Comanche Peak 1

Initiating Events

Significance: G Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to determine the technical adequacy of a change in operation of the Unit 1 pressurizer relief tank
On July 25, 2000, the inspector noted that the Unit 1 reactor operator logs contained a note which allowed the pressurizer relief tank pressure to be maintained at 0 psig provided it was purged with nitrogen once a quarter. The inspector found that on August 30, 1994, a procedure change incorporated this note and removed a requirement to maintain a minimum of 1 psig pressure in the tank. The change was considered an administrative change only and no technical justification was provided. The change in minimum operating pressure was a change to the facility that increased the probability of developing an explosive mixture of hydrogen and oxygen in the pressurizer relief tank which was not an analyzed condition for the facility. Technical Specification 6.8.1; Regulatory Guide 1.33, Revision 2, Appendix A; and plant administrative procedures required a determination of technical adequacy for this material change. This violation of Technical Specifications is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The issue was placed into the licensee's problem identification and resolution program as Smart Form SMF-2000-001693-00.
Inspection Report# : 2000007*(pdf)*

Mitigating Systems

Significance: G Sep 13, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly identify and correct degraded EDG jacket water coolers
The inspectors noted that heat exchanger performance trending had not been conducted for approximately 1½ years on the Unit 1 emergency diesel generator jacket water coolers and for about 1 year on the Unit 2 emergency diesel generator jacket water coolers. During those periods, the Units 1 and 2 Train B emergency diesel generator jacket water coolers were frequently fouled beyond the acceptance criteria and were considered degraded. Failure to promptly identify this condition adverse to quality was a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001548-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the licensee's past operability review determined that the degraded emergency diesel jacket water coolers were operable.
Inspection Report# : 2000006*(pdf)*

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
NCV for nonconservative design calculation for safety-related air accumulators.
The inspectors identified that a calculation for all safety-related air accumulators did not properly account for air usage during a design basis mission. The calculation did not account for dynamic air consumption rates for the system and was therefore nonconservative. Failure to properly incorporate design basis information into station calculations was a violation of 10 CFR Part 50, Appendix B, Criterion III. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001232-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the nonconservative values had not been incorporated into station procedures and the operability of safety-related equipment was not affected.
Inspection Report# : 2000003*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Incomplete valve alignment established drain path from spent fuel pools
Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained. Step 5.9.2 in procedure SOP-506, "Spent Fuel Pool Cooling and Cleanup System" states to close Valves XSF-0220, XSF-0067 and XSF-0068 following completion of spent fuel pool transfer canal draining operations. Contrary to this requirement, Valve XSF-0220 was found open on February 1, 2001, following completion of transfer canal draining operations which established a gravity drain path from Spent Fuel Pools X-01 and X-02 to the recycle holdup tank. This violation is documented in Smart Form 2001-000221-00 and is being treated as a noncited violation.
Inspection Report# : 2001002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Oct 06, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to survey
10 CFR 20.1501(a) states, in part, that each licensee shall make or cause to be made surveys that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of radioactive material. In the following three instances, the licensee failed to properly survey tools and equipment, and determine the quantities of radioactive material present. On March 27, 2001, the licensee discovered a Chicago fitting containing 2000 counts per minute of radioactive material outside the radiologically controlled area. The fitting caused the yard access small article monitor to alarm when personnel were exiting the yard access area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000630. On April 1, 2001, the licensee identified that eddy current equipment was not properly surveyed prior to decontamination. The label indicated contamination levels of 20,000 disintegrations per minute per 100 square centimeters when the actual contamination levels were mrad smearable. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000729. On May 24, 2001, the licensee identified that a tool removed from the clean tool room contained 7000 counts per minute of radioactive material. The tool caused an alarm on the personnel monitor at the Alternate Access Point located outside the radiologically controlled area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-001352. These three examples are being treated as a non-cited violation. The safety significance of this violation was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no over exposure, no substantial potential for over exposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001004*(pdf)*

Significance: G Apr 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
The inspector identified two occasions, during the Unit 1 refueling outage, when radiation protection personnel failed to survey an area prior to workers entering the area. The first occasion was for failure to survey steam generator platform Loop Room 2/3. The second occasion was for failure to survey the overhead of the pressurizer relief tank room. 10 CFR 20.1501(a) requires each licensee to make or cause to be made surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform radiological surveys in the above areas was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Forms 2001-1619 and 2001-805, respectively. The safety significance of this violation 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. This violation was more than minor because the failure to perform a survey has a credible impact on safety and the potential for unplanned or unintended dose.
Inspection Report# : 2001003*(pdf)*

Significance: SL-IV Dec 12, 2000
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to survey
On December 12, 2000, the inspector identified that radiation protection personnel failed to perform a radiological survey of an area above the waste monitoring tank room on elevation 790 foot of the auxiliary building prior to a worker entering the area. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform a radiological survey of the above area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Form 2000-3407. The significance of this violation was determined to be more than minor because there was a credible impact on a worker's radiation safety; however, it did not affect the cornerstone since there were no actual consequences and monitoring devices remained operable
Inspection Report# : 2000009*(pdf)*

Public Radiation Safety

Significance: W Dec 06, 2001
Identified By: Licensee
Item Type: VIO Violation
Failure to survey
Between January 24, 2000, and May 24, 2001, the licensee identified 11 examples in which radioactive material was inadvertently released from the radiologically controlled area because the licensee failed to properly perform surveys. Two of these examples have been dispositioned as a noncited violation of very low safety significance (Green) in NRC Inspection Report 50-445;446/01-04. The failure to perform proper radiological surveys are nine examples of a Technical Specification 5.4.1.a violation consistent with the NRC Enforcement Policy. These events are described in the licensee's corrective action program, reference Smart Forms 2000-000187, 2000-001080, 2000-002380, 2000-002445, 2000-002458, 2000-002740, 2000-003122, 2001-000850, and 2001-000968. Using the public radiation safety significance determination process, the NRC determined that the finding was of low-to-moderate risk significance (white) because the public exposure associated with each item was less than 5 millirem; however, there were more than five events. The events were more than minor, because the failure to properly survey radioactive material has a credible impact on safety, and the issues involved occurrences in the licensee's radioactive material control program that were contrary to NRC requirements or licensee procedures.
Inspection Report# : 2001007*(pdf)*

Significance: G May 18, 2000
Identified By: NRC
Item Type: FIN Finding
Ineffective corrective actions for failure to source check a radiation monitor prior to a release
The details surrounding the March 23, 1999, nonroutine release were in the licensee's corrective action program as Smart Form SMF-1999-000671-00. Corrective actions were completed, and Smart Form SMF-1999-000671-00 was closed on August 24, 1999. However, on September 28, 1999, the licensee again failed to source check the effluent radiation monitor prior to initiating a nonroutine gaseous batch release. Therefore, the inspectors concluded that the corrective actions were ineffective in preventing a second occurrence. This issue was characterized as a green finding because the significance of the related technical issue was green.
Inspection Report# : 2000003*(pdf)*

Significance: G May 04, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to source check a radiation monitor prior to a release
The licensee identified that on March 23, 1999, a nonroutine gaseous release was initiated from the Unit 2 volume control tank prior to performing a source check on the primary plant ventilation noble gas release rate monitor. The inspectors identified another incident on September 28, 1999, in which the licensee performed a nonroutine gaseous batch release from the Unit 1 volume control tank prior to performing a source check to verify proper operation of the primary plant ventilation noble gas release rate monitor. The failure to perform the source check on the effluent monitors could have resulted in a radioactive gaseous release to the environment which was not properly monitored by an operable radiation monitor. The licensee's failure to perform source checks on the primary plant ventilation noble gas release rate monitors prior to initiating the gaseous batch releases from the volume control tanks was a violation of Technical Specification 5.5.1. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-001412-00. This issue was characterized as a green finding using the public radiation safety significance determination process. It was determined to have very low risk significance because the incident did not impair the licensee's ability to assess dose, and the calculated dose to the public as a result of the two gaseous releases was less than 1.0 percent of 10 CFR Part 50, Appendix I limits.
Inspection Report# : 2000003*(pdf)*

Physical Protection

Miscellaneous

Significance: N/A Dec 06, 2001
Identified By: NRC
Item Type: FIN Finding
Overall, an effective corrective action program was in place.
The licensee was effective at identifying problems and entering them into the corrective action program for resolution. Safety significance was appropriately considered in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee evaluations and department self-assessments were comprehensive and self-critical. Based on interviews conducted during this inspection, individuals at the site felt free to input safety issues into the corrective action program and felt that the program effectively addressed safety issues documented. Overall, the licensee implemented corrective actions that were timely and effective. However, the team found that the licensee's process for identifying performance trends relied heavily on each department manager recognizing when adverse trends existed. In one instance, an adverse performance trend involving the inadvertent release of radioactive material from the radiologically controlled area had not been identified and corrected by the department manager. Two violations of NRC requirements were identified where corrective actions were either not effective or timely to prevent a similar occurrence.
Inspection Report# : 2001007*(pdf)*

Significance: SL-IV Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly conduct training of a plant equipment operator trainee during an equipment training evolution
On October 27, 1999, a plant equipment operator trainee was directed and allowed by a qualified plant equipment operator to perform the helium compensation calibration of the hydrogen recombiner in the waste gas holdup system without direct supervision. As a result, the calibration was performed incorrectly. Technical Specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.b, requires procedures for authorities and responsibilities for safe operation. Section 6.15, of Operations Department Administrative Manual Procedure ODA-102, Conduct of Operations, Revision 17, stated, in part, "Whenever trainees operate equipment, a qualified operator shall observe the trainee . . ." and "When a Trainee is performing any equipment operation or control manipulation, the qualified personnel shall observe the necessary indication as if he performed the task himself using all required self verification techniques." The failure of a qualified radwaste equipment operator to directly observe a radwaste equipment operator trainee operating equipment and performing the helium compensation calibration of the hydrogen recombiner is a violation of Technical Specification 5.4.1.a. The NRC determined that this was a willful violation of Operations Department Administrative Procedure ODA-102 requirements. This Severity Level IV violation is being treated as a noncited violation and was entered in the licensee's corrective action program as Smart Form SMF-1999-002891-00.
Inspection Report# : 2000007*(pdf)*

Significance: N/A Aug 28, 2000
Identified By: NRC
Item Type: FIN Finding
Effective Corrective Action Program
The licensee was effective at identifying problems and putting them into the corrective action program. The licensee self-identified the significant deficiencies identified during the review period. The licensee effectively prioritized the extent to which individual problems would be evaluated consistent with their safety and risk significance and established schedules for implementation of corrective actions. The licensee implemented corrective actions that were timely and effective.
Inspection Report# : 2000005*(pdf)*

Last modified : April 01, 2002

Comanche Peak 1

Initiating Events

Significance: G Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to determine the technical adequacy of a change in operation of the Unit 1 pressurizer relief tank
On July 25, 2000, the inspector noted that the Unit 1 reactor operator logs contained a note which allowed the pressurizer relief tank pressure to be maintained at 0 psig provided it was purged with nitrogen once a quarter. The inspector found that on August 30, 1994, a procedure change incorporated this note and removed a requirement to maintain a minimum of 1 psig pressure in the tank. The change was considered an administrative change only and no technical justification was provided. The change in minimum operating pressure was a change to the facility that increased the probability of developing an explosive mixture of hydrogen and oxygen in the pressurizer relief tank which was not an analyzed condition for the facility. Technical Specification 6.8.1; Regulatory Guide 1.33, Revision 2, Appendix A; and plant administrative procedures required a determination of technical adequacy for this material change. This violation of Technical Specifications is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The issue was placed into the licensee's problem identification and resolution program as Smart Form SMF-2000-001693-00.
Inspection Report# : 2000007*(pdf)*

Mitigating Systems

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
NCV for nonconservative design calculation for safety-related air accumulators.
The inspectors identified that a calculation for all safety-related air accumulators did not properly account for air usage during a design basis mission. The calculation did not account for dynamic air consumption rates for the system and was therefore nonconservative. Failure to properly incorporate design basis information into station calculations was a violation of 10 CFR Part 50, Appendix B, Criterion III. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001232-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the nonconservative values had not been incorporated into station procedures and the operability of safety-related equipment was not affected.
Inspection Report# : 2000003*(pdf)*

Significance: G Sep 13, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly identify and correct degraded EDG jacket water coolers
The inspectors noted that heat exchanger performance trending had not been conducted for approximately 1½ years on the Unit 1 emergency diesel generator jacket water coolers and for about 1 year on the Unit 2 emergency diesel generator jacket water coolers. During those periods, the Units 1 and 2 Train B emergency diesel generator jacket water coolers were frequently fouled beyond the acceptance criteria and were considered degraded. Failure to promptly identify this condition adverse to quality was a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001548-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the licensee's past operability review determined that the degraded emergency diesel jacket water coolers were operable.
Inspection Report# : 2000006*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Incomplete valve alignment established drain path from spent fuel pools
Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained. Step 5.9.2 in procedure SOP-506, "Spent Fuel Pool Cooling and Cleanup System" states to close Valves XSF-0220, XSF-0067 and XSF-0068 following completion of spent fuel pool transfer canal draining operations. Contrary to this requirement, Valve XSF-0220 was found open on February 1, 2001, following completion of transfer canal draining operations which established a gravity drain path from Spent Fuel Pools X-01 and X-02 to the recycle holdup tank. This violation is documented in Smart Form 2001-000221-00 and is being treated as a noncited violation.
Inspection Report# : 2001002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Oct 06, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to survey
10 CFR 20.1501(a) states, in part, that each licensee shall make or cause to be made surveys that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of radioactive material. In the following three instances, the licensee failed to properly survey tools and equipment, and determine the quantities of radioactive material present. On March 27, 2001, the licensee discovered a Chicago fitting containing 2000 counts per minute of radioactive material outside the radiologically controlled area. The fitting caused the yard access small article monitor to alarm when personnel were exiting the yard access area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000630. On April 1, 2001, the licensee identified that eddy current equipment was not properly surveyed prior to decontamination. The label indicated contamination levels of 20,000 disintegrations per minute per 100 square centimeters when the actual contamination levels were mrad smearable. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000729. On May 24, 2001, the licensee identified that a tool removed from the clean tool room contained 7000 counts per minute of radioactive material. The tool caused an alarm on the personnel monitor at the Alternate Access Point located outside the radiologically controlled area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-001352. These three examples are being treated as a non-cited violation. The safety significance of this violation was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no over exposure, no substantial potential for over exposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001004*(pdf)*

Significance: G Apr 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
The inspector identified two occasions, during the Unit 1 refueling outage, when radiation protection personnel failed to survey an area prior to workers entering the area. The first occasion was for failure to survey steam generator platform Loop Room 2/3. The second occasion was for failure to survey the overhead of the pressurizer relief tank room. 10 CFR 20.1501(a) requires each licensee to make or cause to be made surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform radiological surveys in the above areas was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Forms 2001-1619 and 2001-805, respectively. The safety significance of this violation 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. This violation was more than minor because the failure to perform a survey has a credible impact on safety and the potential for unplanned or unintended dose.
Inspection Report# : 2001003*(pdf)*

Significance: SL-IV Dec 12, 2000
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to survey
On December 12, 2000, the inspector identified that radiation protection personnel failed to perform a radiological survey of an area above the waste monitoring tank room on elevation 790 foot of the auxiliary building prior to a worker entering the area. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform a radiological survey of the above area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Form 2000-3407. The significance of this violation was determined to be more than minor because there was a credible impact on a worker's radiation safety; however, it did not affect the cornerstone since there were no actual consequences and monitoring devices remained operable
Inspection Report# : 2000009*(pdf)*

Public Radiation Safety

Significance: G May 18, 2000
Identified By: NRC
Item Type: FIN Finding
Ineffective corrective actions for failure to source check a radiation monitor prior to a release
The details surrounding the March 23, 1999, nonroutine release were in the licensee's corrective action program as Smart Form SMF-1999-000671-00. Corrective actions were completed, and Smart Form SMF-1999-000671-00 was closed on August 24, 1999. However, on September 28, 1999, the licensee again failed to source check the effluent radiation monitor prior to initiating a nonroutine gaseous batch release. Therefore, the inspectors concluded that the corrective actions were ineffective in preventing a second occurrence. This issue was characterized as a green finding because the significance of the related technical issue was green.
Inspection Report# : 2000003*(pdf)*

Significance: G May 04, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to source check a radiation monitor prior to a release
The licensee identified that on March 23, 1999, a nonroutine gaseous release was initiated from the Unit 2 volume control tank prior to performing a source check on the primary plant ventilation noble gas release rate monitor. The inspectors identified another incident on September 28, 1999, in which the licensee performed a nonroutine gaseous batch release from the Unit 1 volume control tank prior to performing a source check to verify proper operation of the primary plant ventilation noble gas release rate monitor. The failure to perform the source check on the effluent monitors could have resulted in a radioactive gaseous release to the environment which was not properly monitored by an operable radiation monitor. The licensee's failure to perform source checks on the primary plant ventilation noble gas release rate monitors prior to initiating the gaseous batch releases from the volume control tanks was a violation of Technical Specification 5.5.1. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-001412-00. This issue was characterized as a green finding using the public radiation safety significance determination process. It was determined to have very low risk significance because the incident did not impair the licensee's ability to assess dose, and the calculated dose to the public as a result of the two gaseous releases was less than 1.0 percent of 10 CFR Part 50, Appendix I limits.
Inspection Report# : 2000003*(pdf)*

Significance: W Dec 06, 2001
Identified By: Licensee
Item Type: VIO Violation
Failure to survey
Between January 24, 2000, and May 24, 2001, the licensee identified 11 examples in which radioactive material was inadvertently released from the radiologically controlled area because the licensee failed to properly perform surveys. Two of these examples have been dispositioned as a noncited violation of very low safety significance (Green) in NRC Inspection Report 50-445;446/01-04. The failure to perform proper radiological surveys are nine examples of a Technical Specification 5.4.1.a violation consistent with the NRC Enforcement Policy. These events are described in the licensee's corrective action program, reference Smart Forms 2000-000187, 2000-001080, 2000-002380, 2000-002445, 2000-002458, 2000-002740, 2000-003122, 2001-000850, and 2001-000968. Using the public radiation safety significance determination process, the NRC determined that the finding was of low-to-moderate risk significance (white) because the public exposure associated with each item was less than 5 millirem; however, there were more than five events. The events were more than minor, because the failure to properly survey radioactive material has a credible impact on safety, and the issues involved occurrences in the licensee's radioactive material control program that were contrary to NRC requirements or licensee procedures.
Inspection Report# : 2001007*(pdf)*

Physical Protection

Miscellaneous

Significance: N/A Dec 06, 2001
Identified By: NRC
Item Type: FIN Finding
Overall, an effective corrective action program was in place.
The licensee was effective at identifying problems and entering them into the corrective action program for resolution. Safety significance was appropriately considered in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee evaluations and department self-assessments were comprehensive and self-critical. Based on interviews conducted during this inspection, individuals at the site felt free to input safety issues into the corrective action program and felt that the program effectively addressed safety issues documented. Overall, the licensee implemented corrective actions that were timely and effective. However, the team found that the licensee's process for identifying performance trends relied heavily on each department manager recognizing when adverse trends existed. In one instance, an adverse performance trend involving the inadvertent release of radioactive material from the radiologically controlled area had not been identified and corrected by the department manager. Two violations of NRC requirements were identified where corrective actions were either not effective or timely to prevent a similar occurrence.
Inspection Report# : 2001007*(pdf)*

Significance: SL-IV Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly conduct training of a plant equipment operator trainee during an equipment training evolution
On October 27, 1999, a plant equipment operator trainee was directed and allowed by a qualified plant equipment operator to perform the helium compensation calibration of the hydrogen recombiner in the waste gas holdup system without direct supervision. As a result, the calibration was performed incorrectly. Technical Specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.b, requires procedures for authorities and responsibilities for safe operation. Section 6.15, of Operations Department Administrative Manual Procedure ODA-102, Conduct of Operations, Revision 17, stated, in part, "Whenever trainees operate equipment, a qualified operator shall observe the trainee . . ." and "When a Trainee is performing any equipment operation or control manipulation, the qualified personnel shall observe the necessary indication as if he performed the task himself using all required self verification techniques." The failure of a qualified radwaste equipment operator to directly observe a radwaste equipment operator trainee operating equipment and performing the helium compensation calibration of the hydrogen recombiner is a violation of Technical Specification 5.4.1.a. The NRC determined that this was a willful violation of Operations Department Administrative Procedure ODA-102 requirements. This Severity Level IV violation is being treated as a noncited violation and was entered in the licensee's corrective action program as Smart Form SMF-1999-002891-00.
Inspection Report# : 2000007*(pdf)*

Significance: N/A Aug 28, 2000
Identified By: NRC
Item Type: FIN Finding
Effective Corrective Action Program
The licensee was effective at identifying problems and putting them into the corrective action program. The licensee self-identified the significant deficiencies identified during the review period. The licensee effectively prioritized the extent to which individual problems would be evaluated consistent with their safety and risk significance and established schedules for implementation of corrective actions. The licensee implemented corrective actions that were timely and effective.
Inspection Report# : 2000005*(pdf)*

Last modified : April 01, 2002

Comanche Peak 1

Initiating Events

Significance: G Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to determine the technical adequacy of a change in operation of the Unit 1 pressurizer relief tank
On July 25, 2000, the inspector noted that the Unit 1 reactor operator logs contained a note which allowed the pressurizer relief tank pressure to be maintained at 0 psig provided it was purged with nitrogen once a quarter. The inspector found that on August 30, 1994, a procedure change incorporated this note and removed a requirement to maintain a minimum of 1 psig pressure in the tank. The change was considered an administrative change only and no technical justification was provided. The change in minimum operating pressure was a change to the facility that increased the probability of developing an explosive mixture of hydrogen and oxygen in the pressurizer relief tank which was not an analyzed condition for the facility. Technical Specification 6.8.1; Regulatory Guide 1.33, Revision 2, Appendix A; and plant administrative procedures required a determination of technical adequacy for this material change. This violation of Technical Specifications is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The issue was placed into the licensee's problem identification and resolution program as Smart Form SMF-2000-001693-00.
Inspection Report# : 2000007*(pdf)*

Mitigating Systems

Significance: G Sep 13, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly identify and correct degraded EDG jacket water coolers
The inspectors noted that heat exchanger performance trending had not been conducted for approximately 1½ years on the Unit 1 emergency diesel generator jacket water coolers and for about 1 year on the Unit 2 emergency diesel generator jacket water coolers. During those periods, the Units 1 and 2 Train B emergency diesel generator jacket water coolers were frequently fouled beyond the acceptance criteria and were considered degraded. Failure to promptly identify this condition adverse to quality was a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001548-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the licensee's past operability review determined that the degraded emergency diesel jacket water coolers were operable.
Inspection Report# : 2000006*(pdf)*

