

# Comanche Peak 2

## 4Q/2009 Plant Inspection Findings

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### Initiating Events

**Significance:**  Mar 21, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Follow Procedure Causes Unplanned Load Change**

A self-revealing noncited violation of Technical Specification 5.4.1.a was identified for the failure of operators to follow procedural requirements when reducing turbine load. As a result, operators transposed two digits and inadvertently reduced turbine load from 1273.7 megawatts to 1237.5 megawatts instead of 1273.5 megawatts. In response to the transient, the control rods automatically inserted approximately 17 steps to maintain programmed reactor coolant system temperature. The licensee entered the finding into their corrective action program as Smart Form SMF 2009 000028.

The finding was more than minor because it was associated with the human performance attribute of the initiating events cornerstone, and directly affected the cornerstone objective to limit the likelihood of those events that upset plant stability during power operations. Using Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance (Green) because it did not contribute to the likelihood of mitigating equipment being unavailable. The cause of the finding was related to the Human Performance crosscutting component of work practices for the failure to use self and peer checking techniques.

Inspection Report# : [2009002](#) (*pdf*)

**Significance:**  Jun 22, 2008

Identified By: NRC

Item Type: FIN Finding

#### **Instrument Tubing Failure Causes Plant Trip**

The inspectors reviewed a self-revealing finding for the licensee's failure to follow a tubing installation specification when installing condenser vacuum instrument tubing. Specifically, the installation did not follow Tubing Specification CPSES-I-1018 for general flexibility or thermal growth considerations, ultimately resulting in tubing failure. The tubing failure caused turbine trip instrumentation to fail low, causing a Unit 2 turbine and reactor trip. The licensee entered the finding into their corrective action program and modified the instrument tubing in both Units 1 and 2 to prevent another failure.

The finding is greater than minor because it is associated with the Initiating Events Cornerstone attribute of design control and affected the cornerstone objective, in that it caused a turbine and reactor trip that challenged critical safety functions. The finding is of very low safety significance because, although the likelihood of a reactor trip increased, all mitigating systems were available. The cause of this finding is related to the human performance cross-cutting component of Work Practices, in that, the licensee failed to provide proper oversight of contractors such that nuclear safety is supported.

Inspection Report# : [2008003](#) (*pdf*)

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### Mitigating Systems

**Significance:** **G** Sep 19, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Seal Electrical Enclosure**

The inspectors identified a Green noncited violation of License Condition 2.G for the failure of the licensee to seal a penetration in the Unit 2 train B safety chiller electrical cabinet. As a result, the equipment was vulnerable to water damage from a fire sprinkler activation during a postulated fire on the redundant train. The licensee entered the finding into their corrective action program as Smart Form SMF-2009-001069-00.

The finding was more than minor because it was associated with the protection against external events attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective, in that, it decreased the reliability of the redundant safety chiller train in case of fire on the Unit 2 train A safety chiller. Using NRC Manual Chapter 0609, the inspectors determined that a Phase 3 analysis was required. Based on the senior reactor analyst's significance determination process Phase 3 analysis, this finding was determined to have very low safety significance. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : [2009004](#) (*pdf*)

**Significance:** **G** Sep 19, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure To Seal Electrical Penetrations**

The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure of the licensee to follow the design basis and seal electrical penetration conduits in the containment spray pump rooms. As a result, the water from a pipe break in the valve isolation tank rooms would flow into the conduits in the containment spray pump room and could cause a train of residual heat removal, safety injection, and containment spray equipment to become inoperable. The licensee entered the finding into their corrective action program as Smart Form SMF-2009-000926-00.

