

## Comanche Peak 2

### 2Q/2015 Plant Inspection Findings

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## Initiating Events

**Significance:** G Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Failure to Follow Procedure for Addressing Significant Conditions Adverse to Quality**

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for two examples of a failure to follow procedure for evaluating and correcting significant conditions adverse to quality. The licensee reduced the screening level of two significant conditions adverse to quality and therefore, failed to perform a root cause evaluation and identify corrective actions to preclude repetition. The licensee entered the finding into the corrective action program as Condition Reports CR 2015 002021 and CR 2015-003442.

The licensee’s failure to follow the requirements of Procedure STA-422, “Processing Condition Reports,” was a performance deficiency. Specifically, the licensee failed to appropriately screen condition reports, perform root cause analyses, and identify corrective actions to preclude repetition for two significant conditions adverse to quality. The performance deficiency was more than minor because if left uncorrected, it could lead to a more significant safety issue. Specifically, for significant conditions to adverse to quality, the failure to use the appropriate screening criteria for condition report levels could result in failing to determine the cause and take corrective actions to preclude repetition. Because these failures were associated with unplanned reactor trips, this finding affected the Initiating Events cornerstone. Using Inspection Manual Chapter 0609 Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 1, “Initiating Events Screening Questions,” dated June 19, 2012, the finding was determined to be of very low safety significance (Green) because the finding did not cause a reactor trip and a loss of mitigation equipment. The finding has a human performance cross-cutting aspect associated with consistent processes because the licensee failed to use a consistent, systematic approach to make decisions to downgrade condition reports [H.13].

Inspection Report# : [2015001](#) (*pdf*)

**Significance:** G Dec 31, 2014

Identified By: Self-Revealing

Item Type: FIN Finding

### **Failure to Follow the Troubleshooting Activities Procedure Results in a Manual Turbine Runback**

The inspectors reviewed a self-revealing finding for the licensee’s failure to follow the troubleshooting activities procedure while working on the condensate system alarm and control circuit. The troubleshooting activities caused the condensate low pressure heater bypass valve to open resulting in a secondary plant transient. Operators responded to the event by manually initiating a turbine runback and then stabilized the plant. The licensee entered the finding into the corrective action program as Condition Report CR-2014-001268.

The failure to follow the troubleshooting activities procedure was a performance deficiency. The performance deficiency was more than minor because it affected the human performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using Inspection Manual Chapter 0609, Attachment 04, “Initial Characterization of Findings,” and Appendix A, Exhibit 1, “Initiating Events Screening

Questions,” the finding was determined to be of very low safety significance (Green) because the finding did not cause a reactor trip or the loss of mitigation equipment. The finding has a human performance cross-cutting aspect associated with documentation because the licensee failed to ensure that plant activities were governed by high-quality procedures [H.7].

Inspection Report# : [2014005](#) (*pdf*)

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## Mitigating Systems

**Significance:**  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Failure to Evaluate Operability When Breaching Hazard Barriers**

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” associated with the licensee’s failure to perform adequate operability assessments when disabling hazard barriers during maintenance activities. Specifically, during maintenance activities in the main steam/main feed penetration area, the licensee disabled the high energy line break/environmental qualification door and failed to evaluate operability of the safety-related equipment protected by this door. This issue does not represent an immediate safety concern because, at the time of identification, the doors were shut. The licensee entered the finding into corrective action program as Condition Report CR-2015-001111.

The failure to properly assess and document the basis for operability when creating a degraded or nonconforming condition during a maintenance activity, breaching a high energy line break/environmental qualification barrier, was a performance deficiency. The performance deficiency was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee’s opening the high energy line break/environmental qualification door resulted in a condition where structures, systems, and components necessary to mitigate the effects of a high energy line break may not have functioned as required. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, “Mitigating Systems Screening Questions,” dated June 19, 2012, the finding was determined to require a detailed risk evaluation because it was a deficiency affecting the design and qualification of a mitigating structure, system, or component that resulted in a loss of operability or functionality and represented a loss of system and/or function. A senior reactor analyst performed a detailed risk evaluation and determined that the finding was of very low safety significance (Green). The inspectors determined that this finding does not have a cross-cutting aspect because the most significant contributor of this finding occurred in 2011 and does not reflect current licensee performance.

Inspection Report# : [2015001](#) (*pdf*)

**Significance:**  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

### **Failure to Have an Adequate Procedure for Vendor Information**

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” associated with the licensee’s failure to have an adequate procedure for controlling and processing vendor documents and vendor technical manual updates. This resulted in the licensee’s failure to properly implement new torque requirements for the turbine driven auxiliary feedwater pump trunnion bolts, and their subsequent backing

out. The licensee performed an operability determination for the loose trunnion bolts that established a reasonable expectation for operability. The licensee entered the finding into the corrective action program as Condition Report CR-2014-009518.