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
NCV for nonconservative design calculation for safety-related air accumulators.
The inspectors identified that a calculation for all safety-related air accumulators did not properly account for air usage during a design basis mission. The calculation did not account for dynamic air consumption rates for the system and was therefore nonconservative. Failure to properly incorporate design basis information into station calculations was a violation of 10 CFR Part 50, Appendix B, Criterion III. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001232-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the nonconservative values had not been incorporated into station procedures and the operability of safety-related equipment was not affected.
Inspection Report# : 2000003*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Incomplete valve alignment established drain path from spent fuel pools
Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained. Step 5.9.2 in procedure SOP-506, "Spent Fuel Pool Cooling and Cleanup System" states to close Valves XSF-0220, XSF-0067 and XSF-0068 following completion of spent fuel pool transfer canal draining operations. Contrary to this requirement, Valve XSF-0220 was found open on February 1, 2001, following completion of transfer canal draining operations which established a gravity drain path from Spent Fuel Pools X-01 and X-02 to the recycle holdup tank. This violation is documented in Smart Form 2001-000221-00 and is being treated as a noncited violation.
Inspection Report# : 2001002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Oct 06, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to survey
10 CFR 20.1501(a) states, in part, that each licensee shall make or cause to be made surveys that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of radioactive material. In the following three instances, the licensee failed to properly survey tools and equipment, and determine the quantities of radioactive material present. On March 27, 2001, the licensee discovered a Chicago fitting containing 2000 counts per minute of radioactive material outside the radiologically controlled area. The fitting caused the yard access small article monitor to alarm when personnel were exiting the yard access area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000630. On April 1, 2001, the licensee identified that eddy current equipment was not properly surveyed prior to decontamination. The label indicated contamination levels of 20,000 disintegrations per minute per 100 square centimeters when the actual contamination levels were mrad smearable. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000729. On May 24, 2001, the licensee identified that a tool removed from the clean tool room contained 7000 counts per minute of radioactive material. The tool caused an alarm on the personnel monitor at the Alternate Access Point located outside the radiologically controlled area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-001352. These three examples are being treated as a non-cited violation. The safety significance of this violation was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no over exposure, no substantial potential for over exposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001004*(pdf)*

Significance: G Apr 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
The inspector identified two occasions, during the Unit 1 refueling outage, when radiation protection personnel failed to survey an area prior to workers entering the area. The first occasion was for failure to survey steam generator platform Loop Room 2/3. The second occasion was for failure to survey the overhead of the pressurizer relief tank room. 10 CFR 20.1501(a) requires each licensee to make or cause to be made surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform radiological surveys in the above areas was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Forms 2001-1619 and 2001-805, respectively. The safety significance of this violation 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. This violation was more than minor because the failure to perform a survey has a credible impact on safety and the potential for unplanned or unintended dose.
Inspection Report# : 2001003*(pdf)*

Significance: SL-IV Dec 12, 2000
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to survey
On December 12, 2000, the inspector identified that radiation protection personnel failed to perform a radiological survey of an area above the waste monitoring tank room on elevation 790 foot of the auxiliary building prior to a worker entering the area. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform a radiological survey of the above area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Form 2000-3407. The significance of this violation was determined to be more than minor because there was a credible impact on a worker's radiation safety; however, it did not affect the cornerstone since there were no actual consequences and monitoring devices remained operable
Inspection Report# : 2000009*(pdf)*

Public Radiation Safety

Significance: G May 18, 2000
Identified By: NRC
Item Type: FIN Finding
Ineffective corrective actions for failure to source check a radiation monitor prior to a release
The details surrounding the March 23, 1999, nonroutine release were in the licensee's corrective action program as Smart Form SMF-1999-000671-00. Corrective actions were completed, and Smart Form SMF-1999-000671-00 was closed on August 24, 1999. However, on September 28, 1999, the licensee again failed to source check the effluent radiation monitor prior to initiating a nonroutine gaseous batch release. Therefore, the inspectors concluded that the corrective actions were ineffective in preventing a second occurrence. This issue was characterized as a green finding because the significance of the related technical issue was green.
Inspection Report# : 2000003*(pdf)*

Significance: G May 04, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to source check a radiation monitor prior to a release
The licensee identified that on March 23, 1999, a nonroutine gaseous release was initiated from the Unit 2 volume control tank prior to performing a source check on the primary plant ventilation noble gas release rate monitor. The inspectors identified another incident on September 28, 1999, in which the licensee performed a nonroutine gaseous batch release from the Unit 1 volume control tank prior to performing a source check to verify proper operation of the primary plant ventilation noble gas release rate monitor. The failure to perform the source check on the effluent monitors could have resulted in a radioactive gaseous release to the environment which was not properly monitored by an operable radiation monitor. The licensee's failure to perform source checks on the primary plant ventilation noble gas release rate monitors prior to initiating the gaseous batch releases from the volume control tanks was a violation of Technical Specification 5.5.1. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-001412-00. This issue was characterized as a green finding using the public radiation safety significance determination process. It was determined to have very low risk significance because the incident did not impair the licensee's ability to assess dose, and the calculated dose to the public as a result of the two gaseous releases was less than 1.0 percent of 10 CFR Part 50, Appendix I limits.
Inspection Report# : 2000003*(pdf)*

Significance: W Dec 06, 2001
Identified By: Licensee
Item Type: VIO Violation
Failure to survey
Between January 24, 2000, and May 24, 2001, the licensee identified 11 examples in which radioactive material was inadvertently released from the radiologically controlled area because the licensee failed to properly perform surveys. Two of these examples have been dispositioned as a noncited violation of very low safety significance (Green) in NRC Inspection Report 50-445;446/01-04. The failure to perform proper radiological surveys are nine examples of a Technical Specification 5.4.1.a violation consistent with the NRC Enforcement Policy. These events are described in the licensee's corrective action program, reference Smart Forms 2000-000187, 2000-001080, 2000-002380, 2000-002445, 2000-002458, 2000-002740, 2000-003122, 2001-000850, and 2001-000968. Using the public radiation safety significance determination process, the NRC determined that the finding was of low-to-moderate risk significance (white) because the public exposure associated with each item was less than 5 millirem; however, there were more than five events. The events were more than minor, because the failure to properly survey radioactive material has a credible impact on safety, and the issues involved occurrences in the licensee's radioactive material control program that were contrary to NRC requirements or licensee procedures.
Inspection Report# : 2001007*(pdf)*

Physical Protection

Miscellaneous

Significance: N/A Aug 28, 2000
Identified By: NRC
Item Type: FIN Finding
Effective Corrective Action Program
The licensee was effective at identifying problems and putting them into the corrective action program. The licensee self-identified the significant deficiencies identified during the review period. The licensee effectively prioritized the extent to which individual problems would be evaluated consistent with their safety and risk significance and established schedules for implementation of corrective actions. The licensee implemented corrective actions that were timely and effective.
Inspection Report# : 2000005*(pdf)*

Significance: N/A Dec 06, 2001
Identified By: NRC
Item Type: FIN Finding
Overall, an effective corrective action program was in place.
The licensee was effective at identifying problems and entering them into the corrective action program for resolution. Safety significance was appropriately considered in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee evaluations and department self-assessments were comprehensive and self-critical. Based on interviews conducted during this inspection, individuals at the site felt free to input safety issues into the corrective action program and felt that the program effectively addressed safety issues documented. Overall, the licensee implemented corrective actions that were timely and effective. However, the team found that the licensee's process for identifying performance trends relied heavily on each department manager recognizing when adverse trends existed. In one instance, an adverse performance trend involving the inadvertent release of radioactive material from the radiologically controlled area had not been identified and corrected by the department manager. Two violations of NRC requirements were identified where corrective actions were either not effective or timely to prevent a similar occurrence.
Inspection Report# : 2001007*(pdf)*

Significance: SL-IV Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly conduct training of a plant equipment operator trainee during an equipment training evolution
On October 27, 1999, a plant equipment operator trainee was directed and allowed by a qualified plant equipment operator to perform the helium compensation calibration of the hydrogen recombiner in the waste gas holdup system without direct supervision. As a result, the calibration was performed incorrectly. Technical Specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.b, requires procedures for authorities and responsibilities for safe operation. Section 6.15, of Operations Department Administrative Manual Procedure ODA-102, Conduct of Operations, Revision 17, stated, in part, "Whenever trainees operate equipment, a qualified operator shall observe the trainee . . ." and "When a Trainee is performing any equipment operation or control manipulation, the qualified personnel shall observe the necessary indication as if he performed the task himself using all required self verification techniques." The failure of a qualified radwaste equipment operator to directly observe a radwaste equipment operator trainee operating equipment and performing the helium compensation calibration of the hydrogen recombiner is a violation of Technical Specification 5.4.1.a. The NRC determined that this was a willful violation of Operations Department Administrative Procedure ODA-102 requirements. This Severity Level IV violation is being treated as a noncited violation and was entered in the licensee's corrective action program as Smart Form SMF-1999-002891-00.
Inspection Report# : 2000007*(pdf)*

Last modified : March 29, 2002

Comanche Peak 1

Initiating Events

Significance: G Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to determine the technical adequacy of a change in operation of the Unit 1 pressurizer relief tank
On July 25, 2000, the inspector noted that the Unit 1 reactor operator logs contained a note which allowed the pressurizer relief tank pressure to be maintained at 0 psig provided it was purged with nitrogen once a quarter. The inspector found that on August 30, 1994, a procedure change incorporated this note and removed a requirement to maintain a minimum of 1 psig pressure in the tank. The change was considered an administrative change only and no technical justification was provided. The change in minimum operating pressure was a change to the facility that increased the probability of developing an explosive mixture of hydrogen and oxygen in the pressurizer relief tank which was not an analyzed condition for the facility. Technical Specification 6.8.1; Regulatory Guide 1.33, Revision 2, Appendix A; and plant administrative procedures required a determination of technical adequacy for this material change. This violation of Technical Specifications is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The issue was placed into the licensee's problem identification and resolution program as Smart Form SMF-2000-001693-00.
Inspection Report# : 2000007*(pdf)*

Mitigating Systems

Significance: G Sep 13, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly identify and correct degraded EDG jacket water coolers
The inspectors noted that heat exchanger performance trending had not been conducted for approximately 1½ years on the Unit 1 emergency diesel generator jacket water coolers and for about 1 year on the Unit 2 emergency diesel generator jacket water coolers. During those periods, the Units 1 and 2 Train B emergency diesel generator jacket water coolers were frequently fouled beyond the acceptance criteria and were considered degraded. Failure to promptly identify this condition adverse to quality was a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001548-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the licensee's past operability review determined that the degraded emergency diesel jacket water coolers were operable.
Inspection Report# : 2000006*(pdf)*

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
NCV for nonconservative design calculation for safety-related air accumulators.
The inspectors identified that a calculation for all safety-related air accumulators did not properly account for air usage during a design basis mission. The calculation did not account for dynamic air consumption rates for the system and was therefore nonconservative. Failure to properly incorporate design basis information into station calculations was a violation of 10 CFR Part 50, Appendix B, Criterion III. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001232-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the nonconservative values had not been incorporated into station procedures and the operability of safety-related equipment was not affected.
Inspection Report# : 2000003*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Incomplete valve alignment established drain path from spent fuel pools
Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained. Step 5.9.2 in procedure SOP-506, "Spent Fuel Pool Cooling and Cleanup System" states to close Valves XSF-0220, XSF-0067 and XSF-0068 following completion of spent fuel pool transfer canal draining operations. Contrary to this requirement, Valve XSF-0220 was found open on February 1, 2001, following completion of transfer canal draining operations which established a gravity drain path from Spent Fuel Pools X-01 and X-02 to the recycle holdup tank. This violation is documented in Smart Form 2001-000221-00 and is being treated as a noncited violation.
Inspection Report# : 2001002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: SL-IV Dec 12, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
On December 12, 2000, the inspector identified that radiation protection personnel failed to perform a radiological survey of an area above the waste monitoring tank room on elevation 790 foot of the auxiliary building prior to a worker entering the area. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform a radiological survey of the above area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Form 2000-3407. The significance of this violation was determined to be more than minor because there was a credible impact on a worker's radiation safety; however, it did not affect the cornerstone since there were no actual consequences and monitoring devices remained operable
Inspection Report# : 2000009*(pdf)*

Significance: G Oct 06, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to survey
10 CFR 20.1501(a) states, in part, that each licensee shall make or cause to be made surveys that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of radioactive material. In the following three instances, the licensee failed to properly survey tools and equipment, and determine the quantities of radioactive material present. On March 27, 2001, the licensee discovered a Chicago fitting containing 2000 counts per minute of radioactive material outside the radiologically controlled area. The fitting caused the yard access small article monitor to alarm when personnel were exiting the yard access area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000630. On April 1, 2001, the licensee identified that eddy current equipment was not properly surveyed prior to decontamination. The label indicated contamination levels of 20,000 disintegrations per minute per 100 square centimeters when the actual contamination levels were mrad smearable. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000729. On May 24, 2001, the licensee identified that a tool removed from the clean tool room contained 7000 counts per minute of radioactive material. The tool caused an alarm on the personnel monitor at the Alternate Access Point located outside the radiologically controlled area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-001352. These three examples are being treated as a non-cited violation. The safety significance of this violation was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no over exposure, no substantial potential for over exposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001004*(pdf)*

Significance: G Apr 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
The inspector identified two occasions, during the Unit 1 refueling outage, when radiation protection personnel failed to survey an area prior to

workers entering the area. The first occasion was for failure to survey steam generator platform Loop Room 2/3. The second occasion was for failure to survey the overhead of the pressurizer relief tank room. 10 CFR 20.1501(a) requires each licensee to make or cause to be made surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform radiological surveys in the above areas was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Forms 2001-1619 and 2001-805, respectively. The safety significance of this violation 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. This violation was more than minor because the failure to perform a survey has a credible impact on safety and the potential for unplanned or unintended dose.
Inspection Report# : 2001003*(pdf)*

Public Radiation Safety

Significance: G May 18, 2000
Identified By: NRC
Item Type: FIN Finding
Ineffective corrective actions for failure to source check a radiation monitor prior to a release
The details surrounding the March 23, 1999, nonroutine release were in the licensee's corrective action program as Smart Form SMF-1999-000671-00. Corrective actions were completed, and Smart Form SMF-1999-000671-00 was closed on August 24, 1999. However, on September 28, 1999, the licensee again failed to source check the effluent radiation monitor prior to initiating a nonroutine gaseous batch release. Therefore, the inspectors concluded that the corrective actions were ineffective in preventing a second occurrence. This issue was characterized as a green finding because the significance of the related technical issue was green.
Inspection Report# : 2000003*(pdf)*

Significance: G May 04, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to source check a radiation monitor prior to a release
The licensee identified that on March 23, 1999, a nonroutine gaseous release was initiated from the Unit 2 volume control tank prior to performing a source check on the primary plant ventilation noble gas release rate monitor. The inspectors identified another incident on September 28, 1999, in which the licensee performed a nonroutine gaseous batch release from the Unit 1 volume control tank prior to performing a source check to verify proper operation of the primary plant ventilation noble gas release rate monitor. The failure to perform the source check on the effluent monitors could have resulted in a radioactive gaseous release to the environment which was not properly monitored by an operable radiation monitor. The licensee's failure to perform source checks on the primary plant ventilation noble gas release rate monitors prior to initiating the gaseous batch releases from the volume control tanks was a violation of Technical Specification 5.5.1. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-001412-00. This issue was characterized as a green finding using the public radiation safety significance determination process. It was determined to have very low risk significance because the incident did not impair the licensee's ability to assess dose, and the calculated dose to the public as a result of the two gaseous releases was less than 1.0 percent of 10 CFR Part 50, Appendix I limits.
Inspection Report# : 2000003*(pdf)*

Significance: W Dec 06, 2001
Identified By: Licensee
Item Type: VIO Violation
Failure to survey
Between January 24, 2000, and May 24, 2001, the licensee identified 11 examples in which radioactive material was inadvertently released from the radiologically controlled area because the licensee failed to properly perform surveys. Two of these examples have been dispositioned as a noncited violation of very low safety significance (Green) in NRC Inspection Report 50-445;446/01-04. The failure to perform proper radiological surveys are nine examples of a Technical Specification 5.4.1.a violation consistent with the NRC Enforcement Policy. These events are described in the licensee's corrective action program, reference Smart Forms 2000-000187, 2000-001080, 2000-002380, 2000-002445, 2000-002458, 2000-002740, 2000-003122, 2001-000850, and 2001-000968. Using the public radiation safety significance determination process, the NRC determined that the finding was of low-to-moderate risk significance (white) because the public exposure associated with each item was less than 5 millirem; however, there were more than five events. The events were more than minor, because the failure to properly survey radioactive material has a credible impact on safety, and the issues involved occurrences in the licensee's radioactive material control program that were contrary to NRC requirements or licensee procedures.
Inspection Report# : 2001007*(pdf)*

Physical Protection

Miscellaneous

Significance: SL-IV Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly conduct training of a plant equipment operator trainee during an equipment training evolution
On October 27, 1999, a plant equipment operator trainee was directed and allowed by a qualified plant equipment operator to perform the helium compensation calibration of the hydrogen recombiner in the waste gas holdup system without direct supervision. As a result, the calibration was performed incorrectly. Technical Specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.b, requires procedures for authorities and responsibilities for safe operation. Section 6.15, of Operations Department Administrative Manual Procedure ODA-102, Conduct of Operations, Revision 17, stated, in part, "Whenever trainees operate equipment, a qualified operator shall observe the trainee . . ." and "When a Trainee is performing any equipment operation or control manipulation, the qualified personnel shall observe the necessary indication as if he performed the task himself using all required self verification techniques." The failure of a qualified radwaste equipment operator to directly observe a radwaste equipment operator trainee operating equipment and performing the helium compensation calibration of the hydrogen recombiner is a violation of Technical Specification 5.4.1.a. The NRC determined that this was a willful violation of Operations Department Administrative Procedure ODA-102 requirements. This Severity Level IV violation is being treated as a noncited violation and was entered in the licensee's corrective action program as Smart Form SMF-1999-002891-00.
Inspection Report# : 2000007*(pdf)*

Significance: N/A Aug 28, 2000
Identified By: NRC
Item Type: FIN Finding
Effective Corrective Action Program
The licensee was effective at identifying problems and putting them into the corrective action program. The licensee self-identified the significant deficiencies identified during the review period. The licensee effectively prioritized the extent to which individual problems would be evaluated consistent with their safety and risk significance and established schedules for implementation of corrective actions. The licensee implemented corrective actions that were timely and effective.
Inspection Report# : 2000005*(pdf)*

Significance: N/A Dec 06, 2001
Identified By: NRC
Item Type: FIN Finding
Overall, an effective corrective action program was in place.
The licensee was effective at identifying problems and entering them into the corrective action program for resolution. Safety significance was appropriately considered in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee evaluations and department self-assessments were comprehensive and self-critical. Based on interviews conducted during this inspection, individuals at the site felt free to input safety issues into the corrective action program and felt that the program effectively addressed safety issues documented. Overall, the licensee implemented corrective actions that were timely and effective. However, the team found that the licensee's process for identifying performance trends relied heavily on each department manager recognizing when adverse trends existed. In one instance, an adverse performance trend involving the inadvertent release of radioactive material from the radiologically controlled area had not been identified and corrected by the department manager. Two violations of NRC requirements were identified where corrective actions were either not effective or timely to prevent a similar occurrence.
Inspection Report# : 2001007*(pdf)*

Last modified : March 28, 2002

Comanche Peak 1

Initiating Events

Significance: G Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to determine the technical adequacy of a change in operation of the Unit 1 pressurizer relief tank
On July 25, 2000, the inspector noted that the Unit 1 reactor operator logs contained a note which allowed the pressurizer relief tank pressure to be maintained at 0 psig provided it was purged with nitrogen once a quarter. The inspector found that on August 30, 1994, a procedure change incorporated this note and removed a requirement to maintain a minimum of 1 psig pressure in the tank. The change was considered an administrative change only and no technical justification was provided. The change in minimum operating pressure was a change to the facility that increased the probability of developing an explosive mixture of hydrogen and oxygen in the pressurizer relief tank which was not an analyzed condition for the facility. Technical Specification 6.8.1; Regulatory Guide 1.33, Revision 2, Appendix A; and plant administrative procedures required a determination of technical adequacy for this material change. This violation of Technical Specifications is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The issue was placed into the licensee's problem identification and resolution program as Smart Form SMF-2000-001693-00.
Inspection Report# : 2000007*(pdf)*

Mitigating Systems

Significance: G Sep 13, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly identify and correct degraded EDG jacket water coolers
The inspectors noted that heat exchanger performance trending had not been conducted for approximately 1½ years on the Unit 1 emergency diesel generator jacket water coolers and for about 1 year on the Unit 2 emergency diesel generator jacket water coolers. During those periods, the Units 1 and 2 Train B emergency diesel generator jacket water coolers were frequently fouled beyond the acceptance criteria and were considered degraded. Failure to promptly identify this condition adverse to quality was a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001548-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the licensee's past operability review determined that the degraded emergency diesel jacket water coolers were operable.
Inspection Report# : 2000006*(pdf)*

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
NCV for nonconservative design calculation for safety-related air accumulators.
The inspectors identified that a calculation for all safety-related air accumulators did not properly account for air usage during a design basis mission. The calculation did not account for dynamic air consumption rates for the system and was therefore nonconservative. Failure to properly incorporate design basis information into station calculations was a violation of 10 CFR Part 50, Appendix B, Criterion III. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001232-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the nonconservative values had not been incorporated into station procedures and the operability of safety-related equipment was not affected.
Inspection Report# : 2000003*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Incomplete valve alignment established drain path from spent fuel pools
Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained. Step 5.9.2 in procedure SOP-506, "Spent Fuel Pool Cooling and Cleanup System" states to close Valves XSF-0220, XSF-0067 and XSF-0068 following completion of spent fuel pool transfer canal draining operations. Contrary to this requirement, Valve XSF-0220 was found open on February 1, 2001, following completion of transfer canal draining operations which established a gravity drain path from Spent Fuel Pools X-01 and X-02 to the recycle holdup tank. This violation is documented in Smart Form 2001-000221-00 and is being treated as a noncited violation.
Inspection Report# : 2001002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: SL-IV Dec 12, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
On December 12, 2000, the inspector identified that radiation protection personnel failed to perform a radiological survey of an area above the waste monitoring tank room on elevation 790 foot of the auxiliary building prior to a worker entering the area. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform a radiological survey of the above area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Form 2000-3407. The significance of this violation was determined to be more than minor because there was a credible impact on a worker's radiation safety; however, it did not affect the cornerstone since there were no actual consequences and monitoring devices remained operable
Inspection Report# : 2000009*(pdf)*

Significance: G Oct 06, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to survey
10 CFR 20.1501(a) states, in part, that each licensee shall make or cause to be made surveys that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of radioactive material. In the following three instances, the licensee failed to properly survey tools and equipment, and determine the quantities of radioactive material present. On March 27, 2001, the licensee discovered a Chicago fitting containing 2000 counts per minute of radioactive material outside the radiologically controlled area. The fitting caused the yard access small article monitor to alarm when personnel were exiting the yard access area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000630. On April 1, 2001, the licensee identified that eddy current equipment was not properly surveyed prior to decontamination. The label indicated contamination levels of 20,000 disintegrations per minute per 100 square centimeters when the actual contamination levels were mrad smearable. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000729. On May 24, 2001, the licensee identified that a tool removed from the clean tool room contained 7000 counts per minute of radioactive material. The tool caused an alarm on the personnel monitor at the Alternate Access Point located outside the radiologically controlled area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-001352. These three examples are being treated as a non-cited violation. The safety significance of this violation was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no over exposure, no substantial potential for over exposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001004*(pdf)*

Significance: G Apr 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
The inspector identified two occasions, during the Unit 1 refueling outage, when radiation protection personnel failed to survey an area prior to

workers entering the area. The first occasion was for failure to survey steam generator platform Loop Room 2/3. The second occasion was for failure to survey the overhead of the pressurizer relief tank room. 10 CFR 20.1501(a) requires each licensee to make or cause to be made surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform radiological surveys in the above areas was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Forms 2001-1619 and 2001-805, respectively. The safety significance of this violation 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. This violation was more than minor because the failure to perform a survey has a credible impact on safety and the potential for unplanned or unintended dose.
Inspection Report# : 2001003*(pdf)*