The finding was more than minor because it was associated with the design control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the capability of systems that respond to events. Using NRC Manual Chapter 0609, the inspectors determined that a Phase 3 analysis was required. Based on the senior reactor analyst's significance determination process Phase 3 analysis, this finding was determined to have very low safety significance. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : [2009004](#) (*pdf*)

**Significance:** **G** Sep 19, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Control Transient Equipment**

The inspectors identified a Green noncited violation of Technical Specification 5.4.1.a for failure to comply with the work control procedure which requires that all transient equipment be tracked. Specifically, the licensee placed a floating dock in the service water intake structure for maintenance activities and did not track the dock in Maximo, the licensee's computer program for tracking work. As a result, the dock remained in place significantly longer than allowed without doing an engineering evaluation for the effects, potentially reducing the reliability of the service water pumps in case of a fire or flood. The licensee entered the finding into their corrective action program as Smart Form SMF 2009 001548-00.

The finding was more than minor because it was associated with the protection against external factors attribute of the Mitigating Systems cornerstone, and adversely affected the objective, in that, the reliability of the service water system was reduced in the cases of a fire or the probable maximum flood. The inspectors determined that because the fire scenario did not reflect the dominant risk of the finding, the flooding scenario would be used for the significance determination process. Using NRC Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and

Characterization of Findings,” the finding was determined to be of very low safety significance because the performance deficiency did not cause the loss of any safety function. This finding has a human performance crosscutting aspect associated with resources, in that the licensee failed to provide adequate training for personnel.

Inspection Report# : [2009004](#) (pdf)

**Significance:**  Sep 19, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Postfire Safe Shutdown Procedure**

The inspectors identified a noncited violation of Technical Specification 5.4.1.d for the failure to maintain adequate written procedures covering fire protection program implementation. Specifically, Procedure ABN 803A, “Response to a Fire in the Control Room or Cable Spreading Room,” Revision 8, which is used to perform an alternative shutdown from outside of the control room, failed to assure that the train A charging pump, relied on for achieving postfire safe shutdown, would not be damaged because of a loss of suction. During an alternative shutdown, operators must use the train A charging pump for the reactivity control and reactor coolant makeup functions by providing borated water from the refueling water storage tank. The licensee entered the finding into their corrective action program as Smart Form SMF 2009-004453-00.

Failure to ensure that Procedure ABN 803 contained sufficient instructions to ensure that the credited train A centrifugal charging pump would be available following a postulated control room abandonment was a performance deficiency. This finding was more than minor because it was associated with the protection against external factors attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to external events (such as fire) to prevent undesirable consequences. Based on the senior reactor analyst's significance determination process Phase 3 analysis, this finding was determined to have very low safety significance. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : [2009004](#) (pdf)

**Significance:**  Sep 19, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Assure That One Train of Equipment is Free From Fire Damage**

The inspectors identified a noncited violation of Unit 1 License Condition 2.G and Unit 2 License Condition 2.G. Specifically, the licensee failed to ensure that one train of the equipment required to achieve and maintain safe hot shutdown conditions remained free from fire damage as specified in the approved fire protection program. The inspectors identified that the licensee relied upon local manual actions to mitigate the effects of potential fire damage rather than provide the physical separation or protection required in the approved fire protection program. The licensee entered the finding into their corrective action program as Smart Form SMF 2009-004454-00.

Failure to ensure that one train of the systems required for hot shutdown is free from fire damage was a performance deficiency. This finding was more than minor because it was associated with the protection against external factors attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to external events (such as fire) to prevent undesirable consequences. Based on the senior reactor analyst's significance determination process Phase 3 analysis, this finding was determined to have very low safety significance. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : [2009004](#) (pdf)

**Significance:**  Sep 19, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Alternative Shutdown Procedure**

The inspectors identified a noncited violation of Technical Specification 5.4.1.d for the failure to maintain adequate written procedures covering fire protection program implementation. Specifically, during operator walkthroughs, the inspectors identified that Procedure ABN 803A, "Response to a Fire in the Control Room or Cable Spreading Room," Revision 8, used to perform an alternative shutdown from outside of the control room, had two examples of critical actions that could not be completed in the time required by the postfire safe shutdown analysis. The steps to respond to a potential spurious opening of the train A power operated relief valve and a potential loss of station service water cooling to the emergency diesel generator were not completed within the maximum allowable times specified in the procedure. As a compensatory measure, the licensee issued night orders to alert operators of these procedural concerns. The licensee entered the finding into their corrective action program as Smart Form SMF 2009 004455-00.

