



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION IV  
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March 14, 2006

Mike Blevins, Senior Vice President  
and Chief Nuclear Officer  
TXU Power  
ATTN: Regulatory Affairs  
Comanche Peak Steam Electric Station  
P.O. Box 1002  
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SUBJECT: ERRATA FOR COMANCHE PEAK STEAM ELECTRIC STATION - NRC  
INTEGRATED INSPECTION REPORT 05000445/2005005 AND  
05000446/2005005

Dear Mr. Blevins:

Please replace the Summary of Findings and page 11 of the Report Details in NRC Inspection Report 05000445/2005005 and 05000446/2005005, dated February 13, 2006, with the attached revised pages. The following changes are necessary to (1) delete the sentence in the Summary of Findings for the first finding "This finding has a problem identification and resolution crosscutting aspect because it was caused by lack of effective corrective actions"; (2) delete several phrases and words located in the Summary of Findings (fourth finding, both paragraphs) and (3) delete several phrases and words in Section 1R08.1, (Description and Enforcement paragraphs) to clarify the issues.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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/**

Claude Johnson, Chief  
Project Branch A  
Division of Reactor Projects

Docket Nos.: 50-445, 50-446  
License Nos.: NPF-87, NPF-89

Enclosure:

Errata pages for NRC Inspection Report 05000445/2005005 and 05000446/2005005

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SUNSI Review Completed:  CEJ ADAMS: / Yes  No Initials: CEJ\_\_\_  
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ENCLOSURE  
Revised Pages for NRC Integrated Inspection  
Report 05000445/2005005 AND 05000446/2005005

## SUMMARY OF FINDINGS

IR 05000445/2005005, 05000446/2005005; 09/24/2005-12/31/2005; Comanche Peak Steam Electric Station, Units 1 and 2; Inservice Inspection Activities, Event Follow-up, and Other Activities

This report covered a 3-month period of inspection by two resident inspectors, two reactor inspectors, one operations engineer, one emergency preparedness inspector, one regional project engineer, and one consultant. Four Green noncited violations were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or may 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. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- C Green. A Green self-revealing noncited violation of Technical Specification 5.4.1.a was identified for failure to implement the maintenance procedure to properly install a check valve in the Emergency Diesel Generator 1-01 lubrication system. On October 20, 2005, the diesel generator shutdown for lack of lube oil to the turbo-chargers after 60 seconds during a post maintenance test. The lube oil strainer check valve had been installed backwards during the previous refueling outage but the opposite strainer had been in service for the ensuing 18 months. The check valve was reinstalled properly, the flow direction of similar check valves verified, and the damaged turbo-chargers replaced.

The violation was more than minor because one of two lube oil strainers for the turbo-chargers was incapable of flow, thus affecting the reliability of the diesel generator. The finding has a human performance crosscutting aspect because the failure to follow the procedure caused the diesel generator failure. However, the error was committed in April 2004. The violation is of very low safety significance because CPSES operating experience indicated that the lube oil strainers had never been swapped outside of an outage, and then only to balance run time on the equipment. The significance determination process screened this out as Green because it only affected the mitigating systems cornerstone and it did not cause an actual loss of safety function of a single train nor a loss of safety function that contributed to external event initiated core damage sequences. This event was entered into the corrective action program as Smart Form 2005-004233 (Section 4OA3.1).

- C Green. A Green self-revealing noncited violation of Appendix B, Criterion XVI was identified for failure to implement effective corrective actions for a significant condition adverse to quality. Specifically, station service water Pump 1-01 was returned to service on October 20, 2005, and after two hours of operation tripped on an electrical fault on Phase C of the motor leads. The degraded electrical condition of the motor lead had been identified during restoration from the pump maintenance, but the actions taken to ensure the pump was reliable failed. Phase C of the motor leads was replaced prior to returning the pump to service.

The failure to take effective corrective actions was the performance deficiency. The violation was more than minor because the pump was returned to service with a degraded motor lead. At the time of the event, Unit 1 was defueled and did not require an operable station service water pump. However, Unit 2 was required by Technical Specifications 3.7.8 to have at least one operable station service water pump from the opposite unit. With Unit 2 at 100 percent power, a significance determination was performed using Appendix A of Manual Chapter 0609. The finding was determined to be of very low safety significance (Green) because it did not represent a loss of system safety function, was not an actual loss of safety function for a single Unit 2 train, did not involve equipment or function specifically designed to mitigate a seismic, flooding, or severe weather initiating event, and did not involve the total loss of any safety function that contributed to external event initiated sequences. The cause of this finding is related to the crosscutting aspects of problem identification and resolution. The event was entered into the corrective action program as Smart Form 2005-004220 (Section 4OA3.2).