Public Radiation Safety

Significance: G May 18, 2000
Identified By: NRC
Item Type: FIN Finding
Ineffective corrective actions for failure to source check a radiation monitor prior to a release
The details surrounding the March 23, 1999, nonroutine release were in the licensee's corrective action program as Smart Form SMF-1999-000671-00. Corrective actions were completed, and Smart Form SMF-1999-000671-00 was closed on August 24, 1999. However, on September 28, 1999, the licensee again failed to source check the effluent radiation monitor prior to initiating a nonroutine gaseous batch release. Therefore, the inspectors concluded that the corrective actions were ineffective in preventing a second occurrence. This issue was characterized as a green finding because the significance of the related technical issue was green.
Inspection Report# : 2000003*(pdf)*

Significance: G May 04, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to source check a radiation monitor prior to a release
The licensee identified that on March 23, 1999, a nonroutine gaseous release was initiated from the Unit 2 volume control tank prior to performing a source check on the primary plant ventilation noble gas release rate monitor. The inspectors identified another incident on September 28, 1999, in which the licensee performed a nonroutine gaseous batch release from the Unit 1 volume control tank prior to performing a source check to verify proper operation of the primary plant ventilation noble gas release rate monitor. The failure to perform the source check on the effluent monitors could have resulted in a radioactive gaseous release to the environment which was not properly monitored by an operable radiation monitor. The licensee's failure to perform source checks on the primary plant ventilation noble gas release rate monitors prior to initiating the gaseous batch releases from the volume control tanks was a violation of Technical Specification 5.5.1. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-001412-00. This issue was characterized as a green finding using the public radiation safety significance determination process. It was determined to have very low risk significance because the incident did not impair the licensee's ability to assess dose, and the calculated dose to the public as a result of the two gaseous releases was less than 1.0 percent of 10 CFR Part 50, Appendix I limits.
Inspection Report# : 2000003*(pdf)*

Significance: W Dec 06, 2001
Identified By: Licensee
Item Type: VIO Violation
Failure to survey
Between January 24, 2000, and May 24, 2001, the licensee identified 11 examples in which radioactive material was inadvertently released from the radiologically controlled area because the licensee failed to properly perform surveys. Two of these examples have been dispositioned as a noncited violation of very low safety significance (Green) in NRC Inspection Report 50-445;446/01-04. The failure to perform proper radiological surveys are nine examples of a Technical Specification 5.4.1.a violation consistent with the NRC Enforcement Policy. These events are described in the licensee's corrective action program, reference Smart Forms 2000-000187, 2000-001080, 2000-002380, 2000-002445, 2000-002458, 2000-002740, 2000-003122, 2001-000850, and 2001-000968. Using the public radiation safety significance determination process, the NRC determined that the finding was of low-to-moderate risk significance (white) because the public exposure associated with each item was less than 5 millirem; however, there were more than five events. The events were more than minor, because the failure to properly survey radioactive material has a credible impact on safety, and the issues involved occurrences in the licensee's radioactive material control program that were contrary to NRC requirements or licensee procedures.
Inspection Report# : 2001007*(pdf)*

Physical Protection

Miscellaneous

Significance: SL-IV Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly conduct training of a plant equipment operator trainee during an equipment training evolution
On October 27, 1999, a plant equipment operator trainee was directed and allowed by a qualified plant equipment operator to perform the helium compensation calibration of the hydrogen recombiner in the waste gas holdup system without direct supervision. As a result, the calibration was performed incorrectly. Technical Specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.b, requires procedures for authorities and responsibilities for safe operation. Section 6.15, of Operations Department Administrative Manual Procedure ODA-102, Conduct of Operations, Revision 17, stated, in part, "Whenever trainees operate equipment, a qualified operator shall observe the trainee . . ." and "When a Trainee is performing any equipment operation or control manipulation, the qualified personnel shall observe the necessary indication as if he performed the task himself using all required self verification techniques." The failure of a qualified radwaste equipment operator to directly observe a radwaste equipment operator trainee operating equipment and performing the helium compensation calibration of the hydrogen recombiner is a violation of Technical Specification 5.4.1.a. The NRC determined that this was a willful violation of Operations Department Administrative Procedure ODA-102 requirements. This Severity Level IV violation is being treated as a noncited violation and was entered in the licensee's corrective action program as Smart Form SMF-1999-002891-00.
Inspection Report# : 2000007*(pdf)*

Significance: N/A Aug 28, 2000
Identified By: NRC
Item Type: FIN Finding
Effective Corrective Action Program
The licensee was effective at identifying problems and putting them into the corrective action program. The licensee self-identified the significant deficiencies identified during the review period. The licensee effectively prioritized the extent to which individual problems would be evaluated consistent with their safety and risk significance and established schedules for implementation of corrective actions. The licensee implemented corrective actions that were timely and effective.
Inspection Report# : 2000005*(pdf)*

Significance: N/A Dec 06, 2001
Identified By: NRC
Item Type: FIN Finding
Overall, an effective corrective action program was in place.
The licensee was effective at identifying problems and entering them into the corrective action program for resolution. Safety significance was appropriately considered in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee evaluations and department self-assessments were comprehensive and self-critical. Based on interviews conducted during this inspection, individuals at the site felt free to input safety issues into the corrective action program and felt that the program effectively addressed safety issues documented. Overall, the licensee implemented corrective actions that were timely and effective. However, the team found that the licensee's process for identifying performance trends relied heavily on each department manager recognizing when adverse trends existed. In one instance, an adverse performance trend involving the inadvertent release of radioactive material from the radiologically controlled area had not been identified and corrected by the department manager. Two violations of NRC requirements were identified where corrective actions were either not effective or timely to prevent a similar occurrence.
Inspection Report# : 2001007*(pdf)*

Last modified : March 28, 2002

Comanche Peak 1

Initiating Events

Significance: G Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to determine the technical adequacy of a change in operation of the Unit 1 pressurizer relief tank
On July 25, 2000, the inspector noted that the Unit 1 reactor operator logs contained a note which allowed the pressurizer relief tank pressure to be maintained at 0 psig provided it was purged with nitrogen once a quarter. The inspector found that on August 30, 1994, a procedure change incorporated this note and removed a requirement to maintain a minimum of 1 psig pressure in the tank. The change was considered an administrative change only and no technical justification was provided. The change in minimum operating pressure was a change to the facility that increased the probability of developing an explosive mixture of hydrogen and oxygen in the pressurizer relief tank which was not an analyzed condition for the facility. Technical Specification 6.8.1; Regulatory Guide 1.33, Revision 2, Appendix A; and plant administrative procedures required a determination of technical adequacy for this material change. This violation of Technical Specifications is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The issue was placed into the licensee's problem identification and resolution program as Smart Form SMF-2000-001693-00.
Inspection Report# : 2000007*(pdf)*

Mitigating Systems

Significance: G Sep 13, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly identify and correct degraded EDG jacket water coolers
The inspectors noted that heat exchanger performance trending had not been conducted for approximately 1½ years on the Unit 1 emergency diesel generator jacket water coolers and for about 1 year on the Unit 2 emergency diesel generator jacket water coolers. During those periods, the Units 1 and 2 Train B emergency diesel generator jacket water coolers were frequently fouled beyond the acceptance criteria and were considered degraded. Failure to promptly identify this condition adverse to quality was a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001548-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the licensee's past operability review determined that the degraded emergency diesel jacket water coolers were operable.
Inspection Report# : 2000006*(pdf)*

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
NCV for nonconservative design calculation for safety-related air accumulators.
The inspectors identified that a calculation for all safety-related air accumulators did not properly account for air usage during a design basis mission. The calculation did not account for dynamic air consumption rates for the system and was therefore nonconservative. Failure to properly incorporate design basis information into station calculations was a violation of 10 CFR Part 50, Appendix B, Criterion III. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001232-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the nonconservative values had not been incorporated into station procedures and the operability of safety-related equipment was not affected.
Inspection Report# : 2000003*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Incomplete valve alignment established drain path from spent fuel pools
Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained. Step 5.9.2 in procedure SOP-506, "Spent Fuel Pool Cooling and Cleanup System" states to close Valves XSF-0220, XSF-0067 and XSF-0068 following completion of spent fuel pool transfer canal draining operations. Contrary to this requirement, Valve XSF-0220 was found open on February 1, 2001, following completion of transfer canal draining operations which established a gravity drain path from Spent Fuel Pools X-01 and X-02 to the recycle holdup tank. This violation is documented in Smart Form 2001-000221-00 and is being treated as a noncited violation.
Inspection Report# : 2001002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Apr 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
The inspector identified two occasions, during the Unit 1 refueling outage, when radiation protection personnel failed to survey an area prior to workers entering the area. The first occasion was for failure to survey steam generator platform Loop Room 2/3. The second occasion was for failure to survey the overhead of the pressurizer relief tank room. 10 CFR 20.1501(a) requires each licensee to make or cause to be made surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform radiological surveys in the above areas was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Forms 2001-1619 and 2001-805, respectively. The safety significance of this violation 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. This violation was more than minor because the failure to perform a survey has a credible impact on safety and the potential for unplanned or unintended dose.
Inspection Report# : 2001003*(pdf)*

Significance: SL-IV Dec 12, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
On December 12, 2000, the inspector identified that radiation protection personnel failed to perform a radiological survey of an area above the waste monitoring tank room on elevation 790 foot of the auxiliary building prior to a worker entering the area. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform a radiological survey of the above area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Form 2000-3407. The significance of this violation was determined to be more than minor because there was a credible impact on a worker's radiation safety; however, it did not affect the cornerstone since there were no actual consequences and monitoring devices remained operable
Inspection Report# : 2000009*(pdf)*

Significance: G Oct 06, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to survey
10 CFR 20.1501(a) states, in part, that each licensee shall make or cause to be made surveys that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of radioactive material. In the following three instances, the licensee failed to properly survey tools and equipment, and determine the quantities of radioactive material present. On March 27, 2001, the licensee discovered a Chicago fitting containing 2000 counts per minute of radioactive material outside the radiologically controlled area. The fitting caused the yard access small article monitor to alarm when personnel were exiting the yard access area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000630. On April 1, 2001, the licensee identified that eddy current equipment was not

properly surveyed prior to decontamination. The label indicated contamination levels of 20,000 disintegrations per minute per 100 square centimeters when the actual contamination levels were mrad smearable. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000729. On May 24, 2001, the licensee identified that a tool removed from the clean tool room contained 7000 counts per minute of radioactive material. The tool caused an alarm on the personnel monitor at the Alternate Access Point located outside the radiologically controlled area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-001352. These three examples are being treated as a non-cited violation. The safety significance of this violation was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no over exposure, no substantial potential for over exposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001004*(pdf)*

Public Radiation Safety

Significance: TBD Dec 06, 2001
Identified By: Licensee
Item Type: AV Apparent Violation
Failure to survey
Between January 24, 2000, and May 24, 2001, the licensee identified 11 examples in which radioactive material was inadvertently released from the radiologically controlled area because the licensee failed to properly perform surveys. Two of these examples have been dispositioned as a noncited violation of very low safety significance (Green) in NRC Inspection Report 50-445;446/01-04. The failure to perform proper radiological surveys are nine examples of a Technical Specification 5.4.1.a violation. This violation is being treated as an apparent violation consistent with the NRC Enforcement Policy. These events are described in the licensee's corrective action program, reference Smart Forms 2000-000187, 2000-001080, 2000-002380, 2000-002445, 2000-002458, 2000-002740, 2000-003122, 2001-000850, and 2001-000968. Using the public radiation safety significance determination process, the NRC preliminarily determined that the finding was of low-to-moderate risk significance (white) because the public exposure associated with each item was less than 5 millirem; however, there were more than five events. The events were more than minor, because the failure to properly survey radioactive material has a credible impact on safety, and the issues involved occurrences in the licensee's radioactive material control program that were contrary to NRC requirements or licensee procedures.
Inspection Report# : 2001007*(pdf)*

Significance: G May 18, 2000
Identified By: NRC
Item Type: FIN Finding
Ineffective corrective actions for failure to source check a radiation monitor prior to a release
The details surrounding the March 23, 1999, nonroutine release were in the licensee's corrective action program as Smart Form SMF-1999-000671-00. Corrective actions were completed, and Smart Form SMF-1999-000671-00 was closed on August 24, 1999. However, on September 28, 1999, the licensee again failed to source check the effluent radiation monitor prior to initiating a nonroutine gaseous batch release. Therefore, the inspectors concluded that the corrective actions were ineffective in preventing a second occurrence. This issue was characterized as a green finding because the significance of the related technical issue was green.
Inspection Report# : 2000003*(pdf)*

Significance: G May 04, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to source check a radiation monitor prior to a release
The licensee identified that on March 23, 1999, a nonroutine gaseous release was initiated from the Unit 2 volume control tank prior to performing a source check on the primary plant ventilation noble gas release rate monitor. The inspectors identified another incident on September 28, 1999, in which the licensee performed a nonroutine gaseous batch release from the Unit 1 volume control tank prior to performing a source check to verify proper operation of the primary plant ventilation noble gas release rate monitor. The failure to perform the source check on the effluent monitors could have resulted in a radioactive gaseous release to the environment which was not properly monitored by an operable radiation monitor. The licensee's failure to perform source checks on the primary plant ventilation noble gas release rate monitors prior to initiating the gaseous batch releases from the volume control tanks was a violation of Technical Specification 5.5.1. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-001412-00. This issue was characterized as a green finding using the public radiation safety significance determination process. It was determined to have very low risk significance because the incident did not impair the licensee's ability to assess dose, and the calculated dose to the public as a result of the two gaseous releases was less than 1.0 percent of 10 CFR Part 50, Appendix I limits.
Inspection Report# : 2000003*(pdf)*

Physical Protection

Miscellaneous

Significance: SL-IV Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly conduct training of a plant equipment operator trainee during an equipment training evolution
On October 27, 1999, a plant equipment operator trainee was directed and allowed by a qualified plant equipment operator to perform the helium compensation calibration of the hydrogen recombiner in the waste gas holdup system without direct supervision. As a result, the calibration was performed incorrectly. Technical Specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.b, requires procedures for authorities and responsibilities for safe operation. Section 6.15, of Operations Department Administrative Manual Procedure ODA-102, Conduct of Operations, Revision 17, stated, in part, "Whenever trainees operate equipment, a qualified operator shall observe the trainee . . ." and "When a Trainee is performing any equipment operation or control manipulation, the qualified personnel shall observe the necessary indication as if he performed the task himself using all required self verification techniques." The failure of a qualified radwaste equipment operator to directly observe a radwaste equipment operator trainee operating equipment and performing the helium compensation calibration of the hydrogen recombiner is a violation of Technical Specification 5.4.1.a. The NRC determined that this was a willful violation of Operations Department Administrative Procedure ODA-102 requirements. This Severity Level IV violation is being treated as a noncited violation and was entered in the licensee's corrective action program as Smart Form SMF-1999-002891-00.
Inspection Report# : 2000007*(pdf)*

Significance: N/A Aug 28, 2000
Identified By: NRC
Item Type: FIN Finding
Effective Corrective Action Program
The licensee was effective at identifying problems and putting them into the corrective action program. The licensee self-identified the significant deficiencies identified during the review period. The licensee effectively prioritized the extent to which individual problems would be evaluated consistent with their safety and risk significance and established schedules for implementation of corrective actions. The licensee implemented corrective actions that were timely and effective.
Inspection Report# : 2000005*(pdf)*

Significance: N/A Dec 06, 2001
Identified By: NRC
Item Type: FIN Finding
Overall, an effective corrective action program was in place.
The licensee was effective at identifying problems and entering them into the corrective action program for resolution. Safety significance was appropriately considered in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee evaluations and department self-assessments were comprehensive and self-critical. Based on interviews conducted during this inspection, individuals at the site felt free to input safety issues into the corrective action program and felt that the program effectively addressed safety issues documented. Overall, the licensee implemented corrective actions that were timely and effective. However, the team found that the licensee's process for identifying performance trends relied heavily on each department manager recognizing when adverse trends existed. In one instance, an adverse performance trend involving the inadvertent release of radioactive material from the radiologically controlled area had not been identified and corrected by the department manager. Two violations of NRC requirements were identified where corrective actions were either not effective or timely to prevent a similar occurrence.
Inspection Report# : 2001007*(pdf)*

Last modified : March 27, 2002

Comanche Peak 1

Initiating Events

Significance: G Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to determine the technical adequacy of a change in operation of the Unit 1 pressurizer relief tank
On July 25, 2000, the inspector noted that the Unit 1 reactor operator logs contained a note which allowed the pressurizer relief tank pressure to be maintained at 0 psig provided it was purged with nitrogen once a quarter. The inspector found that on August 30, 1994, a procedure change incorporated this note and removed a requirement to maintain a minimum of 1 psig pressure in the tank. The change was considered an administrative change only and no technical justification was provided. The change in minimum operating pressure was a change to the facility that increased the probability of developing an explosive mixture of hydrogen and oxygen in the pressurizer relief tank which was not an analyzed condition for the facility. Technical Specification 6.8.1; Regulatory Guide 1.33, Revision 2, Appendix A; and plant administrative procedures required a determination of technical adequacy for this material change. This violation of Technical Specifications is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The issue was placed into the licensee's problem identification and resolution program as Smart Form SMF-2000-001693-00.
Inspection Report# : 2000007*(pdf)*

Mitigating Systems

Significance: G Sep 13, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly identify and correct degraded EDG jacket water coolers
The inspectors noted that heat exchanger performance trending had not been conducted for approximately 1½ years on the Unit 1 emergency diesel generator jacket water coolers and for about 1 year on the Unit 2 emergency diesel generator jacket water coolers. During those periods, the Units 1 and 2 Train B emergency diesel generator jacket water coolers were frequently fouled beyond the acceptance criteria and were considered degraded. Failure to promptly identify this condition adverse to quality was a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001548-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the licensee's past operability review determined that the degraded emergency diesel jacket water coolers were operable.
Inspection Report# : 2000006*(pdf)*

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
NCV for nonconservative design calculation for safety-related air accumulators.
The inspectors identified that a calculation for all safety-related air accumulators did not properly account for air usage during a design basis mission. The calculation did not account for dynamic air consumption rates for the system and was therefore nonconservative. Failure to properly incorporate design basis information into station calculations was a violation of 10 CFR Part 50, Appendix B, Criterion III. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001232-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the nonconservative values had not been incorporated into station procedures and the operability of safety-related equipment was not affected.
Inspection Report# : 2000003*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Incomplete valve alignment established drain path from spent fuel pools
Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained. Step 5.9.2 in procedure SOP-506, "Spent Fuel Pool Cooling and Cleanup System" states to close Valves XSF-0220, XSF-0067 and XSF-0068 following completion of spent fuel pool transfer canal draining operations. Contrary to this requirement, Valve XSF-0220 was found open on February 1, 2001, following completion of transfer canal draining operations which established a gravity drain path from Spent Fuel Pools X-01 and X-02 to the recycle holdup tank. This violation is documented in Smart Form 2001-000221-00 and is being treated as a noncited violation.
Inspection Report# : 2001002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Apr 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
The inspector identified two occasions, during the Unit 1 refueling outage, when radiation protection personnel failed to survey an area prior to workers entering the area. The first occasion was for failure to survey steam generator platform Loop Room 2/3. The second occasion was for failure to survey the overhead of the pressurizer relief tank room. 10 CFR 20.1501(a) requires each licensee to make or cause to be made surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform radiological surveys in the above areas was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Forms 2001-1619 and 2001-805, respectively. The safety significance of this violation 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. This violation was more than minor because the failure to perform a survey has a credible impact on safety and the potential for unplanned or unintended dose.
Inspection Report# : 2001003*(pdf)*

Significance: SL-IV Dec 12, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
On December 12, 2000, the inspector identified that radiation protection personnel failed to perform a radiological survey of an area above the waste monitoring tank room on elevation 790 foot of the auxiliary building prior to a worker entering the area. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform a radiological survey of the above area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Form 2000-3407. The significance of this violation was determined to be more than minor because there was a credible impact on a worker's radiation safety; however, it did not affect the cornerstone since there were no actual consequences and monitoring devices remained operable
Inspection Report# : 2000009*(pdf)*

Significance: G Oct 06, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to survey
10 CFR 20.1501(a) states, in part, that each licensee shall make or cause to be made surveys that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of radioactive material. In the following three instances, the licensee failed to properly survey tools and equipment, and determine the quantities of radioactive material present. On March 27, 2001, the licensee discovered a Chicago fitting containing 2000 counts per minute of radioactive material outside the radiologically controlled area. The fitting caused the yard access small article monitor to alarm when personnel were exiting the yard access area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000630. On April 1, 2001, the licensee identified that eddy current equipment was not

properly surveyed prior to decontamination. The label indicated contamination levels of 20,000 disintegrations per minute per 100 square centimeters when the actual contamination levels were mrad smearable. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000729. On May 24, 2001, the licensee identified that a tool removed from the clean tool room contained 7000 counts per minute of radioactive material. The tool caused an alarm on the personnel monitor at the Alternate Access Point located outside the radiologically controlled area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-001352. These three examples are being treated as a non-cited violation. The safety significance of this violation was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no over exposure, no substantial potential for over exposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001004*(pdf)*

Public Radiation Safety

Significance: TBD Dec 06, 2001
Identified By: Licensee
Item Type: AV Apparent Violation
Failure to survey
Between January 24, 2000, and May 24, 2001, the licensee identified 11 examples in which radioactive material was inadvertently released from the radiologically controlled area because the licensee failed to properly perform surveys. Two of these examples have been dispositioned as a noncited violation of very low safety significance (Green) in NRC Inspection Report 50-445;446/01-04. The failure to perform proper radiological surveys are nine examples of a Technical Specification 5.4.1.a violation. This violation is being treated as an apparent violation consistent with the NRC Enforcement Policy. These events are described in the licensee's corrective action program, reference Smart Forms 2000-000187, 2000-001080, 2000-002380, 2000-002445, 2000-002458, 2000-002740, 2000-003122, 2001-000850, and 2001-000968. Using the public radiation safety significance determination process, the NRC preliminarily determined that the finding was of low-to-moderate risk significance (white) because the public exposure associated with each item was less than 5 millirem; however, there were more than five events. The events were more than minor, because the failure to properly survey radioactive material has a credible impact on safety, and the issues involved occurrences in the licensee's radioactive material control program that were contrary to NRC requirements or licensee procedures.
Inspection Report# : 2001007*(pdf)*

Significance: 

May 18, 2000
Identified By: NRC
Item Type: FIN Finding
Ineffective corrective actions for failure to source check a radiation monitor prior to a release
The details surrounding the March 23, 1999, nonroutine release were in the licensee's corrective action program as Smart Form SMF-1999-000671-00. Corrective actions were completed, and Smart Form SMF-1999-000671-00 was closed on August 24, 1999. However, on September 28, 1999, the licensee again failed to source check the effluent radiation monitor prior to initiating a nonroutine gaseous batch release. Therefore, the inspectors concluded that the corrective actions were ineffective in preventing a second occurrence. This issue was characterized as a green finding because the significance of the related technical issue was green.
Inspection Report# : 2000003*(pdf)*

Significance: 

May 04, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to source check a radiation monitor prior to a release
The licensee identified that on March 23, 1999, a nonroutine gaseous release was initiated from the Unit 2 volume control tank prior to performing a source check on the primary plant ventilation noble gas release rate monitor. The inspectors identified another incident on September 28, 1999, in which the licensee performed a nonroutine gaseous batch release from the Unit 1 volume control tank prior to performing a source check to verify proper operation of the primary plant ventilation noble gas release rate monitor. The failure to perform the source check on the effluent monitors could have resulted in a radioactive gaseous release to the environment which was not properly monitored by an operable radiation monitor. The licensee's failure to perform source checks on the primary plant ventilation noble gas release rate monitors prior to initiating the gaseous batch releases from the volume control tanks was a violation of Technical Specification 5.5.1. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-001412-00. This issue was characterized as a green finding using the public radiation safety significance determination process. It was determined to have very low risk significance because the incident did not impair the licensee's ability to assess dose, and the calculated dose to the public as a result of the two gaseous releases was less than 1.0 percent of 10 CFR Part 50, Appendix I limits.
Inspection Report# : 2000003*(pdf)*

