRIPTION	REVISION
STA-744	Maintenance Effectiveness Monitoring Program	2
WCI-677	Database Update Request (DBUR) Processing	1
PDI-ISI-254	Remote Inservice Examination of Reactor Vessel Shell Welds	5 with Procedure Field Change Request 01
TX-ISI-10	Qualification of Ultrasonic Manual Equipment for CPSES	2
TX-ISI-11	Liquid Penetrant Examination	6
TX-ISI-88	Underwater Remote Visual Examination of Reactor Vessel and Internals for CPSES	2
TX-ISI-254	Remote Inservice Examination of Reactor Vessels	2 with Procedure Field Change Request 01
TX-ISI-301	Ultrasonic Examination of Ferritic Piping Welds	1
TX-OPS-101	Preservice and Inservice Examination Documentation for CPSES	7
WDI-EQPT-802	SUPREEM Reactor Vessel In-service Inspection Tool Site Set-Up and Check-out Procedure	1
NDE 7.12	Unit 2 Steam Generator Eddy Current Analysis	3
NDE 7.10	Steam Generator Tube Selection and Examination	2
STA -733	Steam Generator Reliability Program	6

Miscellaneous Documents

DESCRIPTION / NUMBER	TITLE	DATE / REVISION
Guide	Goal Setting and Monitoring Guide	2
Guide	Maintenance Effectiveness Monitoring Guide	5
Guide	Maintenance Preventable Functional Failure (MPFF) Guide	4

Guide	Maintenance Rule Review Panel Guidance Document	2
Guide	Performance Criteria Guideline for Monitoring Maintenance Effectiveness	5
Guide	Structural Monitoring Inspections	1

Smart Forms

SMF-2000-000549
SMF-2001-000292
SMF-2001-000352
SMF-2001-000405
SMF-2001-001503
SMF-2001-001539
SMF-2001-001541
SMF-2001-002576
SMF-2001-002800
SMF-2001-002900

System Engineering Management Overview Program (SEMOP) Audits

SEMOP-4 (Rev 1): 5/26/00, 2/26/01, 10/18/01
SEMOP-5 (Rev 1): 9/07/00, 2/27/01
SEMOP-6 (Rev 2): 8/17/00, 3/31/01, 6/25/01,9/05/01, 4/24/02
SEMOP-7 (Rev 1): 5/9/00
SEMOP-24 (Rev 0): 10/18/00, 1/15/01

Minutes - Maintenance Rule Review Panel Meetings listed per date of meeting (Meeting Number)

08/21/00 (MRRP-00-0821)
01/25/01 (MRRP 01-0125)
03/12/01 (MRRP-01-0312)
05/25/01 (01-0524)
07/24/01 (01-0724)
08/20/01 (01-0820)
10/25/01 (01-1025)
01/15/02 (02-0115)
02/11/02 (02-0211)
03/18/02 (02-0318)

Work Orders

1-00-129436-08
2-98-112075-00
2-98-122072-01
2-00-130056-00

<u>Miscellaneous</u>

Comanche Peak Steam Electric Station (CPSES) - Unit 2 Inservice Inspection Plan Schedule Components First Interval, Third Period, First Outage Sixth Refueling Outage, Revision 0

Unit 2 Inservice Inspection (ISI) A-4 through A-8 Relief Request from 1986 Edition of ASME Code, Section XI, No Addenda, Dated March 4, 2002.

Comanche Peak #2 Summary of Recorded Indications 1983

"TXU Unit 2 Steam Generator Eddy Current Analysis Guidelines," Revision 1