The failure to have an adequate procedure for controlling and processing vendor documents and vendor technical manual updates was a performance deficiency. The performance deficiency was more than minor because it was associated with the procedure quality attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the inadequate procedure allowed a lower torque value to be used on the trunnion bolts for the Unit 2 turbine driven auxiliary feedwater pump which resulted in a condition where the trunnion bolts were loose. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated June 19, 2012, the finding was determined to be of very low safety significance (Green) because the finding: (1) was not a deficiency affecting the design and qualification of a mitigating structure, system, or component, and did not result in a loss of operability or functionality, (2) did not represent a loss of system and/or function, (3) did not represent an actual loss of function of at least a single train for longer than its allowed outage time, or two separate safety systems out-of-service for longer than their technical specification allowed outage time, and (4) does not represent an actual loss of function of one or more non technical specification trains of equipment designated as high safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The inspectors determined that this finding does not have a cross-cutting aspect because the most significant contributor of this finding occurred more than three years ago and does not reflect current licensee performance.

Inspection Report# : [2015001](#) (*pdf*)

**Significance:**  Mar 31, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

#### **Inadequate Centrifugal Charging Pump Lubricating Oil Pump Installation Procedure**

The inspectors reviewed a self-revealing finding of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings" for failure to provide documented instructions of a type appropriate to the circumstances when performing maintenance on the centrifugal charging pump 2-02. As a result, the lubricating oil pump was not correctly installed and decoupled causing the charging pump to become inoperable. The licensee repaired the pump and revised the maintenance procedure. The licensee entered the finding into the corrective action program as Condition Report CR-2014-008651.

The licensee's failure to prescribe documented instructions of a type appropriate to the circumstances when performing maintenance on a charging pump was a performance deficiency. The performance deficiency was more than minor because it was associated with the procedure quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The performance deficiency resulted in an inoperable centrifugal charging pump. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated June 19, 2012, the finding was determined to require a detailed risk evaluation because the finding represented an actual loss of function of a single centrifugal charging pump train for greater than its technical specification allowed outage time. A senior reactor analyst performed a detailed risk evaluation and determined that the finding was of very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with training because the licensee failed to ensure the mechanics were adequately trained to understand the procedure and work requirements [H.9].

Inspection Report# : [2015001](#) (*pdf*)

**Significance:** G Dec 31, 2014

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

**Failure to Follow Procedure for Boundary Valve Leakage Testing**

The inspectors reviewed a self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure to follow instructions for performing surveillance testing of the reactor coolant loop cold leg injection boundary valves. The test procedure had a prerequisite for the plant to be in mode 4 or 5 due to the test lineup. The licensee performed the test in mode 3 which isolated the residual heat removal system flow to loops 3 and 4. As a result, both trains of residual heat removal were inoperable. The licensee revised the procedure for the plant conditions and re-performed the test. The licensee entered the finding into the corrective action program as Condition Report CR-2014-005254.

The licensee’s failure to follow procedure for performing surveillance testing of the reactor coolant loop cold leg injection boundary valves was a performance deficiency. The performance deficiency was more than minor because it was associated with the human performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Attachment 04, “Initial Characterization of Findings,” and Appendix A, Exhibit 2, “Mitigating Systems Screening Questions,” the finding was determined to require a detailed risk evaluation because the finding represented a loss of function for the residual heat removal system. A senior reactor analyst performed a bounding detailed risk evaluation and determined the finding to be of very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with challenging the unknown because the licensee failed to stop when faced with uncertain conditions and evaluate risks before proceeding [H.11].

Inspection Report# : [2014005](#) (*pdf*)

**Significance:** G Sep 26, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

**Failure to Establish Goals and Monitor the Performance of the Uninterruptible Power Supply Air Conditioning System**

The inspectors identified a non-cited violation of 10 CFR 50.65(a)(1) for the failure to establish performance goals and perform monitoring to ensure the uninterruptible power supply air conditioning unit X-01 was capable of performing its intended function. Specifically, the licensee failed to include unavailability hours that caused the equipment to exceed the performance criteria. The licensee planned to establish goals for the system. The licensee entered the finding into the corrective action program as Condition Report CR-2014-010188.

The failure to establish goals and monitor the performance of the uninterruptible power supply air conditioning system was a performance deficiency. The performance deficiency was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Attachment 04, “Initial Characterization of Findings,” and Appendix A, Exhibit 2, “Mitigating System Screening Questions,” the finding was determined to be of very low safety significance (Green) because the finding did not represent an actual loss of safety function of a system and did not represent an actual loss of a technical specification train for greater than its allowed outage time. The finding has a human performance cross-cutting aspect associated with procedure adherence because the engineer failed to use human error reduction techniques when following procedure [H.8].