Physical Protection

Miscellaneous

Significance: SL-IV Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly conduct training of a plant equipment operator trainee during an equipment training evolution
On October 27, 1999, a plant equipment operator trainee was directed and allowed by a qualified plant equipment operator to perform the helium compensation calibration of the hydrogen recombiner in the waste gas holdup system without direct supervision. As a result, the calibration was performed incorrectly. Technical Specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.b, requires procedures for authorities and responsibilities for safe operation. Section 6.15, of Operations Department Administrative Manual Procedure ODA-102, Conduct of Operations, Revision 17, stated, in part, "Whenever trainees operate equipment, a qualified operator shall observe the trainee . . ." and "When a Trainee is performing any equipment operation or control manipulation, the qualified personnel shall observe the necessary indication as if he performed the task himself using all required self verification techniques." The failure of a qualified radwaste equipment operator to directly observe a radwaste equipment operator trainee operating equipment and performing the helium compensation calibration of the hydrogen recombiner is a violation of Technical Specification 5.4.1.a. The NRC determined that this was a willful violation of Operations Department Administrative Procedure ODA-102 requirements. This Severity Level IV violation is being treated as a noncited violation and was entered in the licensee's corrective action program as Smart Form SMF-1999-002891-00.
Inspection Report# : 2000007*(pdf)*

Significance: N/A Dec 06, 2001
Identified By: NRC
Item Type: FIN Finding
Overall, an effective corrective action program was in place.
The licensee was effective at identifying problems and entering them into the corrective action program for resolution. Safety significance was appropriately considered in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee evaluations and department self-assessments were comprehensive and self-critical. Based on interviews conducted during this inspection, individuals at the site felt free to input safety issues into the corrective action program and felt that the program effectively addressed safety issues documented. Overall, the licensee implemented corrective actions that were timely and effective. However, the team found that the licensee's process for identifying performance trends relied heavily on each department manager recognizing when adverse trends existed. In one instance, an adverse performance trend involving the inadvertent release of radioactive material from the radiologically controlled area had not been identified and corrected by the department manager. Two violations of NRC requirements were identified where corrective actions were either not effective or timely to prevent a similar occurrence.
Inspection Report# : 2001007*(pdf)*

Significance: N/A Aug 28, 2000
Identified By: NRC
Item Type: FIN Finding
Effective Corrective Action Program
The licensee was effective at identifying problems and putting them into the corrective action program. The licensee self-identified the significant deficiencies identified during the review period. The licensee effectively prioritized the extent to which individual problems would be evaluated consistent with their safety and risk significance and established schedules for implementation of corrective actions. The licensee implemented corrective actions that were timely and effective.
Inspection Report# : 2000005*(pdf)*

Last modified : March 26, 2002

Comanche Peak 1

Initiating Events

Significance: G Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to determine the technical adequacy of a change in operation of the Unit 1 pressurizer relief tank
On July 25, 2000, the inspector noted that the Unit 1 reactor operator logs contained a note which allowed the pressurizer relief tank pressure to be maintained at 0 psig provided it was purged with nitrogen once a quarter. The inspector found that on August 30, 1994, a procedure change incorporated this note and removed a requirement to maintain a minimum of 1 psig pressure in the tank. The change was considered an administrative change only and no technical justification was provided. The change in minimum operating pressure was a change to the facility that increased the probability of developing an explosive mixture of hydrogen and oxygen in the pressurizer relief tank which was not an analyzed condition for the facility. Technical Specification 6.8.1; Regulatory Guide 1.33, Revision 2, Appendix A; and plant administrative procedures required a determination of technical adequacy for this material change. This violation of Technical Specifications is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The issue was placed into the licensee's problem identification and resolution program as Smart Form SMF-2000-001693-00.
Inspection Report# : 2000007*(pdf)*

Mitigating Systems

Significance: G Sep 13, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly identify and correct degraded EDG jacket water coolers
The inspectors noted that heat exchanger performance trending had not been conducted for approximately 1½ years on the Unit 1 emergency diesel generator jacket water coolers and for about 1 year on the Unit 2 emergency diesel generator jacket water coolers. During those periods, the Units 1 and 2 Train B emergency diesel generator jacket water coolers were frequently fouled beyond the acceptance criteria and were considered degraded. Failure to promptly identify this condition adverse to quality was a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001548-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the licensee's past operability review determined that the degraded emergency diesel jacket water coolers were operable.
Inspection Report# : 2000006*(pdf)*

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
NCV for nonconservative design calculation for safety-related air accumulators.
The inspectors identified that a calculation for all safety-related air accumulators did not properly account for air usage during a design basis mission. The calculation did not account for dynamic air consumption rates for the system and was therefore nonconservative. Failure to properly incorporate design basis information into station calculations was a violation of 10 CFR Part 50, Appendix B, Criterion III. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001232-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the nonconservative values had not been incorporated into station procedures and the operability of safety-related equipment was not affected.
Inspection Report# : 2000003*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Incomplete valve alignment established drain path from spent fuel pools
Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained. Step 5.9.2 in procedure

SOP-506, "Spent Fuel Pool Cooling and Cleanup System" states to close Valves XSF-0220, XSF-0067 and XSF-0068 following completion of spent fuel pool transfer canal draining operations. Contrary to this requirement, Valve XSF-0220 was found open on February 1, 2001, following completion of transfer canal draining operations which established a gravity drain path from Spent Fuel Pools X-01 and X-02 to the recycle holdup tank. This violation is documented in Smart Form 2001-000221-00 and is being treated as a noncited violation.
Inspection Report# : 2001002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Oct 06, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to survey
10 CFR 20.1501(a) states, in part, that each licensee shall make or cause to be made surveys that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of radioactive material. In the following three instances, the licensee failed to properly survey tools and equipment, and determine the quantities of radioactive material present. On March 27, 2001, the licensee discovered a Chicago fitting containing 2000 counts per minute of radioactive material outside the radiologically controlled area. The fitting caused the yard access small article monitor to alarm when personnel were exiting the yard access area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000630. On April 1, 2001, the licensee identified that eddy current equipment was not properly surveyed prior to decontamination. The label indicated contamination levels of 20,000 disintegrations per minute per 100 square centimeters when the actual contamination levels were mrad smearable. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000729. On May 24, 2001, the licensee identified that a tool removed from the clean tool room contained 7000 counts per minute of radioactive material. The tool caused an alarm on the personnel monitor at the Alternate Access Point located outside the radiologically controlled area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-001352. These three examples are being treated as a non-cited violation. The safety significance of this violation was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no over exposure, no substantial potential for over exposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001004*(pdf)*

Significance: G Apr 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
The inspector identified two occasions, during the Unit 1 refueling outage, when radiation protection personnel failed to survey an area prior to workers entering the area. The first occasion was for failure to survey steam generator platform Loop Room 2/3. The second occasion was for failure to survey the overhead of the pressurizer relief tank room. 10 CFR 20.1501(a) requires each licensee to make or cause to be made surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform radiological surveys in the above areas was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Forms 2001-1619 and 2001-805, respectively. The safety significance of this violation 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. This violation was more than minor because the failure to perform a survey has a credible impact on safety and the potential for unplanned or unintended dose.
Inspection Report# : 2001003*(pdf)*

Significance: SL-IV Dec 12, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
On December 12, 2000, the inspector identified that radiation protection personnel failed to perform a radiological survey of an area above the waste monitoring tank room on elevation 790 foot of the auxiliary building prior to a worker entering the area. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform a radiological survey of the above area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Form 2000-3407. The significance of this violation was determined to be more than minor because there was a credible impact on a worker's radiation safety; however, it did not affect the cornerstone since there were no actual consequences and monitoring devices remained operable
Inspection Report# : 2000009*(pdf)*

Public Radiation Safety

Significance: TBD Dec 06, 2001
Identified By: Licensee
Item Type: AV Apparent Violation
Failure to survey
Between January 24, 2000, and May 24, 2001, the licensee identified 11 examples in which radioactive material was inadvertently released from the radiologically controlled area because the licensee failed to properly perform surveys. Two of these examples have been dispositioned as a noncited violation of very low safety significance (Green) in NRC Inspection Report 50-445;446/01-04. The failure to perform proper radiological surveys are nine examples of a Technical Specification 5.4.1.a violation. This violation is being treated as an apparent violation consistent with the NRC Enforcement Policy. These events are described in the licensee's corrective action program, reference Smart Forms 2000-000187, 2000-001080, 2000-002380, 2000-002445, 2000-002458, 2000-002740, 2000-003122, 2001-000850, and 2001-000968. Using the public radiation safety significance determination process, the NRC preliminarily determined that the finding was of low-to-moderate risk significance (white) because the public exposure associated with each item was less than 5 millirem; however, there were more than five events. The events were more than minor, because the failure to properly survey radioactive material has a credible impact on safety, and the issues involved occurrences in the licensee's radioactive material control program that were contrary to NRC requirements or licensee procedures.
Inspection Report# : 2001007*(pdf)*

Significance: G May 18, 2000
Identified By: NRC
Item Type: FIN Finding
Ineffective corrective actions for failure to source check a radiation monitor prior to a release
The details surrounding the March 23, 1999, nonroutine release were in the licensee's corrective action program as Smart Form SMF-1999-000671-00. Corrective actions were completed, and Smart Form SMF-1999-000671-00 was closed on August 24, 1999. However, on September 28, 1999, the licensee again failed to source check the effluent radiation monitor prior to initiating a nonroutine gaseous batch release. Therefore, the inspectors concluded that the corrective actions were ineffective in preventing a second occurrence. This issue was characterized as a green finding because the significance of the related technical issue was green.
Inspection Report# : 2000003*(pdf)*

Significance: G May 04, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to source check a radiation monitor prior to a release
The licensee identified that on March 23, 1999, a nonroutine gaseous release was initiated from the Unit 2 volume control tank prior to performing a source check on the primary plant ventilation noble gas release rate monitor. The inspectors identified another incident on September 28, 1999, in which the licensee performed a nonroutine gaseous batch release from the Unit 1 volume control tank prior to performing a source check to verify proper operation of the primary plant ventilation noble gas release rate monitor. The failure to perform the source check on the effluent monitors could have resulted in a radioactive gaseous release to the environment which was not properly monitored by an operable radiation monitor. The licensee's failure to perform source checks on the primary plant ventilation noble gas release rate monitors prior to initiating the gaseous batch releases from the volume control tanks was a violation of Technical Specification 5.5.1. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-001412-00. This issue was characterized as a green finding using the public radiation safety significance determination process. It was determined to have very low risk significance because the incident did not impair the licensee's ability to assess dose, and the calculated dose to the public as a result of the two gaseous releases was less than 1.0 percent of 10 CFR Part 50, Appendix I limits.
Inspection Report# : 2000003*(pdf)*

Physical Protection

Miscellaneous

Significance: N/A Dec 06, 2001
Identified By: NRC
Item Type: FIN Finding
Overall, an effective corrective action program was in place.
The licensee was effective at identifying problems and entering them into the corrective action program for resolution. Safety significance was appropriately considered in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee evaluations and department self-assessments were comprehensive and self-critical. Based on interviews conducted during this inspection, individuals at the site felt free to input safety issues into the corrective action program and felt that the program effectively addressed safety issues documented. Overall, the licensee implemented corrective actions that were timely and effective. However, the team found that the licensee's process for identifying performance trends relied heavily on each department manager recognizing when adverse trends existed. In one instance, an adverse performance trend involving the inadvertent release of radioactive material from the radiologically controlled area had not been identified and corrected by the department manager. Two violations of NRC requirements were identified where corrective actions were either not effective or timely to prevent a similar occurrence.
Inspection Report# : 2001007*(pdf)*

Significance: SL-IV Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly conduct training of a plant equipment operator trainee during an equipment training evolution
On October 27, 1999, a plant equipment operator trainee was directed and allowed by a qualified plant equipment operator to perform the helium compensation calibration of the hydrogen recombiner in the waste gas holdup system without direct supervision. As a result, the calibration was performed incorrectly. Technical Specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.b, requires procedures for authorities and responsibilities for safe operation. Section 6.15, of Operations Department Administrative Manual Procedure ODA-102, Conduct of Operations, Revision 17, stated, in part, "Whenever trainees operate equipment, a qualified operator shall observe the trainee . . ." and "When a Trainee is performing any equipment operation or control manipulation, the qualified personnel shall observe the necessary indication as if he performed the task himself using all required self verification techniques." The failure of a qualified radwaste equipment operator to directly observe a radwaste equipment operator trainee operating equipment and performing the helium compensation calibration of the hydrogen recombiner is a violation of Technical Specification 5.4.1.a. The NRC determined that this was a willful violation of Operations Department Administrative Procedure ODA-102 requirements. This Severity Level IV violation is being treated as a noncited violation and was entered in the licensee's corrective action program as Smart Form SMF-1999-002891-00.
Inspection Report# : 2000007*(pdf)*

Significance: N/A Aug 28, 2000
Identified By: NRC
Item Type: FIN Finding
Effective Corrective Action Program
The licensee was effective at identifying problems and putting them into the corrective action program. The licensee self-identified the significant deficiencies identified during the review period. The licensee effectively prioritized the extent to which individual problems would be evaluated consistent with their safety and risk significance and established schedules for implementation of corrective actions. The licensee implemented corrective actions that were timely and effective.
Inspection Report# : 2000005*(pdf)*

Last modified : March 01, 2002

Comanche Peak 1

Initiating Events

Significance: G Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to determine the technical adequacy of a change in operation of the Unit 1 pressurizer relief tank
On July 25, 2000, the inspector noted that the Unit 1 reactor operator logs contained a note which allowed the pressurizer relief tank pressure to be maintained at 0 psig provided it was purged with nitrogen once a quarter. The inspector found that on August 30, 1994, a procedure change incorporated this note and removed a requirement to maintain a minimum of 1 psig pressure in the tank. The change was considered an administrative change only and no technical justification was provided. The change in minimum operating pressure was a change to the facility that increased the probability of developing an explosive mixture of hydrogen and oxygen in the pressurizer relief tank which was not an analyzed condition for the facility. Technical Specification 6.8.1; Regulatory Guide 1.33, Revision 2, Appendix A; and plant administrative procedures required a determination of technical adequacy for this material change. This violation of Technical Specifications is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The issue was placed into the licensee's problem identification and resolution program as Smart Form SMF-2000-001693-00.
Inspection Report# : 2000007*(pdf)*

Mitigating Systems

Significance: G Jan 09, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate procedure for equalizing charge resulted in overflowing two cells of safety-related 125 Vdc battery
A noncited violation of TS 5.4.1a was identified for an inadequate procedure for performing an equalizing charge on safety-related batteries. On January 9, 2002, electrolyte overflowed from two cells of the Unit 1 Train A 125 Vdc Battery BT1ED1 during an equalizing charge, even though the procedure in use contained precautions to prevent the overflow. The procedure did not contain sufficient guidance to ensure the electrolyte levels were monitored frequently enough to avoid overflowing the battery case. This violation was more than minor because the overflow condition had an actual impact on safety in that it caused the battery to be inoperable in accordance with Technical Specification 3.8.6. Since the finding affected operability, it was analyzed by the significance determination process. Phase 1 of the significance determination process screened the safety significance to be very low (Green) because the battery, a mitigating subsystem, was inoperable for only a few minutes which is less than the allowed outage time of 2 hours and there was no actual loss of safety function. Because the finding was of very low safety significance, and the finding was documented in the licensee's corrective action system, this finding is being treated as a noncited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-000084-00.
Inspection Report# : 2001006*(pdf)*

Significance: G Sep 13, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly identify and correct degraded EDG jacket water coolers
The inspectors noted that heat exchanger performance trending had not been conducted for approximately 1½ years on the Unit 1 emergency diesel generator jacket water coolers and for about 1 year on the Unit 2 emergency diesel generator jacket water coolers. During those periods, the Units 1 and 2 Train B emergency diesel generator jacket water coolers were frequently fouled beyond the acceptance criteria and were considered degraded. Failure to promptly identify this condition adverse to quality was a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001548-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the licensee's past operability review determined that the degraded emergency diesel jacket water coolers were operable.
Inspection Report# : 2000006*(pdf)*

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
NCV for nonconservative design calculation for safety-related air accumulators.
The inspectors identified that a calculation for all safety-related air accumulators did not properly account for air usage during a design basis mission. The calculation did not account for dynamic air consumption rates for the system and was therefore nonconservative. Failure to properly incorporate design basis information into station calculations was a violation of 10 CFR Part 50, Appendix B, Criterion III. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001232-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the nonconservative values had not been incorporated into station procedures and the operability of safety-related equipment was not affected.
Inspection Report# : 2000003*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Incomplete valve alignment established drain path from spent fuel pools
Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained. Step 5.9.2 in procedure SOP-506, "Spent Fuel Pool Cooling and Cleanup System" states to close Valves XSF-0220, XSF-0067 and XSF-0068 following completion of spent fuel pool transfer canal draining operations. Contrary to this requirement, Valve XSF-0220 was found open on February 1, 2001, following completion of transfer canal draining operations which established a gravity drain path from Spent Fuel Pools X-01 and X-02 to the recycle holdup tank. This violation is documented in Smart Form 2001-000221-00 and is being treated as a noncited violation.
Inspection Report# : 2001002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: SL-IV Mar 13, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to acknowledge a personnel contamination monitor alarm.
On March 13, 2002, an NRC inspector observed an individual leaving the protected area and exiting the portal radiation monitor (PM-7) while the monitor was in alarm. The individual did not stop, and when the inspector called the individual to recount he did not return. The individual was stopped by another site employee and returned for a recount. The recount did not detect any radioactive material. Station Administration Procedure STA-654, "Personnel and Discrete Radioactive Particle Contamination Control," Revision 3, requires that if a portal monitor alarm occurs, the individual is to step out and repeat the count. The failure to follow procedural requirements involving a personnel contamination monitor alarm was a violation of Technical Specification 5.4.1a. This is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-000777. The safety significance of this violation was determined to be more than minor, because not responding to a personnel contamination monitor alarm had a credible impact on a worker's radiation safety. This violation did not affect the cornerstone since there was no impact on radiation monitors (instrumentation and/or personnel dosimetry) related to measuring workers' dose.
Inspection Report# : 2001006*(pdf)*

Significance: G Oct 06, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation

Failure to survey
10 CFR 20.1501(a) states, in part, that each licensee shall make or cause to be made surveys that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of radioactive material. In the following three instances, the licensee failed to properly survey tools and equipment, and determine the quantities of radioactive material present. On March 27, 2001, the licensee discovered a Chicago fitting containing 2000 counts per minute of radioactive material outside the radiologically controlled area. The fitting caused the yard access small article monitor to alarm when personnel were exiting the yard access area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000630. On April 1, 2001, the licensee identified that eddy current equipment was not properly surveyed prior to decontamination. The label indicated contamination levels of 20,000 disintegrations per minute per 100 square centimeters when the actual contamination levels were mrad smearable. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000729. On May 24, 2001, the licensee identified that a tool removed from the clean tool room contained 7000 counts per minute of radioactive material. The tool caused an alarm on the personnel monitor at the Alternate Access Point located outside the radiologically controlled area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-001352. These three examples are being treated as a non-cited violation. The safety significance of this violation was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no over exposure, no substantial potential for over exposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001004*(pdf)*

Significance: G Apr 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
The inspector identified two occasions, during the Unit 1 refueling outage, when radiation protection personnel failed to survey an area prior to workers entering the area. The first occasion was for failure to survey steam generator platform Loop Room 2/3. The second occasion was for failure to survey the overhead of the pressurizer relief tank room. 10 CFR 20.1501(a) requires each licensee to make or cause to be made surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform radiological surveys in the above areas was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Forms 2001-1619 and 2001-805, respectively. The safety significance of this violation 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. This violation was more than minor because the failure to perform a survey has a credible impact on safety and the potential for unplanned or unintended dose.
Inspection Report# : 2001003*(pdf)*

Significance: SL-IV Dec 12, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
On December 12, 2000, the inspector identified that radiation protection personnel failed to perform a radiological survey of an area above the waste monitoring tank room on elevation 790 foot of the auxiliary building prior to a worker entering the area. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform a radiological survey of the above area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Form 2000-3407. The significance of this violation was determined to be more than minor because there was a credible impact on a worker's radiation safety; however, it did not affect the cornerstone since there were no actual consequences and monitoring devices remained operable
Inspection Report# : 2000009*(pdf)*

Public Radiation Safety

Significance: W Dec 06, 2001
Identified By: Licensee
Item Type: VIO Violation
Failure to survey
Between January 24, 2000, and May 24, 2001, the licensee identified 11 examples in which radioactive material was inadvertently released from the radiologically controlled area because the licensee failed to properly perform surveys. Two of these examples have been dispositioned as a noncited violation of very low safety significance (Green) in NRC Inspection Report 50-445;446/01-04. The failure to perform proper radiological surveys are nine examples of a Technical Specification 5.4.1.a violation consistent with the NRC Enforcement Policy. These events are described in the licensee's corrective action program, reference Smart Forms 2000-

000187, 2000-001080, 2000-002380, 2000-002445, 2000-002458, 2000-002740, 2000-003122, 2001-000850, and 2001-000968. Using the public radiation safety significance determination process, the NRC determined that the finding was of low-to-moderate risk significance (white) because the public exposure associated with each item was less than 5 millirem; however, there were more than five events. The events were more than minor, because the failure to properly survey radioactive material has a credible impact on safety, and the issues involved occurrences in the licensee's radioactive material control program that were contrary to NRC requirements or licensee procedures. A Notice of Violation was issued in a letter dated February 21, 2002.
Inspection Report# : 2001007*(pdf)*

Significance: N/A Apr 25, 2002
Identified By: NRC
Item Type: FIN Finding
Supplemental Inspection Results
A supplemental inspection was performed by the NRC to assess the licensee's evaluation of the control of radioactive material. A finding previously characterized as having low to moderate safety significance (White) was documented in the Final Significance Determination for NRC Inspection Report 50-445/01-07; 50-446/01-07. During this supplemental inspection performed in accordance with Inspection Procedure 95001, the inspector determined that the licensee performed a thorough, broad-based evaluation of the causes of the radioactive material control issue and correctly identified the extent of the conditions that led to the control problems. The licensee's evaluation identified 17 root causes. Corrective actions included: (1) conducting a pre-outage stand-down with all station work groups to discuss the past associated problems and the importance for control of radioactive material; (2) procedural revisions that clarified radioactive material control expectations and identification programs; (3) improved Radiation Worker Training lesson plans that stressed the need for and the controls in-place for handling radioactive material; and, (4) increased staffing for monitoring and controlling the release of radioactive material during outages. An effectiveness evaluation of radiation protection activities, to include the control of radioactive material, will be documented in Nuclear Oversight Department Evaluation 2002-015, at the completion of refueling outage 2RFO6. Because of the licensee's acceptable performance in addressing the control of radioactive material, the White finding associated with this issue will only be considered in assessing plant performance for a total of four quarters, in accordance with the guidance in IMC 0305, "Operating Reactor Assessment Program."
Inspection Report# : 2002007*(pdf)*