- Green. A Green self-revealing noncited violation of Technical Specification 3.8.1 was identified, after both the alternate and emergency power supplies to a 6.9 kV safeguards bus failed to provide power to the bus within the time assumed in the accident analysis. On October 19, 2004, an unplanned loss of the preferred offsite power caused the Unit 2, Train B, 6.9 kV safeguards bus to de-energize. A degraded Agastat relay delayed the normal power supply breaker from opening for 30 seconds, which delayed powering the bus from the alternate offsite AC power supply or the emergency diesel generator. This issue had crosscutting aspects in the area of problem identification and resolution because the licensee previously identified that aged Agastat relays were unreliable and should be replaced if they were in service greater than 12 years. The failed relay had been in service for 16 years.

The violation was more than minor because it impacted the Mitigating Systems Cornerstone objective of availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, "Determining the Significance of Reactor Inspection Findings for At-Power Situations," the finding was determined to be of very low safety significance because the likelihood of a medium or large break loss of coolant accident coincident with a loss of offsite power, which are the only conditions where the deficiency would cause a non-negligible change in the baseline risk

profile, is less than or equal to 1E-6 per year. Therefore the change in core damage frequency will be less than 1E-6 per year. The licensee captured the issue in their corrective action program as Smart Form SMF-2004-003528 (Section 4OA5.2).

Cornerstone: Barrier Integrity

- Green. A Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI (Corrective Action) was identified, in that licensee personnel failed to take effective corrective action for a condition adverse to quality. Specifically, licensee welders repaired a body-to-bonnet leak on Valve 1-8702B, Residual Heat Removal Pump 1-02 hot-leg recirculation isolation valve, in April 2004 by installing a seal weld. The valve required additional repair in October 2005 for a body-to-bonnet leak.

The failure to take effective corrective action for a body-to-bonnet leak on Valve 1-8702 B was a performance deficiency. This finding is greater than minor because it is similar to Example 3.g. of Appendix E of Manual Chapter 0612 because the leakage reoccurred. The inspectors found this finding screened out of the Phase 1 process as Green. The inspectors considered this finding to be of very low safety significance because the event was leakage and not a line break. The cause of this finding is related to the crosscutting aspects of problem identification and resolution. (Section 1R08.1)

B. Licensee Identified Violations

None.



because of evidence of boron leakage since 1995. The valves were 2-8378B, Reactor Coolant System Loop 2-04 charging upstream check valve; 2-8379A, and 2-8379B, Reactor Coolant System Loop 2-01 charging system downstream check valves. Licensee personnel found all of these welds to subsequently leak within a year in 1996. In 2005, licensee welders also repaired two valve body-to-bonnet flanged connections because of evidence of leakage. These valves were numbered 2-8818B and 2-8818C, residual heat removal loop check valves. In summary, this repair has been done six times and failed four times. Two of the six times this repair has been done are unknown at this time in respect to leakage because a refueling outage has not occurred. The inspectors considered the evidence of boron leakage in these body-to-bonnet flanged connections to be a condition adverse to quality.

Analysis. The inspectors found this finding to be greater than minor because it is similar to Example 3.g. of Appendix E of Manual Chapter 0612 because the leakage recurred. The inspectors considered this finding as of very low safety significance because the event was leakage and not a line break. The inspectors found this finding screened out of the Phase 1 process as Green. The licensee issued a Smart Form (SMF) SMF-2005-004209 regarding this finding.

Enforcement. Criterion XVI, *Corrective Actions*, of Appendix B to 10 CFR Part 50 states, in part, that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Contrary to the above, corrective actions were inadequate in that leakage of the body-to-bonnet flanged connections on Valve 1-8702B after previous repair in 2004, and on Valves 2-8378B, 2-8379A/B in 1995, were recurrent. The inspectors identified this finding as an NCV because of its very low safety significance and because the licensee has entered this finding in its corrective action program. This is consistent with Section VI.A. of the NRC Enforcement Policy: NCV 05000445/2005005-01, Inadequate Corrective Actions for a Leaking Valve with a Seal Weld which Subsequently Leaked.

.2 Pressurizer Water Reactor Vessel Upper Head Penetration Inspection Activities (Section 02.02)

a. Inspection Scope

The inspection procedure requires observation or review of upper head inspections after the completion of Temporary Instruction 2515/150. The procedure requires samples similar in number to the preceding section.

The licensee plans to replace this head, and thus close the Temporary Instruction 2515/150. The licensee did not perform upper head inspections other than visual during this outage. The visual inspection activities are documented in Section 1R20 of this report.