Inspection Report# : [2014004](#) (pdf)

**Significance:**  Sep 26, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

**Inadequate Acceptance Criteria for Inservice Testing of Auxiliary Feedwater Discharge Check Valves**

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the failure to incorporate adequate acceptance limits in a written procedure to demonstrate components will perform satisfactorily. The licensee used acceptance criteria for inservice testing that did not demonstrate successful performance of the test. Specifically, the licensee failed to use appropriate acceptance limits which would have identified a failed check valve when testing auxiliary feedwater discharge check valves. The licensee revised the inadequate test procedure. The licensee entered the finding into the corrective action program as Condition Report CR-2014-010082.

The licensee's failure to incorporate adequate acceptance limits in a written procedure to demonstrate components perform satisfactorily was a performance deficiency. The finding was more than minor because it was associated with the procedure quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 2, "Mitigating Systems Screening Questions," the finding was determined to be of very low safety significance (Green) because although the finding was a deficiency affecting the design or qualification of a mitigating system, the system maintained its operability and functionality. The inspectors determined that the finding was not representative of current licensee performance and no cross-cutting aspect was assigned.

Inspection Report# : [2014004](#) (pdf)

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## Barrier Integrity

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## Emergency Preparedness

**Significance:**  Sep 26, 2014

Identified By: NRC

Item Type: NCV Non-Cited Violation

**Maintenance of a Standard Action Level Scheme for Main Steam Line Monitors**

The inspectors identified a non-cited violation of 10 CFR 50.54(q)(2) for the failure to follow and maintain the effectiveness of an emergency plan that meets the requirements of planning standard 50.47(b)(4), which requires that a standard emergency classification and action level scheme is in use by the licensee. Specifically, several main steam line monitors were out of service for extended periods of time without apparent contingency actions in place in order to be able to declare an emergency. The licensee entered the finding into the corrective action program as Condition Report CR-2014-005874.

The failure to maintain a standard emergency classification and action level scheme for the initiating condition requiring the main steam line monitors was a performance deficiency. The performance deficiency was more than minor because it affected the licensee's ability to implement adequate measures to protect the health and safety of the

public. Using Inspection Manual Chapter 0609, Appendix B, “Emergency Preparedness Significance

Determination Process,” and Table 5.4-1, “Significance Examples 50.47(b)(4), the finding was determined to be of very low safety significance (Green) because it was a failure to comply with NRC requirements and was not a degraded risk significant planning standard function. The planning standard function was not degraded because of other emergency action levels; an appropriate declaration could be made in an accurate and timely manner. This finding has a problem identification and resolution cross-cutting aspect associated with evaluation because the licensee failed to thoroughly evaluate the extent of condition of the inoperable monitors on the emergency plan and scheme for declaring emergencies [P.2].

Inspection Report# : [2014004](#) (*pdf*)

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## Occupational Radiation Safety

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### Public Radiation Safety

**Significance:**  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

#### **Failure to Provide an Accurate Shipping Manifest**

The inspectors identified a non-cited violation of 10 CFR 71.5, pursuant to 49 CFR 172.203(d)(3), and 10 CFR 20.2006(b) for the licensee’s failure to ship radioactive waste with accurate manifests. Specifically, two radioactive waste shipments departed the site with inaccurate activity information on the manifest shipping papers. After determining that the shipment manifests and the amount of radwaste in the containers were incorrect, the licensee faxed corrected copies of the shipment manifests to the processor, suspended resin shipments, and conducted an apparent cause evaluation. The licensee entered the finding into the corrective action program as Condition Report CR-2015-000124.

The failure to ship radioactive material with an accurate shipping manifest in accordance with 49 CFR 172.203(d) and 10 CFR 20.2006 was a performance deficiency. The performance deficiency was more than minor because it was associated with the program and process (transportation program) attribute of the Public Radiation Safety cornerstone and adversely affected the cornerstone objective. Specifically, incorrect information on shipment documentation could result in incorrect Department of Transportation shipping characterizations or incorrect waste classifications in accordance with 10 CFR 61. Using Inspection Manual Chapter 0609, Appendix D, “Public Radiation Safety Significance Determination Process,” dated February 12, 2008, the finding was determined to be of very low safety significance (Green) because: (1) radiation limits were not exceeded, (2) there was no breach of a package during transit, (3) it did not involve a certificate of compliance issue, (4) it was not a low level burial ground nonconformance, and (5) it did not involve a failure to make notifications or provide emergency information. The finding has a human performance cross-cutting aspect associated with avoid complacency because the licensee did not recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Specifically, the licensee’s procedure for conducting waste and material characterization did not include precautions related to not accounting for the decay of short lived isotopes or guidance on when it was appropriate to override a default software option to omit decay correction for material sample results [H.12].

Inspection Report# : [2015001](#) (*pdf*)

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## Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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## Miscellaneous

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