Significance: G May 18, 2000
Identified By: NRC
Item Type: FIN Finding
Ineffective corrective actions for failure to source check a radiation monitor prior to a release
The details surrounding the March 23, 1999, nonroutine release were in the licensee's corrective action program as Smart Form SMF-1999-000671-00. Corrective actions were completed, and Smart Form SMF-1999-000671-00 was closed on August 24, 1999. However, on September 28, 1999, the licensee again failed to source check the effluent radiation monitor prior to initiating a nonroutine gaseous batch release. Therefore, the inspectors concluded that the corrective actions were ineffective in preventing a second occurrence. This issue was characterized as a green finding because the significance of the related technical issue was green.
Inspection Report# : 2000003*(pdf)*

Significance: G May 04, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to source check a radiation monitor prior to a release
The licensee identified that on March 23, 1999, a nonroutine gaseous release was initiated from the Unit 2 volume control tank prior to performing a source check on the primary plant ventilation noble gas release rate monitor. The inspectors identified another incident on September 28, 1999, in which the licensee performed a nonroutine gaseous batch release from the Unit 1 volume control tank prior to performing a source check to verify proper operation of the primary plant ventilation noble gas release rate monitor. The failure to perform the source check on the effluent monitors could have resulted in a radioactive gaseous release to the environment which was not properly monitored by an operable radiation monitor. The licensee's failure to perform source checks on the primary plant ventilation noble gas release rate monitors prior to initiating the gaseous batch releases from the volume control tanks was a violation of Technical Specification 5.5.1. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-001412-00. This issue was characterized as a green finding using the public radiation safety significance determination process. It was determined to have very low risk significance because the incident did not impair the licensee's ability to assess dose, and the calculated dose to the public as a result of the two gaseous releases was less than 1.0 percent of 10 CFR Part 50, Appendix I limits.
Inspection Report# : 2000003*(pdf)*

Physical Protection

Miscellaneous

Significance: N/A Dec 06, 2001
Identified By: NRC
Item Type: FIN Finding
Overall, an effective corrective action program was in place.
The licensee was effective at identifying problems and entering them into the corrective action program for resolution. Safety significance was appropriately considered in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee evaluations and department self-assessments were comprehensive and self-critical. Based on interviews conducted during this inspection, individuals at the site felt free to input safety issues into the corrective action program and felt that the program effectively addressed safety issues documented. Overall, the licensee implemented corrective actions that were timely and effective. However, the team found that the licensee's process for identifying performance trends relied heavily on each department manager recognizing when adverse trends existed. In one instance, an adverse performance trend involving the inadvertent release of radioactive material from the radiologically controlled area had not been identified and corrected by the department manager. Two violations of NRC requirements were identified where corrective actions were either not effective or timely to prevent a similar occurrence.
Inspection Report# : 2001007*(pdf)*

Significance: SL-IV Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly conduct training of a plant equipment operator trainee during an equipment training evolution
On October 27, 1999, a plant equipment operator trainee was directed and allowed by a qualified plant equipment operator to perform the helium compensation calibration of the hydrogen recombiner in the waste gas holdup system without direct supervision. As a result, the calibration was performed incorrectly. Technical Specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.b, requires procedures for authorities and responsibilities for safe operation. Section 6.15, of Operations Department Administrative Manual Procedure ODA-102, Conduct of Operations, Revision 17, stated, in part, "Whenever trainees operate equipment, a qualified operator shall observe the trainee . . ." and "When a Trainee is performing any equipment operation or control manipulation, the qualified personnel shall observe the necessary indication as if he performed the task himself using all required self verification techniques." The failure of a qualified radwaste equipment operator to directly observe a radwaste equipment operator trainee operating equipment and performing the helium compensation calibration of the hydrogen recombiner is a violation of Technical Specification 5.4.1.a. The NRC determined that this was a willful violation of Operations Department Administrative Procedure ODA-102 requirements. This Severity Level IV violation is being treated as a noncited violation and was entered in the licensee's corrective action program as Smart Form SMF-1999-002891-00.
Inspection Report# : 2000007*(pdf)*

Significance: N/A Aug 28, 2000
Identified By: NRC
Item Type: FIN Finding
Effective Corrective Action Program
The licensee was effective at identifying problems and putting them into the corrective action program. The licensee self-identified the significant deficiencies identified during the review period. The licensee effectively prioritized the extent to which individual problems would be evaluated consistent with their safety and risk significance and established schedules for implementation of corrective actions. The licensee implemented corrective actions that were timely and effective.
Inspection Report# : 2000005*(pdf)*

Last modified : July 22, 2002

Comanche Peak 1

Initiating Events

Significance: G Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to determine the technical adequacy of a change in operation of the Unit 1 pressurizer relief tank
On July 25, 2000, the inspector noted that the Unit 1 reactor operator logs contained a note which allowed the pressurizer relief tank pressure to be maintained at 0 psig provided it was purged with nitrogen once a quarter. The inspector found that on August 30, 1994, a procedure change incorporated this note and removed a requirement to maintain a minimum of 1 psig pressure in the tank. The change was considered an administrative change only and no technical justification was provided. The change in minimum operating pressure was a change to the facility that increased the probability of developing an explosive mixture of hydrogen and oxygen in the pressurizer relief tank which was not an analyzed condition for the facility. Technical Specification 6.8.1; Regulatory Guide 1.33, Revision 2, Appendix A; and plant administrative procedures required a determination of technical adequacy for this material change. This violation of Technical Specifications is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The issue was placed into the licensee's problem identification and resolution program as Smart Form SMF-2000-001693-00.
Inspection Report# : 2000007*(pdf)*

Mitigating Systems

Significance: G Jan 09, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate procedure for equalizing charge resulted in overflowing two cells of safety-related 125 Vdc battery
A noncited violation of TS 5.4.1a was identified for an inadequate procedure for performing an equalizing charge on safety-related batteries. On January 9, 2002, electrolyte overflowed from two cells of the Unit 1 Train A 125 Vdc Battery BT1ED1 during an equalizing charge, even though the procedure in use contained precautions to prevent the overflow. The procedure did not contain sufficient guidance to ensure the electrolyte levels were monitored frequently enough to avoid overflowing the battery case. This violation was more than minor because the overflow condition had an actual impact on safety in that it caused the battery to be inoperable in accordance with Technical Specification 3.8.6. Since the finding affected operability, it was analyzed by the significance determination process. Phase 1 of the significance determination process screened the safety significance to be very low (Green) because the battery, a mitigating subsystem, was inoperable for only a few minutes which is less than the allowed outage time of 2 hours and there was no actual loss of safety function. Because the finding was of very low safety significance, and the finding was documented in the licensee's corrective action system, this finding is being treated as a noncited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-000084-00.
Inspection Report# : 2001006*(pdf)*

Significance: G Sep 13, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to promptly identify and correct degraded EDG jacket water coolers
The inspectors noted that heat exchanger performance trending had not been conducted for approximately 1½ years on the Unit 1 emergency diesel generator jacket water coolers and for about 1 year on the Unit 2 emergency diesel generator jacket water coolers. During those periods, the Units 1 and 2 Train B emergency diesel generator jacket water coolers were frequently fouled beyond the acceptance criteria and were considered degraded. Failure to promptly identify this condition adverse to quality was a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001548-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the licensee's past operability review determined that the degraded emergency diesel jacket water coolers were operable.
Inspection Report# : 2000006*(pdf)*

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
NCV for nonconservative design calculation for safety-related air accumulators.
The inspectors identified that a calculation for all safety-related air accumulators did not properly account for air usage during a design basis mission. The calculation did not account for dynamic air consumption rates for the system and was therefore nonconservative. Failure to properly incorporate design basis information into station calculations was a violation of 10 CFR Part 50, Appendix B, Criterion III. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001232-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the nonconservative values had not been incorporated into station procedures and the operability of safety-related equipment was not affected.
Inspection Report# : 2000003*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Incomplete valve alignment established drain path from spent fuel pools
Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained. Step 5.9.2 in procedure SOP-506, "Spent Fuel Pool Cooling and Cleanup System" states to close Valves XSF-0220, XSF-0067 and XSF-0068 following completion of spent fuel pool transfer canal draining operations. Contrary to this requirement, Valve XSF-0220 was found open on February 1, 2001, following completion of transfer canal draining operations which established a gravity drain path from Spent Fuel Pools X-01 and X-02 to the recycle holdup tank. This violation is documented in Smart Form 2001-000221-00 and is being treated as a noncited violation.
Inspection Report# : 2001002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: SL-IV Mar 13, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to acknowledge a personnel contamination monitor alarm.
On March 13, 2002, an NRC inspector observed an individual leaving the protected area and exiting the portal radiation monitor (PM-7) while the monitor was in alarm. The individual did not stop, and when the inspector called the individual to recount he did not return. The individual was stopped by another site employee and returned for a recount. The recount did not detect any radioactive material. Station Administration Procedure STA-654, "Personnel and Discrete Radioactive Particle Contamination Control," Revision 3, requires that if a portal monitor alarm occurs, the individual is to step out and repeat the count. The failure to follow procedural requirements involving a personnel contamination monitor alarm was a violation of Technical Specification 5.4.1a. This is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-000777. The safety significance of this violation was determined to be more than minor, because not responding to a personnel contamination monitor alarm had a credible impact on a worker's radiation safety. This violation did not affect the cornerstone since there was no impact on radiation monitors (instrumentation and/or personnel dosimetry) related to measuring workers' dose.
Inspection Report# : 2001006*(pdf)*

Significance: G Oct 06, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to survey
10 CFR 20.1501(a) states, in part, that each licensee shall make or cause to be made surveys that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of radioactive material. In the following three instances, the licensee failed to properly survey tools and equipment, and determine the quantities of radioactive material present. On March 27, 2001, the licensee discovered a Chicago fitting containing 2000 counts per minute of radioactive material outside the radiologically controlled area. The fitting caused the yard access small article monitor to alarm when personnel were exiting the yard access area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000630. On April 1, 2001, the licensee identified that eddy current equipment was not properly surveyed prior to decontamination. The label indicated contamination levels of 20,000 disintegrations per minute per 100 square centimeters when the actual contamination levels were mrad smearable. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000729. On May 24, 2001, the licensee identified that a tool removed from the clean tool room contained 7000 counts per minute of radioactive material. The tool caused an alarm on the personnel monitor at the Alternate Access Point located outside the radiologically controlled area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-001352. These three examples are being treated as a non-cited violation. The safety significance of this violation was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no over exposure, no substantial potential for over exposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001004*(pdf)*

Significance: G Apr 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
The inspector identified two occasions, during the Unit 1 refueling outage, when radiation protection personnel failed to survey an area prior to workers entering the area. The first occasion was for failure to survey steam generator platform Loop Room 2/3. The second occasion was for failure to survey the overhead of the pressurizer relief tank room. 10 CFR 20.1501(a) requires each licensee to make or cause to be made surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform radiological surveys in the above areas was a violation of 10 CFR 20.1501 (a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Forms 2001-1619 and 2001-805, respectively. The safety significance of this violation 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. This violation was more than minor because the failure to perform a survey has a credible impact on safety and the potential for unplanned or unintended dose.
Inspection Report# : 2001003*(pdf)*

Significance: SL-IV Dec 12, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
On December 12, 2000, the inspector identified that radiation protection personnel failed to perform a radiological survey of an area above the waste monitoring tank room on elevation 790 foot of the auxiliary building prior to a worker entering the area. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform a radiological survey of the above area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Form 2000-3407. The significance of this violation was determined to be more than minor because there was a credible impact on a worker's radiation safety; however, it did not affect the cornerstone since there were no actual consequences and monitoring devices remained operable
Inspection Report# : 2000009*(pdf)*

Public Radiation Safety

Significance: N/A Apr 25, 2002
Identified By: NRC
Item Type: FIN Finding
Supplemental Inspection Results
A supplemental inspection was performed by the NRC to assess the licensee's evaluation of the control of radioactive material. A finding previously characterized as having low to moderate safety significance (White) was documented in the Final Significance Determination for NRC Inspection Report 50-445/01-07; 50-446/01-07. During this supplemental inspection performed in accordance with Inspection Procedure 95001, the inspector determined that the licensee performed a thorough, broad-based evaluation of the causes of the radioactive material control issue and correctly identified the extent of the conditions that led to the control problems. The licensee's evaluation identified 17 root causes. Corrective actions included: (1) conducting a pre-outage stand-down with all station work groups to discuss the past associated problems and the importance for control of radioactive material; (2) procedural revisions

that clarified radioactive material control expectations and identification programs; (3) improved Radiation Worker Training lesson plans that stressed the need for and the controls in-place for handling radioactive material; and, (4) increased staffing for monitoring and controlling the release of radioactive material during outages. An effectiveness evaluation of radiation protection activities, to include the control of radioactive material, will be documented in Nuclear Oversight Department Evaluation 2002-015, at the completion of refueling outage 2RFO6. Because of the licensee's acceptable performance in addressing the control of radioactive material, the White finding associated with this issue will only be considered in assessing plant performance for a total of four quarters, in accordance with the guidance in IMC 0305, "Operating Reactor Assessment Program."
Inspection Report# : 2002007*(pdf)*

Significance: W Dec 06, 2001
Identified By: Licensee
Item Type: VIO Violation
Failure to survey
Between January 24, 2000, and May 24, 2001, the licensee identified 11 examples in which radioactive material was inadvertently released from the radiologically controlled area because the licensee failed to properly perform surveys. Two of these examples have been dispositioned as a noncited violation of very low safety significance (Green) in NRC Inspection Report 50-445;446/01-04. The failure to perform proper radiological surveys are nine examples of a Technical Specification 5.4.1.a violation consistent with the NRC Enforcement Policy. These events are described in the licensee's corrective action program, reference Smart Forms 2000-000187, 2000-001080, 2000-002380, 2000-002445, 2000-002458, 2000-002740, 2000-003122, 2001-000850, and 2001-000968. Using the public radiation safety significance determination process, the NRC determined that the finding was of low-to-moderate risk significance (white) because the public exposure associated with each item was less than 5 millirem; however, there were more than five events. The events were more than minor, because the failure to properly survey radioactive material has a credible impact on safety, and the issues involved occurrences in the licensee's radioactive material control program that were contrary to NRC requirements or licensee procedures. A Notice of Violation was issued in a letter dated February 21, 2002.
Inspection Report# : 2001007*(pdf)*

Significance: G May 18, 2000
Identified By: NRC
Item Type: FIN Finding
Ineffective corrective actions for failure to source check a radiation monitor prior to a release
The details surrounding the March 23, 1999, nonroutine release were in the licensee's corrective action program as Smart Form SMF-1999-000671-00. Corrective actions were completed, and Smart Form SMF-1999-000671-00 was closed on August 24, 1999. However, on September 28, 1999, the licensee again failed to source check the effluent radiation monitor prior to initiating a nonroutine gaseous batch release. Therefore, the inspectors concluded that the corrective actions were ineffective in preventing a second occurrence. This issue was characterized as a green finding because the significance of the related technical issue was green.
Inspection Report# : 2000003*(pdf)*

Significance: G May 04, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to source check a radiation monitor prior to a release
The licensee identified that on March 23, 1999, a nonroutine gaseous release was initiated from the Unit 2 volume control tank prior to performing a source check on the primary plant ventilation noble gas release rate monitor. The

inspectors identified another incident on September 28, 1999, in which the licensee performed a nonroutine gaseous batch release from the Unit 1 volume control tank prior to performing a source check to verify proper operation of the primary plant ventilation noble gas release rate monitor. The failure to perform the source check on the effluent monitors could have resulted in a radioactive gaseous release to the environment which was not properly monitored by an operable radiation monitor. The licensee's failure to perform source checks on the primary plant ventilation noble gas release rate monitors prior to initiating the gaseous batch releases from the volume control tanks was a violation of Technical Specification 5.5.1. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-001412-00. This issue was characterized as a green finding using the public radiation safety significance determination process. It was determined to have very low risk significance because the incident did not impair the licensee's ability to assess dose, and the calculated dose to the public as a result of the two gaseous releases was less than 1.0 percent of 10 CFR Part 50, Appendix I limits.
Inspection Report# : 2000003*(pdf)*

Physical Protection

Miscellaneous

Significance: N/A Dec 06, 2001
Identified By: NRC
Item Type: FIN Finding
Overall, an effective corrective action program was in place.
The licensee was effective at identifying problems and entering them into the corrective action program for resolution. Safety significance was appropriately considered in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee evaluations and department self-assessments were comprehensive and self-critical. Based on interviews conducted during this inspection, individuals at the site felt free to input safety issues into the corrective action program and felt that the program effectively addressed safety issues documented. Overall, the licensee implemented corrective actions that were timely and effective. However, the team found that the licensee's process for identifying performance trends relied heavily on each department manager recognizing when adverse trends existed. In one instance, an adverse performance trend involving the inadvertent release of radioactive material from the radiologically controlled area had not been identified and corrected by the department manager. Two violations of NRC requirements were identified where corrective actions were either not effective or timely to prevent a similar occurrence.
Inspection Report# : 2001007*(pdf)*

Significance: SL-IV Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly conduct training of a plant equipment operator trainee during an equipment training evolution
On October 27, 1999, a plant equipment operator trainee was directed and allowed by a qualified plant equipment operator to perform the helium compensation calibration of the hydrogen recombiner in the waste gas holdup system without direct supervision. As a result, the calibration was performed incorrectly. Technical Specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.b, requires procedures for authorities and responsibilities for safe operation. Section 6.15, of Operations

Department Administrative Manual Procedure ODA-102, Conduct of Operations, Revision 17, stated, in part, "Whenever trainees operate equipment, a qualified operator shall observe the trainee . . ." and "When a Trainee is performing any equipment operation or control manipulation, the qualified personnel shall observe the necessary indication as if he performed the task himself using all required self verification techniques." The failure of a qualified radwaste equipment operator to directly observe a radwaste equipment operator trainee operating equipment and performing the helium compensation calibration of the hydrogen recombiner is a violation of Technical Specification 5.4.1.a. The NRC determined that this was a willful violation of Operations Department Administrative Procedure ODA-102 requirements. This Severity Level IV violation is being treated as a noncited violation and was entered in the licensee's corrective action program as Smart Form SMF-1999-002891-00.
Inspection Report# : 2000007*(pdf)*

Significance: N/A Aug 28, 2000
Identified By: NRC
Item Type: FIN Finding
Effective Corrective Action Program
The licensee was effective at identifying problems and putting them into the corrective action program. The licensee self-identified the significant deficiencies identified during the review period. The licensee effectively prioritized the extent to which individual problems would be evaluated consistent with their safety and risk significance and established schedules for implementation of corrective actions. The licensee implemented corrective actions that were timely and effective.
Inspection Report# : 2000005*(pdf)*

Last modified : August 29, 2002

Comanche Peak 1

Initiating Events

Significance: G Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to determine the technical adequacy of a change in operation of the Unit 1 pressurizer relief tank
On July 25, 2000, the inspector noted that the Unit 1 reactor operator logs contained a note which allowed the pressurizer relief tank pressure to be maintained at 0 psig provided it was purged with nitrogen once a quarter. The inspector found that on August 30, 1994, a procedure change incorporated this note and removed a requirement to maintain a minimum of 1 psig pressure in the tank. The change was considered an administrative change only and no technical justification was provided. The change in minimum operating pressure was a change to the facility that increased the probability of developing an explosive mixture of hydrogen and oxygen in the pressurizer relief tank which was not an analyzed condition for the facility. Technical Specification 6.8.1; Regulatory Guide 1.33, Revision 2, Appendix A; and plant administrative procedures required a determination of technical adequacy for this material change. This violation of Technical Specifications is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy. The issue was placed into the licensee's problem identification and resolution program as Smart Form SMF-2000-001693-00.
Inspection Report# : 2000007*(pdf)*

Mitigating Systems

Significance: G Jan 09, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate procedure for equalizing charge resulted in overflowing two cells of safety-related 125 Vdc battery
A noncited violation of TS 5.4.1a was identified for an inadequate procedure for performing an equalizing charge on safety-related batteries. On January 9, 2002, electrolyte overflowed from two cells of the Unit 1 Train A 125 Vdc Battery BT1ED1 during an equalizing charge, even though the procedure in use contained precautions to prevent the overflow. The procedure did not contain sufficient guidance to ensure the electrolyte levels were monitored frequently enough to avoid overflowing the battery case. This violation was more than minor because the overflow condition had an actual impact on safety in that it caused the battery to be inoperable in accordance with Technical Specification 3.8.6. Since the finding affected operability, it was analyzed by the significance determination process. Phase 1 of the significance determination process screened the safety significance to be very low (Green) because the battery, a mitigating subsystem, was inoperable for only a few minutes which is less than the allowed outage time of 2 hours and there was no actual loss of safety function. Because the finding was of very low safety significance, and the finding was documented in the licensee's corrective action system, this finding is being treated as a noncited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-000084-00.
Inspection Report# : 2001006*(pdf)*

Significance: G Sep 13, 2000
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to promptly identify and correct degraded EDG jacket water coolers
The inspectors noted that heat exchanger performance trending had not been conducted for approximately 1½ years on the Unit 1 emergency diesel generator jacket water coolers and for about 1 year on the Unit 2 emergency diesel generator jacket water coolers. During those periods, the Units 1 and 2 Train B emergency diesel generator jacket water coolers were frequently fouled beyond the acceptance criteria and were considered degraded. Failure to promptly identify this condition adverse to quality was a violation of 10 CFR Part 50, Appendix B, Criterion XVI. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001548-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the licensee's past operability review determined that the degraded emergency diesel jacket water coolers were operable.
Inspection Report# : 2000006*(pdf)*

Significance: G May 20, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
NCV for nonconservative design calculation for safety-related air accumulators.
The inspectors identified that a calculation for all safety-related air accumulators did not properly account for air usage during a design basis mission. The calculation did not account for dynamic air consumption rates for the system and was therefore nonconservative. Failure to properly incorporate design basis information into station calculations was a violation of 10 CFR Part 50, Appendix B, Criterion III. This violation is being treated as a noncited violation in accordance with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-0001232-00. This issue was characterized as a green finding using the significance determination process. It was determined to have very low risk significance because the nonconservative values had not been incorporated into station procedures and the operability of safety-related equipment was not affected.
Inspection Report# : 2000003*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Incomplete valve alignment established drain path from spent fuel pools
Technical Specification 5.4.1 states, in part, that written procedures shall be established, implemented, and maintained. Step 5.9.2 in procedure SOP-506, "Spent Fuel Pool Cooling and Cleanup System" states to close Valves XSF-0220, XSF-0067 and XSF-0068 following completion of spent fuel pool transfer canal draining operations. Contrary to this requirement, Valve XSF-0220 was found open on February 1, 2001, following completion of transfer canal draining operations which established a gravity drain path from Spent Fuel Pools X-01 and X-02 to the recycle holdup tank. This violation is documented in Smart Form 2001-000221-00 and is being treated as a noncited violation.
Inspection Report# : 2001002*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: SL-IV Mar 13, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to acknowledge a personnel contamination monitor alarm.
On March 13, 2002, an NRC inspector observed an individual leaving the protected area and exiting the portal radiation monitor (PM-7) while the monitor was in alarm. The individual did not stop, and when the inspector called the individual to recount he did not return. The individual was stopped by another site employee and returned for a recount. The recount did not detect any radioactive material. Station Administration Procedure STA-654, "Personnel and Discrete Radioactive Particle Contamination Control," Revision 3, requires that if a portal monitor alarm occurs, the individual is to step out and repeat the count. The failure to follow procedural requirements involving a personnel contamination monitor alarm was a violation of Technical Specification 5.4.1a. This is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-000777. The safety significance of this violation was determined to be more than minor, because not responding to a personnel contamination monitor alarm had a credible impact on a worker's radiation safety. This violation did not affect the cornerstone since there was no impact on radiation monitors (instrumentation and/or personnel dosimetry) related to measuring workers' dose.
Inspection Report# : 2001006*(pdf)*