Failure to provide adequate procedural guidance to implement the requirements of the approved fire protection program was a performance deficiency. This finding was more than minor because it was associated with the protection against external factors attribute of the Mitigating Systems cornerstone, and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to external events (such as fire) to prevent undesirable consequences. Based on the senior reactor analyst's significance determination process Phase 3 analysis, this finding was determined to have very low safety significance. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : [2009004](#) (*pdf*)

**Significance:**  Aug 14, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Untimely Corrective Actions For Bailey/Asea Brown Boveri Positioners**

The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," for the failure of to promptly correct a condition adverse to quality when they did not apply thread sealant to safety-related atmospheric relief valves positioner adjustment screws. This issue was entered into the licensee's corrective action program as SmartForm SMF-2009-004054. The licensee took corrective actions by performing an operability determination, which provided reasonable assurance that the atmospheric relief valves were operable and completion of the thread sealant repairs could be reasonably delayed until the next scheduled outage.

The finding was more than minor since it affected the Mitigation System Cornerstone attribute of availability and reliability of mitigating equipment, specifically the operability of the atmospheric relief valves. Using Manual Chapter 0609, Attachment 4, "Phase 1- Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance since it did not result in a loss of the safety system function. No crosscutting aspect was assigned because this issue was not indicative of current plant performance.

Inspection Report# : [2009006](#) (*pdf*)

**Significance:**  Mar 21, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Initiate a Smart Form for Damage to Safety-Related Breakers**

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for failure to follow procedures that require initiating a Smart Form for damage to safety-related equipment. The licensee discovered a bent shutter pin in the internal racking mechanism of a safety-related circuit breaker during maintenance. However, because the condition was not entered into the Smart Form database, the licensee failed to correct the cause of the condition and formally evaluate the impact of the condition on all of the associated 480 volt breakers. The licensee entered the finding into their corrective action program as Smart Form SMF-2009-000095.

The finding was more than minor because if the licensee continues to fail to document damage to safety-related equipment in a Smart Form, there is potential that it could lead to a more significant safety concern in that the damage will not be evaluated and corrected. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Phase 1- Initial Characterization and Screening of Findings," the finding screened as very low safety significance (Green) because the condition did not result in the inoperability of safety-related breakers when they were required to be operable. The cause of this finding was related to the Problem Identification and Resolution crosscutting component of the

corrective action program, in that, the licensee failed to enter the issue into the Smart Form database.

Inspection Report# : [2009002](#) (*pdf*)

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## Barrier Integrity

**Significance:**  Jun 20, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Initiate Smart Form for Damage to Steam Generator Tubes Due to Loose Parts**

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedures that require initiating a Smart Form for damage to safety-related equipment. The licensee failed to initiate a Smart Form when multiple loose parts were discovered in the steam generators during a refueling outage that had damaged the tubes to varying degrees. As a result, the licensee did not identify sources of loose parts and potential corrective actions. The licensee entered the finding into their corrective action program as Smart Form SMF-2009-001069-00.

The finding was more than minor because if the licensee continues to fail to document damage to safety-related equipment in the Smart Form database, there is potential that this could lead to a more significant safety concern, in that, the cause of the damage will not be evaluated and corrected. Once entered into the Smart Form database, a review of the loose parts was conducted. Although the licensee could not identify sources for any of the parts, similar reviews in the future could reasonably produce corrective actions that would not have been taken without the reviews. Using NRC Inspection Manual Chapter 0609, Appendix J, "Steam Generator Tube Integrity Findings Significance Determination Process," the finding was determined to be of very low safety significance because none of the tested tubes failed the in situ pressure tests. The cause of this finding was related to the Problem Identification and Resolution crosscutting component of the corrective action program, in that the licensee failed to enter the issue into their corrective action program. [P1.a]

Inspection Report# : [2009003](#) (*pdf*)

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## Emergency Preparedness

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## Occupational Radiation Safety

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## Public Radiation Safety

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## Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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# Miscellaneous

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