Comanche Peak 2
3Q/2015 Plant Inspection Findings

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)*

Mitigating Systems

Significance: G Aug 03, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Follow Operability Determination Procedure forTornado Missile Impact of Diesel Vents
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," which states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished." Operability Determination Procedure STI-422.01 Step 6.2 G, states in part, "ODs should be documented in sufficient detail so the basis for the determination can be understood during subsequent reviews.… justification for the basis of the operability should be documented." Specifically, on May 4, 2015, the licensee had performed an operability determination for tornado driven missiles impacting the diesel generator fuel oil vent piping. The licensee failed to follow the operability evaluation procedure in that they did not adequately justify the basis of the operability. The team identified that the licensee had not adequately justified the exclusion of horizontally generated missiles in their analysis. In response to this issue, the licensee re-performed the operability determination, using a revised analysis using the correct parameters for horizontal missiles generated by a tornado, and concluded that the diesel generators would still perform their safety function. This finding was entered into the licensee's corrective action program as Condition Report CR 2015 005848.

The team determined that the licensee's failure to follow procedure for performing an operability determination for the diesel generator fuel oil vent piping 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 adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to adequately document the basis for operability of the diesel generator system because it excluded horizontal tornado missiles in the analysis. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, Exhibit 2, "Mitigating Systems Screening Questions," the issue screened as having very low safety significance (Green) because it was a design or qualification deficiency that did not represent a loss of operability or functionality; did not represent an actual loss of safety function of the system or train; did not result in the loss of one or more trains of non-technical specification equipment; and did not screen as potentially risk significant due to seismic, flooding, or severe weather. The team determined that this finding had a crosscutting aspect in the area of problem identification and resolution, because the organization failed to thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance.
Inspection Report# : 2015007 *(pdf)*

Significance: G Jun 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Adequately Assess Risk and Implement Risk Management Actions for Proposed Maintenance
The inspectors identified a non-cited violation of 10 CFR 50.65(a)(4), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," for the licensee's failure to adequately assess risk and implement required risk management actions for a planned maintenance activity. Specifically, the licensee failed to evaluate the risk associated with the use of a non-seismically qualified crane when moving loads over an operable train of service water during installation of a temporary modification in 2014. This issue did not represent an immediate safety concern because, at the time of identification, the maintenance activity was no longer in progress. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-001203.

The failure to adequately assess the risk and implement required risk management actions for proposed maintenance activities was a performance deficiency. This performance deficiency was more than minor, and therefore a finding, because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affected the associated objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," dated May 19, 2005, Flowchart 2, "Assessment of Risk Management Actions," the inspectors determined the need to calculate the risk deficit to determine the significance of this issue. Based on a review of the licensee's risk model it was determined that the incremental core damage probability associated with this finding was less than 1 x 10-6; therefore, this finding is determined to have very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with consistent processes because the licensee failed to use a consistent, systematic approach to evaluate risk for planned maintenance activities. [H.13]
Inspection Report# : 2015002 *(pdf)*

Significance: G Jun 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate and Appropriately Approve Design Changes
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," associated with the licensee's failure to ensure that design changes were subject to design control measures commensurate with those applied to the original design and were approved by the designated responsible organization. Specifically, the licensee changed required embedment depths for safety-related concrete expansion anchors associated with manhole covers but failed to re-perform the design calculation to demonstrate that the new embedment depth was sufficient for tornado loading. The licensee performed an operability determination which established a reasonable expectation for operability pending final resolution of the issue. This issue was entered into the licensee's corrective action program as Condition Report CR-2015-003152.

The licensee's failure to ensure that changes to the facility were subject to design control measures commensurate with those applied to the original design, and were approved by the designated responsible organization was a performance deficiency. This performance deficiency was more than minor, and therefore a finding, because it was associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affected the associated objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee changed required embedment depths for safety-related concrete expansion anchors associated with manhole covers but failed to re-perform the design calculation to demonstrate that the new embedment depth was sufficient for tornado loading. Using Inspection Manual Chapter (IMC) 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19,

2012, inspectors determined that this finding was 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 safetysignificant 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# : 2015002 *(pdf)*

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Operability When Breeching 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: G 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: G 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)*

Barrier Integrity

Emergency Preparedness

Significance: G Jun 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Critique Weaknesses in Radiation Protection Practices
The NRC identified two examples of licensee failures to correct deficiencies occurring during the June 10, 2015, emergency preparedness exercise as required by 10 CFR 50.47(b)(14). Specifically, the licensee failed to identify that a lack of radiological briefings for plant repair teams and a lack of habitability assessments in the Operations Support Center were deficiencies requiring corrective action. This issue was entered into the licensee's corrective action program as Condition Report CR 2015-005496.

The failure to correct deficiencies occurring during an emergency preparedness exercise is a performance deficiency within the licensee's ability to foresee and correct. The performance deficiency is more than minor because the issue is associated with the emergency response organization readiness and performance cornerstone attributes (training) and adversely affected the cornerstone objective. The performance deficiency affects the cornerstone objective because the licensee cannot assure that adequate measures will be taken to protect the health and safety of the public when deficiencies are not corrected. The finding was evaluated using Manual Chapter 0609, Appendix B, "Emergency

Preparedness Significance Determination Process," dated September 23, 2014, and determined to be of very low safety significance (Green) because the performance deficiency was a failure to comply with NRC requirements and was not a degraded or lost planning standard function. The planning standard was not degraded or lost because the deficiency was not associated with a risk-significant planning standard function and the licensee identified other deficiencies that occurred during the June 10, 2014, exercise. The finding has been assigned a cross-cutting aspect of Identification in the Problem Identification and Resolution cross-cutting area because the licensee failed to identify issues completely and accurately [P.1].
Inspection Report# : 2015002 *(pdf)*

Occupational Radiation Safety

Public Radiation Safety

Significance: G 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)*

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.

Miscellaneous

Significance: N/A Jun 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Update the UFSAR for Restrictions Associated with Shared System Operations of Component Cooling Water
The inspectors identified a non-cited violation of 10 CFR 50.71(e), "Maintenance of Records, Making Reports," associated with the licensee's failure to update the Final Safety Analysis Report. Specifically, the licensee failed to update the Final Safety Analysis Report to include information detailing restrictions associated with shared system operations of the non-safeguards component cooling water loads between units. This issue does not represent an immediate safety concern because, at the time of identification, the component cooling water systems were not cross connected. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2014-007235.

The licensee's failure to update the Final Safety Analysis Report to reflect restrictions associated with shared system operations of the non-safeguards component cooling water loads was a performance deficiency. Because this performance deficiency had the potential to impact the NRC's ability to perform its regulatory function, inspectors evaluated the performance deficiency using traditional enforcement. Using Inspection Manual Chapter 0612, "Power Reactor Inspection Reports," dated January 24, 2013, Appendix B, "Issue Screening," and Appendix E, "Examples of Minor Issues," the Reactor Oversight Program aspect of this performance deficiency was determined to be minor. Using the NRC Enforcement Policy, dated January 28, 2013, the performance deficiency was determined to be a Severity Level IV violation in accordance with Section 6.1.d.3, because the lack of up-to-date information in the Final Safety Analysis Report had not resulted in any unacceptable changes to the facility or procedures. Inspectors determined that cross-cutting was not applicable to this finding because it was strictly a traditional enforcement issue.
Inspection Report# : 2015002 *(pdf)*

Last modified : December 30, 2015