Significance:  Oct 06, 2001
Identified By: Licensee
Item Type: NCV NonCited Violation
Failure to survey
10 CFR 20.1501(a) states, in part, that each licensee shall make or cause to be made surveys that are reasonable under the circumstances to evaluate the magnitude and extent of radiation levels and concentrations or quantities of radioactive material. In the following three instances, the licensee failed to properly survey tools and equipment, and determine the quantities of radioactive material present. On March 27, 2001, the licensee discovered a Chicago fitting containing 2000 counts per minute of radioactive material outside the radiologically controlled area. The fitting caused the yard access small article monitor to alarm when personnel were exiting the yard access area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000630. On April 1, 2001, the licensee identified that eddy current equipment was not properly surveyed prior to decontamination. The label indicated contamination levels of 20,000 disintegrations per minute per 100 square centimeters when the actual contamination levels were mrad smearable. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-000729. On May 24, 2001, the licensee identified that a tool removed from the clean tool room contained 7000 counts per minute of radioactive material. The tool caused an alarm on the personnel monitor at the Alternate Access Point located outside the radiologically controlled area. This event is described in the licensee's corrective action program, reference Smart Form SMF 2001-001352. These three examples are being treated as a non-cited violation. The safety significance of this violation was determined to be very low by the Occupational Radiation Safety Significance Determination Process because there was no over exposure, no substantial potential for over exposure, and the ability to assess dose was not compromised.
Inspection Report# : 2001004*(pdf)*

Significance:  Apr 03, 2001
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
The inspector identified two occasions, during the Unit 1 refueling outage, when radiation protection personnel failed to survey an area prior to workers entering the area. The first occasion was for failure to survey steam generator platform Loop Room 2/3. The second occasion was for failure to survey the overhead of the pressurizer relief tank room. 10 CFR 20.1501(a) requires each licensee to make or cause to be made surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform radiological surveys in the above areas was a violation of 10 CFR 20.1501 (a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart

Forms 2001-1619 and 2001-805, respectively. The safety significance of this violation 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. This violation was more than minor because the failure to perform a survey has a credible impact on safety and the potential for unplanned or unintended dose.
Inspection Report# : 2001003*(pdf)*

Significance: SL-IV Dec 12, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to survey
On December 12, 2000, the inspector identified that radiation protection personnel failed to perform a radiological survey of an area above the waste monitoring tank room on elevation 790 foot of the auxiliary building prior to a worker entering the area. 10 CFR 20.1501(a), states, in part, each licensee shall make or cause to be made, surveys that are reasonable under the circumstances to evaluate radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards. The failure to perform a radiological survey of the above area was a violation of 10 CFR 20.1501(a). This violation is being treated as a noncited violation and is in the licensee's corrective action program as Smart Form 2000-3407. The significance of this violation was determined to be more than minor because there was a credible impact on a worker's radiation safety; however, it did not affect the cornerstone since there were no actual consequences and monitoring devices remained operable
Inspection Report# : 2000009*(pdf)*

Public Radiation Safety

Significance: N/A Apr 25, 2002
Identified By: NRC
Item Type: FIN Finding
Supplemental Inspection Results
A supplemental inspection was performed by the NRC to assess the licensee's evaluation of the control of radioactive material. A finding previously characterized as having low to moderate safety significance (White) was documented in the Final Significance Determination for NRC Inspection Report 50-445/01-07; 50-446/01-07. During this supplemental inspection performed in accordance with Inspection Procedure 95001, the inspector determined that the licensee performed a thorough, broad-based evaluation of the causes of the radioactive material control issue and correctly identified the extent of the conditions that led to the control problems. The licensee's evaluation identified 17 root causes. Corrective actions included: (1) conducting a pre-outage stand-down with all station work groups to discuss the past associated problems and the importance for control of radioactive material; (2) procedural revisions that clarified radioactive material control expectations and identification programs; (3) improved Radiation Worker Training lesson plans that stressed the need for and the controls in-place for handling radioactive material; and, (4) increased staffing for monitoring and controlling the release of radioactive material during outages. An effectiveness evaluation of radiation protection activities, to include the control of radioactive material, will be documented in Nuclear Oversight Department Evaluation 2002-015, at the completion of refueling outage 2RFO6. Because of the licensee's acceptable performance in addressing the control of radioactive material, the White finding associated with this issue will only be considered in assessing plant performance for a total of four quarters, in accordance with the guidance in IMC 0305, "Operating Reactor Assessment Program."
Inspection Report# : 2002007*(pdf)*

Significance: W Dec 06, 2001
Identified By: Licensee
Item Type: VIO Violation
Failure to survey
Between January 24, 2000, and May 24, 2001, the licensee identified 11 examples in which radioactive material was

inadvertently released from the radiologically controlled area because the licensee failed to properly perform surveys. Two of these examples have been dispositioned as a noncited violation of very low safety significance (Green) in NRC Inspection Report 50-445;446/01-04. The failure to perform proper radiological surveys are nine examples of a Technical Specification 5.4.1.a violation consistent with the NRC Enforcement Policy. These events are described in the licensee's corrective action program, reference Smart Forms 2000-000187, 2000-001080, 2000-002380, 2000-002445, 2000-002458, 2000-002740, 2000-003122, 2001-000850, and 2001-000968. Using the public radiation safety significance determination process, the NRC determined that the finding was of low-to-moderate risk significance (white) because the public exposure associated with each item was less than 5 millirem; however, there were more than five events. The events were more than minor, because the failure to properly survey radioactive material has a credible impact on safety, and the issues involved occurrences in the licensee's radioactive material control program that were contrary to NRC requirements or licensee procedures. A Notice of Violation was issued in a letter dated February 21, 2002. On March 6, 2002, the licensee filed an appeal of the characterization of the white finding to the NRC Region IV office. That appeal was denied by letter dated July 5, 2002. On August 6, 2002, the licensee filed an appeal with the EDO office. That appeal was denied by letter dated October 16, 2002.
Inspection Report# : 2001007*(pdf)*

Significance: G May 18, 2000
Identified By: NRC
Item Type: FIN Finding
Ineffective corrective actions for failure to source check a radiation monitor prior to a release
The details surrounding the March 23, 1999, nonroutine release were in the licensee's corrective action program as Smart Form SMF-1999-000671-00. Corrective actions were completed, and Smart Form SMF-1999-000671-00 was closed on August 24, 1999. However, on September 28, 1999, the licensee again failed to source check the effluent radiation monitor prior to initiating a nonroutine gaseous batch release. Therefore, the inspectors concluded that the corrective actions were ineffective in preventing a second occurrence. This issue was characterized as a green finding because the significance of the related technical issue was green.
Inspection Report# : 2000003*(pdf)*

Significance: G May 04, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to source check a radiation monitor prior to a release
The licensee identified that on March 23, 1999, a nonroutine gaseous release was initiated from the Unit 2 volume control tank prior to performing a source check on the primary plant ventilation noble gas release rate monitor. The inspectors identified another incident on September 28, 1999, in which the licensee performed a nonroutine gaseous batch release from the Unit 1 volume control tank prior to performing a source check to verify proper operation of the primary plant ventilation noble gas release rate monitor. The failure to perform the source check on the effluent monitors could have resulted in a radioactive gaseous release to the environment which was not properly monitored by an operable radiation monitor. The licensee's failure to perform source checks on the primary plant ventilation noble gas release rate monitors prior to initiating the gaseous batch releases from the volume control tanks was a violation of Technical Specification 5.5.1. This violation is being treated as a noncited violation consistent with Section VI.A of the NRC Enforcement Policy and is in the licensee's corrective action program as Smart Form SMF-2000-001412-00. This issue was characterized as a green finding using the public radiation safety significance determination process. It was determined to have very low risk significance because the incident did not impair the licensee's ability to assess dose, and the calculated dose to the public as a result of the two gaseous releases was less than 1.0 percent of 10 CFR Part 50, Appendix I limits.
Inspection Report# : 2000003*(pdf)*

Physical Protection

Miscellaneous

Significance: N/A Dec 06, 2001
Identified By: NRC
Item Type: FIN Finding
Overall, an effective corrective action program was in place.
The licensee was effective at identifying problems and entering them into the corrective action program for resolution. Safety significance was appropriately considered in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementation of corrective actions. Licensee evaluations and department self-assessments were comprehensive and self-critical. Based on interviews conducted during this inspection, individuals at the site felt free to input safety issues into the corrective action program and felt that the program effectively addressed safety issues documented. Overall, the licensee implemented corrective actions that were timely and effective. However, the team found that the licensee's process for identifying performance trends relied heavily on each department manager recognizing when adverse trends existed. In one instance, an adverse performance trend involving the inadvertent release of radioactive material from the radiologically controlled area had not been identified and corrected by the department manager. Two violations of NRC requirements were identified where corrective actions were either not effective or timely to prevent a similar occurrence.
Inspection Report# : 2001007*(pdf)*

Significance: SL-IV Nov 03, 2000
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to properly conduct training of a plant equipment operator trainee during an equipment training evolution
On October 27, 1999, a plant equipment operator trainee was directed and allowed by a qualified plant equipment operator to perform the helium compensation calibration of the hydrogen recombiner in the waste gas holdup system without direct supervision. As a result, the calibration was performed incorrectly. Technical Specification 5.4.1.a requires, in part, that written procedures be established, implemented, and maintained covering the activities recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Regulatory Guide 1.33, Appendix A, Section 1.b, requires procedures for authorities and responsibilities for safe operation. Section 6.15, of Operations Department Administrative Manual Procedure ODA-102, Conduct of Operations, Revision 17, stated, in part, "Whenever trainees operate equipment, a qualified operator shall observe the trainee . . ." and "When a Trainee is performing any equipment operation or control manipulation, the qualified personnel shall observe the necessary indication as if he performed the task himself using all required self verification techniques." The failure of a qualified radwaste equipment operator to directly observe a radwaste equipment operator trainee operating equipment and performing the helium compensation calibration of the hydrogen recombiner is a violation of Technical Specification 5.4.1.a. The NRC determined that this was a willful violation of Operations Department Administrative Procedure ODA-102 requirements. This Severity Level IV violation is being treated as a noncited violation and was entered in the licensee's corrective action program as Smart Form SMF-1999-002891-00.
Inspection Report# : 2000007*(pdf)*

Significance: N/A Aug 28, 2000
Identified By: NRC
Item Type: FIN Finding
Effective Corrective Action Program
The licensee was effective at identifying problems and putting them into the corrective action program. The licensee self-identified the significant deficiencies identified during the review period. The licensee effectively prioritized the extent to which individual problems would be evaluated consistent with their safety and risk significance and established schedules for implementation of corrective actions. The licensee implemented corrective actions that were timely and effective.
Inspection Report# : 2000005*(pdf)*

Last modified : December 02, 2002

Comanche Peak 1

Initiating Events

Significance: G Oct 07, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadequate Procedure to Test Lockout Relay in 345 kV Switchyard Resulted in Loss of Shutdown Cooling
An inadequate maintenance procedure for testing the lockout relays on the East bus in the 345 kV switchyard resulted in the loss of residual heat removal shutdown cooling. The procedure failed to state that actuation of a relay would cause loss of power to both Unit 1 safety related 6.9 kV buses. A self-revealing non-cited violation of Technical Specification 5.4.1.a was identified. The finding is greater than minor in that it was associated with the procedure quality attribute of the initiating events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during a shutdown. The finding is of very low safety significance because reactor cavity level was greater than 23 feet above the reactor vessel flange and residual heat removal cooling was recovered within 8 minutes.
Inspection Report# : 2002005*(pdf)*

Mitigating Systems

Significance: G Dec 06, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to test interlock circuits for residual heat removal system cross-tie valves
The inspectors identified one finding, which was a violation of NRC regulatory requirements. The inspectors found that the licensee had failed to fully and routinely test the control circuits for the residual heat removal system crosstie valves (two per unit), which are opened from the control room to provide suction to the charging and safety injection pumps during intermediate pressure cold leg recirculation following a loss-of-coolant accident. During the inspection, to address the inspectors' concerns, the licensee performed special tests, which revealed that a limit switch for one interlock for a Unit 1 valve failed to close as required, and wiring connections for another interlock on a Unit 2 valve were loose. The licensee determined that the remaining parts of the degraded interlock circuits were intact, and concluded that these as-found conditions would not have prevented the operator from opening the valves for the recirculation mode. Despite the problems encountered, the system and its trains would have performed their safety function with the proper valve line up. The inspectors concluded that failure to routinely test these circuits and detect these failures was a noncited violation of 10 CFR Part 50, Appendix B, Criterion XI, Test Control. Criterion XI requires a licensee establish a test program to assure identification and performance of all testing required to demonstrate that systems and components will perform satisfactorily in service. The inspectors considered the finding greater than minor because the lack of testing affected the reliability of a mitigating system. The inspectors considered the risk significance to be green because there was not an actual loss of a train of risk significant equipment. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy (50-445;446/0208-01). This violation is in the licensee's corrective action program as SmartForms 2002-004158, 2002-004227, and 2002-004228.
Inspection Report# : 2002008*(pdf)*

Significance: G Jan 09, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate procedure for equalizing charge resulted in overflowing two cells of safety-related 125 Vdc battery
A noncited violation of TS 5.4.1a was identified for an inadequate procedure for performing an equalizing charge on safety-related batteries. On January 9, 2002, electrolyte overflowed from two cells of the Unit 1 Train A 125 Vdc Battery BT1ED1 during an equalizing charge, even though the procedure in use contained precautions to prevent the overflow. The procedure did not contain sufficient guidance to ensure the electrolyte levels were monitored frequently enough to avoid overflowing the battery case. This violation was more than minor because the overflow condition had an actual impact on safety in that it caused the battery to be inoperable in accordance with Technical Specification 3.8.6. Since the finding affected operability, it was analyzed by the significance determination process. Phase 1 of the significance determination process screened the safety significance to be very low (Green) because the battery, a mitigating subsystem, was inoperable for only a few minutes which is less than the allowed outage time of 2 hours and there was no actual loss of safety function. Because the finding was of very low safety significance, and the finding was documented in the licensee's corrective action system, this finding is being treated as a

noncited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-000084-00.
Inspection Report# : 2001006*(pdf)*

Barrier Integrity

Significance: G Nov 01, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Two Examples of Failure to Identify and Correct Steam Generator Tube Flaws
Inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI for two examples of failure to perform adequate steam generator eddy-current examination in the 2002 refueling outage (1RF09). The inadequate examinations resulted in analyst failure to properly characterize two steam generator tube flaws until the licensee took corrective actions in response to questions from the NRC inspectors. This finding is greater than minor because it degraded the ability to meet the cornerstone objective of reactor coolant system pressure boundary. The failure to identify the flaws could have resulted in flawed tubes that might have developed leaks if left in service. The significance of this finding is very low because the in situ tests demonstrated that the tubes would have met the design basis requirements for withstanding analyzed transients, and prior to returning the plant to operation the licensee removed the flawed tubes from service.
Inspection Report# : 2002009*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: SL-IV Mar 13, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to acknowledge a personnel contamination monitor alarm.
On March 13, 2002, an NRC inspector observed an individual leaving the protected area and exiting the portal radiation monitor (PM-7) while the monitor was in alarm. The individual did not stop, and when the inspector called the individual to recount he did not return. The individual was stopped by another site employee and returned for a recount. The recount did not detect any radioactive material. Station Administration Procedure STA-654, "Personnel and Discrete Radioactive Particle Contamination Control," Revision 3, requires that if a portal monitor alarm occurs, the individual is to step out and repeat the count. The failure to follow procedural requirements involving a personnel contamination monitor alarm was a violation of Technical Specification 5.4.1a. This is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-000777. The safety significance of this violation was determined to be more than minor, because not responding to a personnel contamination monitor alarm had a credible impact on a worker's radiation safety. This violation did not affect the cornerstone since there was no impact on radiation monitors (instrumentation and/or personnel dosimetry) related to measuring workers' dose.
Inspection Report# : 2001006*(pdf)*

Public Radiation Safety

Significance: G Dec 13, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to properly classify a radioactive material shipment package as Surface Contaminated Object-II.
A self-revealing non-cited violation of 49 CFR 173.421 was identified because the licensee failed to properly classify a shipment package as Surface Contaminated Object (SCO)-II, Schedule 8. On May 1, 2002, box number 300125 included in Radioactive Material Shipment 2002-0039 was classified by the licensee as limited quantity based on a maximum exterior surface dose rate of 0.4 millirem per hour measured prior to shipment. However, on May 9, 2002, receipt surveys performed by Westinghouse personnel showed that the maximum dose rate on the

exterior surface of the box was 2.4 millirem per hour, which exceeded the 0.5 millirem per hour limit for a limited quantity package. The team determined that this issue was self-revealing rather than licensee identified because the issue was identified during receipt surveys by the recipient of the radioactive materials shipment. The failure to properly classify box number 300125 as SCO-II was a performance deficiency. The finding was determined to be more than minor because it was associated with one of the Public Radiation Safety cornerstone attributes (Transportation Program) and affected the associated cornerstone objective. Using the Public Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because radiation limits for SCO-II were not exceeded, the package was not breached during transit, no certificate-of-compliance problem was involved, there was no low level burial ground nonconformance, and the licensee did not fail to make notifications. This violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-001873.
Inspection Report# : 2002010*(pdf)*

Significance: 

Dec 13, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to control detectable licensed radioactive material.
A self-revealing non-cited violation of Technical Specification 5.4.1a was identified because the licensee did not prevent the release of detectable licensed radioactive material from the radiologically controlled area. Specifically, Procedure RPI-213, "Survey and Release of Material and Personnel," Revision 8, Section 4.2.1, states, in part, that the criteria for unconditional release from an Radiologically Controlled Area is no detectable activity. However, on November 12, 2002, a contract worker was discovered with radioactive material on his lanyard during an in-processing whole body count at another licensee's facility. The individual last worked at Comanche Peak Steam Electric Station. The team determined that this example was self-revealing rather than licensee identified because the example was found by another licensee. The failure to properly control detectable licensed radioactive material is a performance deficiency. The finding was more than minor because it was associated with one of the Public Radiation Safety cornerstone attributes (Material Release Program) and affected the associated cornerstone objective. Using the Public Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because there were not more than 5 occurrences and the exposure associated with each item was less than 5 millirem. This violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-3975.
Inspection Report# : 2002010*(pdf)*

Significance: N/A Apr 25, 2002
Identified By: NRC
Item Type: FIN Finding
Supplemental Inspection Results
A supplemental inspection was performed by the NRC to assess the licensee's evaluation of the control of radioactive material. A finding previously characterized as having low to moderate safety significance (White) was documented in the Final Significance Determination for NRC Inspection Report 50-445/01-07; 50-446/01-07. During this supplemental inspection performed in accordance with Inspection Procedure 95001, the inspector determined that the licensee performed a thorough, broad-based evaluation of the causes of the radioactive material control issue and correctly identified the extent of the conditions that led to the control problems. The licensee's evaluation identified 17 root causes. Corrective actions included: (1) conducting a pre-outage stand-down with all station work groups to discuss the past associated problems and the importance for control of radioactive material; (2) procedural revisions that clarified radioactive material control expectations and identification programs; (3) improved Radiation Worker Training lesson plans that stressed the need for and the controls in-place for handling radioactive material; and, (4) increased staffing for monitoring and controlling the release of radioactive material during outages. An effectiveness evaluation of radiation protection activities, to include the control of radioactive material, will be documented in Nuclear Oversight Department Evaluation 2002-015, at the completion of refueling outage 2RFO6. Because of the licensee's acceptable performance in addressing the control of radioactive material, the White finding associated with this issue will only be considered in assessing plant performance for a total of four quarters, in accordance with the guidance in IMC 0305, "Operating Reactor Assessment Program."
Inspection Report# : 2002007*(pdf)*

Physical Protection

Miscellaneous

Last modified : March 25, 2003

Comanche Peak 1
1Q/2003 Plant Inspection Findings

Initiating Events

Significance: Oct 07, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadequate Procedure to Test Lockout Relay in 345 kV Switchyard Resulted in Loss of Shutdown Cooling
An inadequate maintenance procedure for testing the lockout relays on the East bus in the 345 kV switchyard resulted in the loss of residual heat removal shutdown cooling. The procedure failed to state that actuation of a relay would cause loss of power to both Unit 1 safety related 6.9 kV buses. A self-revealing non-cited violation of Technical Specification 5.4.1.a was identified. The finding is greater than minor in that it was associated with the procedure quality attribute of the initiating events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during a shutdown. The finding is of very low safety significance because reactor cavity level was greater than 23 feet above the reactor vessel flange and residual heat removal cooling was recovered within 8 minutes.
Inspection Report# : 2002005*(pdf)*

Mitigating Systems

Significance: Dec 06, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to test interlock circuits for residual heat removal system cross-tie valves
The inspectors identified one finding, which was a violation of NRC regulatory requirements. The inspectors found that the licensee had failed to fully and routinely test the control circuits for the residual heat removal system crosstie valves (two per unit), which are opened from the control room to provide suction to the charging and safety injection pumps during intermediate pressure cold leg recirculation following a loss-of-coolant accident. During the inspection, to address the inspectors' concerns, the licensee performed special tests, which revealed that a limit switch for one interlock for a Unit 1 valve failed to close as required, and wiring connections for another interlock on a Unit 2 valve were loose. The licensee determined that the remaining parts of the degraded interlock circuits were intact, and concluded that these as-found conditions would not have prevented the operator from opening the valves for the recirculation mode. Despite the problems encountered, the system and its trains would have performed their safety function with the proper valve line up. The inspectors concluded that failure to routinely test these circuits and detect these failures was a noncited violation of 10 CFR Part 50, Appendix B, Criterion XI, Test Control. Criterion XI requires a licensee establish a test program to assure identification and performance of all testing required to demonstrate that systems and components will perform satisfactorily in service. The inspectors considered the finding greater than minor because the lack of testing affected the reliability of a mitigating system. The inspectors considered the risk significance to be green because there was not an actual loss of a train of risk significant equipment. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy (50-445;446/0208-01). This violation is in the licensee's corrective action program as SmartForms 2002-004158, 2002-

004227, and 2002-004228.
Inspection Report# : 2002008*(pdf)*

Significance: G Oct 05, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadequate Low Temperature Overpressure Protection (LTOP) surveillance procedure resulted in Train B RHR Being Inoperable
An inadequate calibration procedure for the low temperature overpressure protection (LTOP) temperature channel resulted in Train B residual heat removal system being inoperable while Technical Specification 3.9.6 required both trains to be operable. The procedure failed to state that the performance of the surveillance would interlock closed the reactor coolant system hot leg to Train B residual heat removal pump suction Valve 1-8702B. This self-revealing, noncited violation of Technical Specification 5.4.1.a. was first documented in NRC Inspection Report 50-445/02-05; 50-446/02-05 as an unresolved item (URI 50-445/0205-01) pending a Phase 2 analysis. This finding is greater than minor because it was associated with the mitigating systems attribute of equipment availability and affected the cornerstone objective to ensure the availability of a mitigating system. This violation degraded the safety of a shutdown reactor, and in accordance with Inspection Manual Chapter 0609, Appendix G, the shutdown safety function of the core heat removal guidelines was not met. Since the finding degraded the ability to recover decay heat removal once it was lost, a Phase 2 analysis was required. Because the Phase 2 shutdown risk tool is currently in draft, the analyst completed a Phase 3 analysis. This analysis resulted in the significance of this violation being very low (GREEN). This was primarily due to: (1) the operators having two methods to realign Train B RHR to the decay heat removal mode and both were achievable within 10 minutes; and (2) the available water in the RWST provided 9 hours of inventory and the water in the cavity increased the time to boil.
Inspection Report# : 2002006*(pdf)*

Barrier Integrity

Significance: G Nov 01, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Two Examples of Failure to Identify and Correct Steam Generator Tube Flaws
Inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI for two examples of failure to perform adequate steam generator eddy-current examination in the 2002 refueling outage (1RF09). The inadequate examinations resulted in analyst failure to properly characterize two steam generator tube flaws until the licensee took corrective actions in response to questions from the NRC inspectors. This finding is greater than minor because it degraded the ability to meet the cornerstone objective of reactor coolant system pressure boundary. The failure to identify the flaws could have resulted in flawed tubes that might have developed leaks if left in service. The significance of this finding is very low because the in situ tests demonstrated that the tubes would have met the design basis requirements for withstanding analyzed transients, and prior to returning the plant to operation the licensee removed the flawed tubes from service.
Inspection Report# : 2002009*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: G Dec 13, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to properly classify a radioactive material shipment package as Surface Contaminated Object-II.
A self-revealing non-cited violation of 49 CFR 173.421 was identified because the licensee failed to properly classify a shipment package as Surface Contaminated Object (SCO)-II, Schedule 8. On May 1, 2002, box number 300125 included in Radioactive Material Shipment 2002-0039 was classified by the licensee as limited quantity based on a maximum exterior surface dose rate of 0.4 millirem per hour measured prior to shipment. However, on May 9, 2002, receipt surveys performed by Westinghouse personnel showed that the maximum dose rate on the exterior surface of the box was 2.4 millirem per hour, which exceeded the 0.5 millirem per hour limit for a limited quantity package. The team determined that this issue was self-revealing rather than licensee identified because the issue was identified during receipt surveys by the recipient of the radioactive materials shipment. The failure to properly classify box number 300125 as SCO-II was a performance deficiency. The finding was determined to be more than minor because it was associated with one of the Public Radiation Safety cornerstone attributes (Transportation Program) and affected the associated cornerstone objective. Using the Public Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because radiation limits for SCO-II were not exceeded, the package was not breached during transit, no certificate-of-compliance problem was involved, there was no low level burial ground nonconformance, and the licensee did not fail to make notifications. This violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-001873.
Inspection Report# : 2002010*(pdf)*

Significance: G Dec 13, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to control detectable licensed radioactive material.
A self-revealing non-cited violation of Technical Specification 5.4.1a was identified because the licensee did not prevent the release of detectable licensed radioactive material from the radiologically controlled area. Specifically, Procedure RPI-213, "Survey and Release of Material and Personnel," Revision 8, Section 4.2.1, states, in part, that the criteria for unconditional release from an Radiologically Controlled Area is no detectable activity. However, on November 12, 2002, a contract worker was discovered with radioactive material on his lanyard during an in-processing whole body count at another licensee's facility. The individual last worked at Comanche Peak Steam Electric Station. The team determined that this example was self-revealing rather than licensee identified because the example was found by another licensee. The failure to properly control detectable licensed radioactive material is a performance deficiency. The finding was more than minor because it was associated with one of the Public Radiation Safety cornerstone attributes (Material Release Program) and affected the associated cornerstone objective. Using the Public Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because there were not more than 5 occurrences and the exposure associated with each item was less than 5 millirem. This violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy.

This violation is in the licensee's corrective action program as Smart Form SMF-2002-3975.
Inspection Report# : 2002010*(pdf)*

Significance: N/A Apr 25, 2002
Identified By: NRC
Item Type: FIN Finding
Supplemental Inspection Results
A supplemental inspection was performed by the NRC to assess the licensee's evaluation of the control of radioactive material. A finding previously characterized as having low to moderate safety significance (White) was documented in the Final Significance Determination for NRC Inspection Report 50-445/01-07; 50-446/01-07. During this supplemental inspection performed in accordance with Inspection Procedure 95001, the inspector determined that the licensee performed a thorough, broad-based evaluation of the causes of the radioactive material control issue and correctly identified the extent of the conditions that led to the control problems. The licensee's evaluation identified 17 root causes. Corrective actions included: (1) conducting a pre-outage stand-down with all station work groups to discuss the past associated problems and the importance for control of radioactive material; (2) procedural revisions that clarified radioactive material control expectations and identification programs; (3) improved Radiation Worker Training lesson plans that stressed the need for and the controls in-place for handling radioactive material; and, (4) increased staffing for monitoring and controlling the release of radioactive material during outages. An effectiveness evaluation of radiation protection activities, to include the control of radioactive material, will be documented in Nuclear Oversight Department Evaluation 2002-015, at the completion of refueling outage 2RFO6. Because of the licensee's acceptable performance in addressing the control of radioactive material, the White finding associated with this issue will only be considered in assessing plant performance for a total of four quarters, in accordance with the guidance in IMC 0305, "Operating Reactor Assessment Program."
Inspection Report# : 2002007*(pdf)*

Physical Protection

Miscellaneous

Last modified : May 30, 2003

Comanche Peak 1
2Q/2003 Plant Inspection Findings

Initiating Events

Significance: G Oct 07, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadequate Procedure to Test Lockout Relay in 345 kV Switchyard Resulted in Loss of Shutdown Cooling
An inadequate maintenance procedure for testing the lockout relays on the East bus in the 345 kV switchyard resulted in the loss of residual heat removal shutdown cooling. The procedure failed to state that actuation of a relay would cause loss of power to both Unit 1 safety related 6.9 kV buses. A self-revealing non-cited violation of Technical Specification 5.4.1.a was identified. The finding is greater than minor in that it was associated with the procedure quality attribute of the initiating events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during a shutdown. The finding is of very low safety significance because reactor cavity level was greater than 23 feet above the reactor vessel flange and residual heat removal cooling was recovered within 8 minutes.
Inspection Report# : 2002005*(pdf)*

Mitigating Systems

Significance: G Dec 06, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to test interlock circuits for residual heat removal system cross-tie valves
The inspectors identified one finding, which was a violation of NRC regulatory requirements. The inspectors found that the licensee had failed to fully and routinely test the control circuits for the residual heat removal system crosstie valves (two per unit), which are opened from the control room to provide suction to the charging and safety injection pumps during intermediate pressure cold leg recirculation following a loss-of-coolant accident. During the inspection, to address the inspectors' concerns, the licensee performed special tests, which revealed that a limit switch for one interlock for a Unit 1 valve failed to close as required, and wiring connections for another interlock on a Unit 2 valve were loose. The licensee determined that the remaining parts of the degraded interlock circuits were intact, and concluded that these as-found conditions would not have prevented the operator from opening the valves for the recirculation mode. Despite the problems encountered, the system and its trains would have performed their safety function with the proper valve line up. The inspectors concluded that failure to routinely test these circuits and detect these failures was a noncited violation of 10 CFR Part 50, Appendix B, Criterion XI, Test Control. Criterion XI requires a licensee establish a test program to assure identification and performance of all testing required to demonstrate that systems and components will perform satisfactorily in service. The inspectors considered the finding greater than minor because the lack of testing affected the reliability of a mitigating system. The inspectors considered the risk significance to be green because there was not an actual loss of a train of risk significant equipment. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy (50-445;446/0208-01). This violation is in the licensee's corrective action program as SmartForms 2002-004158, 2002-

004227, and 2002-004228.
Inspection Report# : 2002008*(pdf)*

Significance: G Oct 05, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadequate Low Temperature Overpressure Protection (LTOP) surveillance procedure resulted in Train B RHR Being Inoperable
An inadequate calibration procedure for the low temperature overpressure protection (LTOP) temperature channel resulted in Train B residual heat removal system being inoperable while Technical Specification 3.9.6 required both trains to be operable. The procedure failed to state that the performance of the surveillance would interlock closed the reactor coolant system hot leg to Train B residual heat removal pump suction Valve 1-8702B. This self-revealing, noncited violation of Technical Specification 5.4.1.a. was first documented in NRC Inspection Report 50-445/02-05; 50-446/02-05 as an unresolved item (URI 50-445/0205-01) pending a Phase 2 analysis. This finding is greater than minor because it was associated with the mitigating systems attribute of equipment availability and affected the cornerstone objective to ensure the availability of a mitigating system. This violation degraded the safety of a shutdown reactor, and in accordance with Inspection Manual Chapter 0609, Appendix G, the shutdown safety function of the core heat removal guidelines was not met. Since the finding degraded the ability to recover decay heat removal once it was lost, a Phase 2 analysis was required. Because the Phase 2 shutdown risk tool is currently in draft, the analyst completed a Phase 3 analysis. This analysis resulted in the significance of this violation being very low (GREEN). This was primarily due to: (1) the operators having two methods to realign Train B RHR to the decay heat removal mode and both were achievable within 10 minutes; and (2) the available water in the RWST provided 9 hours of inventory and the water in the cavity increased the time to boil.
Inspection Report# : 2002006*(pdf)*

Barrier Integrity

Significance: G Nov 01, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Two Examples of Failure to Identify and Correct Steam Generator Tube Flaws
Inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI for two examples of failure to perform adequate steam generator eddy-current examination in the 2002 refueling outage (1RF09). The inadequate examinations resulted in analyst failure to properly characterize two steam generator tube flaws until the licensee took corrective actions in response to questions from the NRC inspectors. This finding is greater than minor because it degraded the ability to meet the cornerstone objective of reactor coolant system pressure boundary. The failure to identify the flaws could have resulted in flawed tubes that might have developed leaks if left in service. The significance of this finding is very low because the in situ tests demonstrated that the tubes would have met the design basis requirements for withstanding analyzed transients, and prior to returning the plant to operation the licensee removed the flawed tubes from service.
Inspection Report# : 2002009*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: G Dec 13, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to properly classify a radioactive material shipment package as Surface Contaminated Object-II.
A self-revealing non-cited violation of 49 CFR 173.421 was identified because the licensee failed to properly classify a shipment package as Surface Contaminated Object (SCO)-II, Schedule 8. On May 1, 2002, box number 300125 included in Radioactive Material Shipment 2002-0039 was classified by the licensee as limited quantity based on a maximum exterior surface dose rate of 0.4 millirem per hour measured prior to shipment. However, on May 9, 2002, receipt surveys performed by Westinghouse personnel showed that the maximum dose rate on the exterior surface of the box was 2.4 millirem per hour, which exceeded the 0.5 millirem per hour limit for a limited quantity package. The team determined that this issue was self-revealing rather than licensee identified because the issue was identified during receipt surveys by the recipient of the radioactive materials shipment. The failure to properly classify box number 300125 as SCO-II was a performance deficiency. The finding was determined to be more than minor because it was associated with one of the Public Radiation Safety cornerstone attributes (Transportation Program) and affected the associated cornerstone objective. Using the Public Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because radiation limits for SCO-II were not exceeded, the package was not breached during transit, no certificate-of-compliance problem was involved, there was no low level burial ground nonconformance, and the licensee did not fail to make notifications. This violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-001873.
Inspection Report# : 2002010*(pdf)*

Significance: G Dec 13, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to control detectable licensed radioactive material.
A self-revealing non-cited violation of Technical Specification 5.4.1a was identified because the licensee did not prevent the release of detectable licensed radioactive material from the radiologically controlled area. Specifically, Procedure RPI-213, "Survey and Release of Material and Personnel," Revision 8, Section 4.2.1, states, in part, that the criteria for unconditional release from an Radiologically Controlled Area is no detectable activity. However, on November 12, 2002, a contract worker was discovered with radioactive material on his lanyard during an in-processing whole body count at another licensee's facility. The individual last worked at Comanche Peak Steam Electric Station. The team determined that this example was self-revealing rather than licensee identified because the example was found by another licensee. The failure to properly control detectable licensed radioactive material is a performance deficiency. The finding was more than minor because it was associated with one of the Public Radiation Safety cornerstone attributes (Material Release Program) and affected the associated cornerstone objective. Using the Public Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because there were not more than 5 occurrences and the exposure associated with each item was less than 5 millirem. This violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy.

This violation is in the licensee's corrective action program as Smart Form SMF-2002-3975.
Inspection Report# : 2002010*(pdf)*

Physical Protection

Significance: N/A Jun 05, 2003
Identified By: NRC
Item Type: FIN Finding
Verification of Compliance With Interim Compensatory Measures Order
On February 25, 2002, the NRC imposed by Order, Interim Compensatory Measures to enhance physical security. The inspectors determined that, overall, the licensee appropriately incorporated the Interim Compensatory Measures into the site protective strategy and access authorization program; developed and implemented relevant procedures; ensured that the emergency plan could be implemented; and established and effectively coordinated interface agreements with offsite organizations.
Inspection Report# : 2003005*(pdf)*

Miscellaneous

Significance: N/A Jun 19, 2003
Identified By: NRC
Item Type: FIN Finding
Identification and Resolution of Problems
The team identified that the licensee was effective at identifying problems and putting them into the corrective action program. The licensee's effectiveness at problem identification was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. The licensee effectively used risk in prioritizing the extent that individual problems would be evaluated and in establishing schedules for implementing corrective actions. Corrective actions, when specified, were implemented in a timely manner, with few exceptions. Licensee audits and assessments were found to be effective. On the basis of interviews conducted during this inspection, workers at the site felt free to input safety findings into the corrective action program.
Inspection Report# : 2003006*(pdf)*

Last modified : September 04, 2003

Comanche Peak 1
3Q/2003 Plant Inspection Findings

Initiating Events

Significance: G Oct 07, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadequate Procedure to Test Lockout Relay in 345 kV Switchyard Resulted in Loss of Shutdown Cooling
An inadequate maintenance procedure for testing the lockout relays on the East bus in the 345 kV switchyard resulted in the loss of residual heat removal shutdown cooling. The procedure failed to state that actuation of a relay would cause loss of power to both Unit 1 safety related 6.9 kV buses.

A self-revealing non-cited violation of Technical Specification 5.4.1.a was identified. The finding is greater than minor in that it was associated with the procedure quality attribute of the initiating events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during a shutdown. The finding is of very low safety significance because reactor cavity level was greater than 23 feet above the reactor vessel flange and residual heat removal cooling was recovered within 8 minutes.
Inspection Report# : 2002005*(pdf)*

Mitigating Systems

Significance: G Dec 06, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to test interlock circuits for residual heat removal system cross-tie valves
The inspectors identified one finding, which was a violation of NRC regulatory requirements. The inspectors found that the licensee had failed to fully and routinely test the control circuits for the residual heat removal system crosstie valves (two per unit), which are opened from the control room to provide suction to the charging and safety injection pumps during intermediate pressure cold leg recirculation following a loss-of-coolant accident. During the inspection, to address the inspectors' concerns, the licensee performed special tests, which revealed that a limit switch for one interlock for a Unit 1 valve failed to close as required, and wiring connections for another interlock on a Unit 2 valve were loose. The licensee determined that the remaining parts of the degraded interlock circuits were intact, and concluded that these as-found conditions would not have prevented the operator from opening the valves for the recirculation mode. Despite the problems encountered, the system and its trains would have performed their safety function with the proper valve line up.

The inspectors concluded that failure to routinely test these circuits and detect these failures was a noncited violation of 10 CFR Part 50, Appendix B, Criterion XI, Test Control. Criterion XI requires a licensee establish a test program to assure identification and performance of all testing required to demonstrate that systems and components will perform satisfactorily in service. The inspectors considered the finding greater than minor because the lack of testing affected the reliability of a mitigating system. The inspectors considered the risk significance to be green because there was not

an actual loss of a train of risk significant equipment. This violation is being treated as a noncited violation consistent with Section VI.A.1 of the NRC Enforcement Policy (50-445;446/0208-01). This violation is in the licensee's corrective action program as SmartForms 2002-004158, 2002-004227, and 2002-004228.
Inspection Report# : 2002008*(pdf)*

Significance: G Oct 05, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadequate Low Temperature Overpressure Protection (LTOP) surveillance procedure resulted in Train B RHR Being Inoperable
An inadequate calibration procedure for the low temperature overpressure protection (LTOP) temperature channel resulted in Train B residual heat removal system being inoperable while Technical Specification 3.9.6 required both trains to be operable. The procedure failed to state that the performance of the surveillance would interlock closed the reactor coolant system hot leg to Train B residual heat removal pump suction Valve 1-8702B.

This self-revealing, noncited violation of Technical Specification 5.4.1.a. was first documented in NRC Inspection Report 50-445/02-05; 50-446/02-05 as an unresolved item (URI 50-445/0205-01) pending a Phase 2 analysis. This finding is greater than minor because it was associated with the mitigating systems attribute of equipment availability and affected the cornerstone objective to ensure the availability of a mitigating system. This violation degraded the safety of a shutdown reactor, and in accordance with Inspection Manual Chapter 0609, Appendix G, the shutdown safety function of the core heat removal guidelines was not met. Since the finding degraded the ability to recover decay heat removal once it was lost, a Phase 2 analysis was required. Because the Phase 2 shutdown risk tool is currently in draft, the analyst completed a Phase 3 analysis. This analysis resulted in the significance of this violation being very low (GREEN). This was primarily due to: (1) the operators having two methods to realign Train B RHR to the decay heat removal mode and both were achievable within 10 minutes; and (2) the available water in the RWST provided 9 hours of inventory and the water in the cavity increased the time to boil.
Inspection Report# : 2002006*(pdf)*

Barrier Integrity

Significance: G Nov 01, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Two Examples of Failure to Identify and Correct Steam Generator Tube Flaws
Inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI for two examples of failure to perform adequate steam generator eddy-current examination in the 2002 refueling outage (1RF09). The inadequate examinations resulted in analyst failure to properly characterize two steam generator tube flaws until the licensee took corrective actions in response to questions from the NRC inspectors.

This finding is greater than minor because it degraded the ability to meet the cornerstone objective of reactor coolant system pressure boundary. The failure to identify the flaws could have resulted in flawed tubes that might have developed leaks if left in service. The significance of this finding is very low because the in situ tests demonstrated that the tubes would have met the design basis requirements for withstanding analyzed transients, and prior to returning the plant to operation the licensee removed the flawed tubes from service.
Inspection Report# : 2002009*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: G Dec 13, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to control detectable licensed radioactive material.
A self-revealing non-cited violation of Technical Specification 5.4.1a was identified because the licensee did not prevent the release of detectable licensed radioactive material from the radiologically controlled area. Specifically, Procedure RPI-213, "Survey and Release of Material and Personnel," Revision 8, Section 4.2.1, states, in part, that the criteria for unconditional release from an Radiologically Controlled Area is no detectable activity. However, on November 12, 2002, a contract worker was discovered with radioactive material on his lanyard during an in-processing whole body count at another licensee's facility. The individual last worked at Comanche Peak Steam Electric Station. The team determined that this example was self-revealing rather than licensee identified because the example was found by another licensee.

The failure to properly control detectable licensed radioactive material is a performance deficiency. The finding was more than minor because it was associated with one of the Public Radiation Safety cornerstone attributes (Material Release Program) and affected the associated cornerstone objective. Using the Public Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because there were not more than 5 occurrences and the exposure associated with each item was less than 5 millirem. This violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-3975.
Inspection Report# : 2002010*(pdf)*

Significance: G Dec 13, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to properly classify a radioactive material shipment package as Surface Contaminated Object-II.
A self-revealing non-cited violation of 49 CFR 173.421 was identified because the licensee failed to properly classify a shipment package as Surface Contaminated Object (SCO)-II, Schedule 8. On May 1, 2002, box number 300125 included in Radioactive Material Shipment 2002-0039 was classified by the licensee as limited quantity based on a maximum exterior surface dose rate of 0.4 millirem per hour measured prior to shipment. However, on May 9, 2002, receipt surveys performed by Westinghouse personnel showed that the maximum dose rate on the exterior surface of the box was 2.4 millirem per hour, which exceeded the 0.5 millirem per hour limit for a limited quantity package. The team determined that this issue was self-revealing rather than licensee identified because the issue was identified during receipt surveys by the recipient of the radioactive materials shipment.

The failure to properly classify box number 300125 as SCO-II was a performance deficiency. The finding was determined to be more than minor because it was associated with one of the Public Radiation Safety cornerstone attributes (Transportation Program) and affected the associated cornerstone objective. Using the Public Radiation Safety Significance Determination Process, the team determined the finding had very low safety significance because radiation limits for SCO-II were not exceeded, the package was not breached during transit, no certificate-of-compliance problem was involved, there was no low level burial ground nonconformance, and the licensee did not fail to make notifications. This violation is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. This violation is in the licensee's corrective action program as Smart Form SMF-2002-001873.
Inspection Report# : 2002010*(pdf)*

Physical Protection

Significance: N/A Jun 05, 2003
Identified By: NRC
Item Type: FIN Finding
Verification of Compliance With Interim Compensatory Measures Order
On February 25, 2002, the NRC imposed by Order, Interim Compensatory Measures to enhance physical security. The inspectors determined that, overall, the licensee appropriately incorporated the Interim Compensatory Measures into the site protective strategy and access authorization program; developed and implemented relevant procedures; ensured that the emergency plan could be implemented; and established and effectively coordinated interface agreements with offsite organizations.
Inspection Report# : 2003005*(pdf)*

Miscellaneous

Significance: N/A Jun 19, 2003
Identified By: NRC
Item Type: FIN Finding
Identification and Resolution of Problems
The team identified that the licensee was effective at identifying problems and putting them into the corrective action program. The licensee's effectiveness at problem identification was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. The licensee effectively used risk in prioritizing the extent that individual problems would be evaluated and in establishing schedules for implementing corrective actions. Corrective actions, when specified, were implemented in a timely manner, with few exceptions. Licensee audits and assessments were found to be effective. On the basis of interviews conducted during this inspection, workers at the site felt free to input safety findings into the corrective action program.
Inspection Report# : 2003006*(pdf)*

Last modified : December 01, 2003

Comanche Peak 1
4Q/2003 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Aug 20, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadvertent TS 3.0.3 Entry Due to Inoperable CRACS Trains
A self-revealing non-cited violation of Technical Specification 3.0.3 was identified when both trains of the Units 1 and 2 control room air conditioning system (CRACS) were inoperable for longer than the 7 hours specified without placing both units in Mode 3. Specifically, on August 20, 2003, the licensee discovered that Unit 1 and Unit 2 CRACS units had been inoperable according to TS 3.7.11 for several hours prior to discovery, because support systems required for operability had been removed from service for routine maintenance and surveillance. The appropriate systems were restored to make one train of CRACS operable prior to an actual power reduction, but the total duration with less than one operable train exceeded the time to enter Mode 3, as required by Technical Specification 3.0.3. Corrective actions included issuing a Shift Order; issuing lessons learned to operators and schedulers; and reviewing operations and work control procedures for improvement. This event was entered into the licensee's corrective action program as SMF-2003-2463.

This violation is greater than minor because it involves a failure to perform required actions of a Technical Specification and affects an attribute and objective of the mitigating systems cornerstone in that the lack of proper configuration control affected the capability of the CRACS to respond to initiating events. The violation is considered to have a very low safety significance (Green) because it affected only the mitigating system cornerstone and did not represent an actual loss of safety function.
Inspection Report# : 2003004*(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G May 11, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to Follow Radiological Postings
A self-revealing non-cited violation of Technical Specification 5.4.1.a was identified because two operators failed to follow radiological postings as required by procedure. Specifically, on May 11, 2003, two operators entered Unit 1 Room 1-092 which was posted "Not Routinely Surveyed, Contact RP Prior To Entry" to hang clearance tags for valve work. However, the two operators entered to complete their task and received electronic dosimeter accumulated dose alarms. During an investigation of the dosimeter alarms, it was identified that the operators entered the room without contacting radiation protection for current radiological conditions. This event was entered into the licensee's corrective action program as SMF 2003-1313.

The finding is greater than minor because it affected the Occupational Radiation Safety cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation and is associated with a cornerstone attribute (Program & Process). The finding involved individuals' potential for unplanned or unintended dose. When processed through the Occupational Radiation Safety Significance Determination Process the finding was determined to be of very low safety significance because the finding was not associated with ALARA planning or work controls, there was no overexposure or a substantial potential for an overexposure, and the ability to assess dose was not compromised.
Inspection Report# : 2003004*(pdf)*

Public Radiation Safety

Physical Protection

Significance: N/A Jun 05, 2003
Identified By: NRC
Item Type: FIN Finding
Verification of Compliance With Interim Compensatory Measures Order
On February 25, 2002, the NRC imposed by Order, Interim Compensatory Measures to enhance physical security. The inspectors determined that, overall, the licensee appropriately incorporated the Interim Compensatory Measures into the site protective strategy and access authorization program; developed and implemented relevant procedures; ensured that the emergency plan could be implemented; and established and effectively coordinated interface agreements with offsite organizations.
Inspection Report# : 2003005*(pdf)*

Miscellaneous

Significance: N/A Jun 19, 2003
Identified By: NRC
Item Type: FIN Finding
Identification and Resolution of Problems

The team identified that the licensee was effective at identifying problems and putting them into the corrective action program. The licensee's effectiveness at problem identification was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. The licensee effectively used risk in prioritizing the extent that individual problems would be evaluated and in establishing schedules for implementing corrective actions. Corrective actions, when specified, were implemented in a timely manner, with few exceptions. Licensee audits and assessments were found to be effective. On the basis of interviews conducted during this inspection, workers at the site felt free to input safety findings into the corrective action program.
Inspection Report# : 2003006*(pdf)*

Last modified : March 02, 2004

Comanche Peak 1
1Q/2004 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Aug 20, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadvertent TS 3.0.3 Entry Due to Inoperable CRACS Trains
A self-revealing non-cited violation of Technical Specification 3.0.3 was identified when both trains of the Units 1 and 2 control room air conditioning system (CRACS) were inoperable for longer than the 7 hours specified without placing both units in Mode 3. Specifically, on August 20, 2003, the licensee discovered that Unit 1 and Unit 2 CRACS units had been inoperable according to TS 3.7.11 for several hours prior to discovery, because support systems required for operability had been removed from service for routine maintenance and surveillance. The appropriate systems were restored to make one train of CRACS operable prior to an actual power reduction, but the total duration with less than one operable train exceeded the time to enter Mode 3, as required by Technical Specification 3.0.3. Corrective actions included issuing a Shift Order; issuing lessons learned to operators and schedulers; and reviewing operations and work control procedures for improvement. This event was entered into the licensee's corrective action program as SMF-2003-2463.

This violation is greater than minor because it involves a failure to perform required actions of a Technical Specification and affects an attribute and objective of the mitigating systems cornerstone in that the lack of proper configuration control affected the capability of the CRACS to respond to initiating events. The violation is considered to have a very low safety significance (Green) because it affected only the mitigating system cornerstone and did not represent an actual loss of safety function.
Inspection Report# : 2003004*(pdf)*

Barrier Integrity

Significance: W Dec 10, 2002
Identified By: NRC
Item Type: VIO Violation
Failure to identify a steam generator tube flaw and correct it by removing it from service in refueling outage 1RF08
As documented in NRC Special Inspection Report 05000445/2002-09, the inspectors identified a violation of 10 CFR Part 50, Appendix B, Criterion XVI for failure to promptly identify a flaw in Comanche Peak, Unit 1, Steam Generator No. 2 Tube R41C71 and correct it by removing it from service. As a result, in September 2002, the flaw developed into a leak that caused operators to shut the plant down. The tube subsequently failed in situ testing.

The final significance determination was completed and documented in "Final Significance Determination for a White Finding and Notice of Violation," (EA-04-009) dated February 13, 2004. The finding was determined to be of low to moderate safety significance (White) because the tube failed in-situ testing. This failure indicated a higher probability of inservice failure for the tube during postulated initiating events and core damage sequences.

The U.S. Nuclear Regulatory Commission (NRC) performed a supplemental inspection to assess the licensee's evaluations associated with the failure to identify and correct the steam generator tube flaw during Refueling Outage 1RF08. During this supplemental inspection, performed in accordance with Inspection Procedure 95001, the inspectors determined that the licensee performed a comprehensive evaluation of the causes and extent of the performance deficiency that resulted in failure to identify the flaw. The licensee's evaluation resulted in changes in processes and practices for eddy current analysis, improved peer review, and more supervisory oversight. The root-cause evaluation also resulted in additional reviews of the eddy current data obtained in Refueling Outage 1RF09, insuring that analysts identified similar defects. In addition, the licensee applied the lessons learned during the subsequent refueling outage for Unit 2.
Inspection Report# : 2004006*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G May 11, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to Follow Radiological Postings
A self-revealing non-cited violation of Technical Specification 5.4.1.a was identified because two operators failed to follow radiological postings as required by procedure. Specifically, on May 11, 2003, two operators entered Unit 1 Room 1-092 which was posted "Not Routinely Surveyed, Contact RP Prior To Entry" to hang clearance tags for valve work. However, the two operators entered to complete their task and received electronic dosimeter accumulated dose alarms. During an investigation of the dosimeter alarms, it was identified that the operators entered the room without contacting radiation protection for current radiological conditions. This event was entered into the licensee's corrective action program as SMF 2003-1313.

The finding is greater than minor because it affected the Occupational Radiation Safety cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation and is associated with a cornerstone attribute (Program & Process). The finding involved individuals' potential for unplanned or unintended dose. When processed through the Occupational Radiation Safety Significance Determination Process the finding was determined to be of very low safety significance because the finding was not associated with ALARA planning or work controls, there was no overexposure or a substantial potential for an overexposure, and the ability to assess dose was not compromised.
Inspection Report# : 2003004*(pdf)*

Public Radiation Safety

Physical Protection

Significance: N/A Jun 05, 2003
Identified By: NRC
Item Type: FIN Finding
Verification of Compliance With Interim Compensatory Measures Order
On February 25, 2002, the NRC imposed by Order, Interim Compensatory Measures to enhance physical security. The inspectors determined that, overall, the licensee appropriately incorporated the Interim Compensatory Measures into the site protective strategy and access authorization program; developed and implemented relevant procedures; ensured that the emergency plan could be implemented; and established and effectively coordinated interface agreements with offsite organizations.
Inspection Report# : 2003005*(pdf)*

Miscellaneous

Significance: N/A Jun 19, 2003
Identified By: NRC
Item Type: FIN Finding
Identification and Resolution of Problems
The team identified that the licensee was effective at identifying problems and putting them into the corrective action program. The licensee's effectiveness at problem identification was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. The licensee effectively used risk in prioritizing the extent that individual problems would be evaluated and in establishing schedules for implementing corrective actions. Corrective actions, when specified, were implemented in a timely manner, with few exceptions. Licensee audits and assessments were found to be effective. On the basis of interviews conducted during this inspection, workers at the site felt free to input safety findings into the corrective action program.
Inspection Report# : 2003006*(pdf)*

Last modified : May 05, 2004

Comanche Peak 1
2Q/2004 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Aug 20, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadvertent TS 3.0.3 Entry Due to Inoperable CRACS Trains
A self-revealing non-cited violation of Technical Specification 3.0.3 was identified when both trains of the Units 1 and 2 control room air conditioning system (CRACS) were inoperable for longer than the 7 hours specified without placing both units in Mode 3. Specifically, on August 20, 2003, the licensee discovered that Unit 1 and Unit 2 CRACS units had been inoperable according to TS 3.7.11 for several hours prior to discovery, because support systems required for operability had been removed from service for routine maintenance and surveillance. The appropriate systems were restored to make one train of CRACS operable prior to an actual power reduction, but the total duration with less than one operable train exceeded the time to enter Mode 3, as required by Technical Specification 3.0.3. Corrective actions included issuing a Shift Order; issuing lessons learned to operators and schedulers; and reviewing operations and work control procedures for improvement. This event was entered into the licensee's corrective action program as SMF-2003-2463.

This violation is greater than minor because it involves a failure to perform required actions of a Technical Specification and affects an attribute and objective of the mitigating systems cornerstone in that the lack of proper configuration control affected the capability of the CRACS to respond to initiating events. The violation is considered to have a very low safety significance (Green) because it affected only the mitigating system cornerstone and did not represent an actual loss of safety function.
Inspection Report# : 2003004*(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: SL-IV May 28, 2004
Identified By: Self Disclosing
Item Type: VIO Violation
Entry into a high radiation area without a briefing on radiation dose rates
On November 4, 2003, an individual entered a high radiation area without contacting radiation protection personnel for a briefing on the dose rates in the area, despite verbal and posted instructions to the contrary. Dose rates within the room were as high as 250 millirems per hour at 30 centimeters from the source of radiation. The licensee was alerted to the situation when the individual's electronic dosimeter alarmed because the dose rate setpoint was exceeded. The occurrence was a violation of Technical Specification 5.7.1.e. The violation involved the act of a low-level individual; however, the licensee failed to promptly provide information concerning the violation to appropriate NRC personnel, in accordance with Section VI.A.1.d(1) of the NRC Enforcement Policy. Therefore, the finding could not be treated as a noncited violation.

The failure to contact radiation protection personnel for a briefing on radiation dose rates prior to entering a high radiation area is a performance deficiency because it resulted in the licensee's failure to meet a requirement in its technical specifications. Because there are willful aspects of the violation, it is subject to traditional enforcement. The willful aspects notwithstanding, the inspector used the Occupational Radiation Safety Significance Determination Process described in Manual Chapter 0609, Appendix C, to analyze the significance of the finding. The inspector determined that the finding was of very low safety significance because it did not involve (1) ALARA planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. The finding was entered into the licensee's corrective action program as SMF-2003-3594, and the individual was appropriately disciplined. This finding also had crosscutting aspects associated with human performance.

Inspection Report# : 2004003*(pdf)*

Significance: G Apr 09, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Two examples of a Technical Specification 5.7.1e violation for failure of personnel to receive a briefing on radiation dose rates prior to entry into a high radiation area
The NRC reviewed two examples of a self-revealing noncited violation of Technical Specification 5.7.1e for the failure of personnel to receive a briefing on radiation dose rates prior to entering a high radiation area. On February 10, 2004, an individual entered the Waste Monitor Tank Room X-185, a posted high radiation area, without being briefed on dose rates in the area and received an electronic dosimeter dose rate alarm. On February 18, 2004, an individual entered the piping penetration Train A, Room 077B, a posted high radiation area, without being briefed on the dose rates in the area before being stopped by another worker.

The failure to be briefed about radiation dose rates prior to entering a high radiation area is a performance deficiency. The finding was greater than minor because it was associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because the finding was not associated with as low as is reasonably achievable issues, there was no overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The two examples of the finding were entered into the licensee's corrective action program as SMF-2004-062 and SMF-2004-0471.
Inspection Report# : 2004003*(pdf)*

Significance: G Apr 09, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Two examples of a 10 CFR 20.1501 violation for failure to perform a radiological survey
The NRC identified two examples of a noncited violation of 10 CFR 20.1501a because the licensee failed to perform surveys to identify dose rates and contamination levels of potential radiological hazards. On January 8, 2004, workers performing decontamination of a pole that was used for filter compaction alarmed the contamination monitors while exiting the radiologically controlled area. The licensee identified that the pole had contact dose rates of 150 millirem per hour; however, the inspector determined that the pole was not surveyed for contamination. In addition, on April 5, 2004, the inspector identified dose rates as high as 250 millirem per hour on contact and 80 millirem per hour at 30 centimeters on a containment spray line in Piping Area X-213. The posted survey map outside the room indicated general area dose rates near the pipe of between 1 and 5 millirem per hour.

The failure to perform surveys to evaluate the magnitude and extent of radiation levels and the concentrations or quantities of radioactive materials are performance deficiencies. The finding is greater than minor because they are associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because it was not associated with as low as is reasonably achievable issues, there was no overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The two examples of the finding were entered into the licensee's corrective action program as SMF-2004-0069 and SMF-2004-1264.
Inspection Report# : 2004003*(pdf)*

Significance: G Apr 09, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Technical Specification 5.4.1 violation for failure to follow radiation work permit requirement
The inspector reviewed a self-revealing noncited violation of Technical Specification 5.4.1 for failure to follow a radiation work permit requirement. On April 4, 2004, scaffold builders constructed scaffolding up into an area of containment that had not been surveyed by radiation protection personnel and received an electronic dosimeter dose rate alarm.

The failure to follow radiation work permit requirements is a performance deficiency. The finding was greater than minor because it was associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because the finding was not associated with as low as is reasonably achievable issues, there was no overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The finding was entered into the licensee's corrective action program as SMF-2004-1202.
Inspection Report# : 2004003*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : September 08, 2004

Comanche Peak 1
3Q/2004 Plant Inspection Findings

Initiating Events

Mitigating Systems

Barrier Integrity

Significance: G Sep 23, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Storage of a fuel assembly in an unacceptable location in Spent Fuel Pool IAW T.S. 3.7.17 (Closure of LER 50-445:446/04-001-11)
Storage of a fuel assembly in an unacceptable location in Spent Fuel P
Green. A self-revealing NCV was identified for storing a fuel assembly in an unacceptable location in Region II racks in the spent fuel pool in violation of Technical Specification 3.7.17. On March 3, 2004, the licensee discovered that Fuel Assembly C45 was stored in an unacceptable four-out-of-four configuration. Based on the enrichment and correct burnup value, Assembly C45 should have been restricted to a three-out-of-four configuration. During the transition to the new computer code to track fuel enrichment and burnup, prior burnup data was not correctly entered into the data files. As a result of this error, Assembly C45 had been in an unacceptable four-out-of-four configuration since June 25, 2001. Upon discovery, the fuel assembly was moved to a Region I rack location where Technical Specification 3.7.17 does not apply.

This finding is more than minor because it resulted in a violation of Technical Specifications. This finding cannot be evaluated by the significance determination process because Manual Chapter 0609, "Significance Determination Process," Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and Appendix G, "Shutdown Operations Significance Determination Process," do not apply to the spent fuel pool. This finding is determined to be of very low safety significance by management review because the bounding analyzed accident scenario of a single fresh assembly at the maximum allowable enrichment misloaded into the spent fuel pool would be sufficiently subcritical with 1900 ppm soluble boron. The spent fuel pool boron concentration remained above 2370 ppm soluble boron during the entire time that Assembly C45 was in an unacceptable location. Because this violation was of very low safety significance and it was entered into the corrective action program as SMF-2004-0797-00, this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy. (Section 4OA3.2)

Inspection Report# : 2004004*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: SL-IV May 28, 2004
Identified By: Self Disclosing
Item Type: VIO Violation
Entry into a high radiation area without a briefing on radiation dose rates
On November 4, 2003, an individual entered a high radiation area without contacting radiation protection personnel for a briefing on the dose rates in the area, despite verbal and posted instructions to the contrary. Dose rates within the room were as high as 250 millirems per hour at 30 centimeters from the source of radiation. The licensee was alerted to the situation when the individual's electronic dosimeter alarmed because the dose rate setpoint was exceeded. The occurrence was a violation of Technical Specification 5.7.1.e. The violation involved the act of a low-level individual; however, the licensee failed to promptly provide information concerning the violation to appropriate NRC personnel, in accordance with Section VI.A.1.d(1) of the NRC Enforcement Policy. Therefore, the finding could not be treated as a noncited violation.

The failure to contact radiation protection personnel for a briefing on radiation dose rates prior to entering a high radiation area is a performance deficiency because it resulted in the licensee's failure to meet a requirement in its technical specifications. Because there are willful aspects of the violation, it is subject to traditional enforcement. The willful aspects notwithstanding, the inspector used the Occupational Radiation Safety Significance Determination Process described in Manual Chapter 0609, Appendix C, to analyze the significance of the finding. The inspector determined that the finding was of very low safety significance because it did not involve (1) ALARA planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. The finding was entered into the licensee's corrective action program as SMF-2003-3594, and the individual was appropriately disciplined. This finding also had crosscutting aspects associated with human performance.

Inspection Report# : 2004003*(pdf)*

Significance:  Apr 09, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Two examples of a Technical Specification 5.7.1e violation for failure of personnel to receive a briefing on radiation dose rates prior to entry into a high radiation area
The NRC reviewed two examples of a self-revealing noncited violation of Technical Specification 5.7.1e for the failure of personnel to receive a briefing on radiation dose rates prior to entering a high radiation area. On February 10, 2004, an individual entered the Waste Monitor Tank Room X-185, a posted high radiation area, without being briefed on dose rates in the area and received an electronic dosimeter dose rate alarm. On February 18, 2004, an individual entered the piping penetration Train A, Room 077B, a posted high radiation area, without being briefed on the dose rates in the area before being stopped by another worker.

The failure to be briefed about radiation dose rates prior to entering a high radiation area is a performance deficiency. The finding was greater than minor because it was associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because the finding was not associated with as low as is reasonably achievable issues, there was no overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The two examples of the finding were entered into the licensee's corrective action program as SMF-2004-062 and SMF-2004-0471.
Inspection Report# : 2004003*(pdf)*

Significance:  Apr 09, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Two examples of a 10 CFR 20.1501 violation for failure to perform a radiological survey
The NRC identified two examples of a noncited violation of 10 CFR 20.1501a because the licensee failed to perform surveys to identify dose rates and contamination levels of potential radiological hazards. On January 8, 2004, workers performing decontamination of a pole that was used for filter compaction alarmed the contamination monitors while exiting the radiologically controlled area. The licensee identified that the pole had contact dose rates of 150 millirem per hour; however, the inspector determined that the pole was not surveyed for contamination. In addition, on April 5, 2004, the inspector identified dose rates as high as 250 millirem per hour on contact and 80 millirem per hour at 30 centimeters on a containment spray line in Piping Area X-213. The posted survey map outside the room indicated general area dose rates near the pipe of between 1 and 5 millirem per hour.

The failure to perform surveys to evaluate the magnitude and extent of radiation levels and the concentrations or quantities of radioactive materials are performance deficiencies. The finding is greater than minor because they are associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because it was not associated with as low as is reasonably achievable issues, there was no overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The two examples of the finding were entered into the licensee's corrective action program as SMF-2004-0069 and SMF-2004-1264.
Inspection Report# : 2004003*(pdf)*

Significance:  Apr 09, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Technical Specification 5.4.1 violation for failure to follow radiation work permit requirement
The inspector reviewed a self-revealing noncited violation of Technical Specification 5.4.1 for failure to follow a radiation work permit requirement. On April 4, 2004, scaffold builders constructed scaffolding up into an area of containment that had not been surveyed by radiation protection personnel and received an electronic dosimeter dose rate alarm.

The failure to follow radiation work permit requirements is a performance deficiency. The finding was greater than minor because it was associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation

Safety Significance Determination Process, the finding was determined to be of very low safety significance because the finding was not associated with as low as is reasonably achievable issues, there was no overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The finding was entered into the licensee's corrective action program as SMF-2004-1202.
Inspection Report# : 2004003*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : December 29, 2004

Comanche Peak 1
4Q/2004 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Dec 03, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to fully implement Commission granted relief and alternative requirements
The team identified a non-cited violation of 10 CFR 50.55a(f)(6)(i), for failure to fully implement NRC granted relief and alternative inservice testing requirements. Specifically, the licensee failed to perform the alternative requirement for periodic assessments, which precluded the reassessment of components to reflect changes in plant configuration, component performance test results, industry experience, and other inputs to the risk-informed process. The finding has very low safety significance and has been entered into the corrective action program as Smart Form SMF-2004--003883-00.

The team characterized this finding as greater than minor because the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage) was affected. The finding is associated with the equipment performance attribute of the mitigating systems cornerstone. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process", this finding is determined to be of very low safety significance because there was no actual loss of a safety function.
Inspection Report# : 2004008*(pdf)*

Significance: G Dec 03, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to maintain design control over a safety class boundary isolation
A non-cited violation of 10CFR50 Appendix B Section III, Design Control, was identified for failure to maintain the design requirements for a safety class piping isolation boundary in the makeup line to the Condensate Storage Tank. The licensee performed plant modifications and operating procedure changes which involved a fundamental change in status of safety class piping boundary isolation valves from normally closed to normally open without determining that the new configuration did not meet the system design requirements. The issue was entered into the corrective action program as Smart Form SMF-2003-001773-00.

The licensee had performed an operability assessment of the Auxiliary Feedwater System and concluded that the system remains operable, even though it is degraded because of the lack of appropriate double valve isolation between the Class III and Class V piping in the Condensate Storage Tank makeup line. The licensee assessment showed operations personnel had over 30 minutes to manually isolate a leak from the non-safety class piping. The licensee is planning to modify the Condensate Storage Tank makeup lines to incorporate double check valve isolation meeting the appropriate design requirements for normally using the line for tank recirculation.

The team characterized this finding as greater than minor because the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage) was affected. The finding is associated with the design control attribute of the mitigating systems cornerstone. Using the Phase 1 worksheet in Manul Chapter 0609, "Significance Determination Process", this finding is determined to be of very low safety significance because there was no actual loss of a safety function.
Inspection Report# : 2004008*(pdf)*

Barrier Integrity

Significance: G Mar 03, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation

Storage of a fuel assembly in an unacceptable location in Spent Fuel Pool IAW T.S. 3.7.17 (Closure of LER 50-445:446/04-001-00)
A self-revealing NCV was identified for storing a fuel assembly in an unacceptable location in Region II racks in the spent fuel pool in violation of Technical Specification 3.7.17. On March 3, 2004, the licensee discovered that Fuel Assembly C45 was stored in an unacceptable four-out-of-four configuration. Based on the enrichment and correct burnup value, Assembly C45 should have been restricted to a three-out-of-four configuration. During the transition to the new computer code to track fuel enrichment and burnup, prior burnup data was not correctly entered into the data files. As a result of this error, Assembly C45 had been in an unacceptable four-out-of-four configuration since June 25, 2001. Upon discovery, the fuel assembly was moved to a Region I rack location where Technical Specification 3.7.17 does not apply.

This finding is more than minor because it resulted in a violation of Technical Specifications. This finding cannot be evaluated by the significance determination process because Manual Chapter 0609, "Significance Determination Process," Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and Appendix G, "Shutdown Operations Significance Determination Process," do not apply to the spent fuel pool. This finding is determined to be of very low safety significance by management review because the bounding analyzed accident scenario of a single fresh assembly at the maximum allowable enrichment misloaded into the spent fuel pool would be sufficiently subcritical with 1900 ppm soluble boron. The spent fuel pool boron concentration remained above 2370 ppm soluble boron during the entire time that Assembly C45 was in an unacceptable location. Because this violation was of very low safety significance and it was entered into the corrective action program as SMF-2004-0797-00, this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy.

Inspection Report# : 2004004*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: SL-IV May 28, 2004
Identified By: Self Disclosing
Item Type: VIO Violation
Entry into a high radiation area without a briefing on radiation dose rates
On November 4, 2003, an individual entered a high radiation area without contacting radiation protection personnel for a briefing on the dose rates in the area, despite verbal and posted instructions to the contrary. Dose rates within the room were as high as 250 millirems per hour at 30 centimeters from the source of radiation. The licensee was alerted to the situation when the individual's electronic dosimeter alarmed because the dose rate setpoint was exceeded. The occurrence was a violation of Technical Specification 5.7.1.e. The violation involved the act of a low-level individual; however, the licensee failed to promptly provide information concerning the violation to appropriate NRC personnel, in accordance with Section VI.A.1.d(1) of the NRC Enforcement Policy. Therefore, the finding could not be treated as a noncited violation.

The failure to contact radiation protection personnel for a briefing on radiation dose rates prior to entering a high radiation area is a performance deficiency because it resulted in the licensee's failure to meet a requirement in its technical specifications. Because there are willful aspects of the violation, it is subject to traditional enforcement. The willful aspects notwithstanding, the inspector used the Occupational Radiation Safety Significance Determination Process described in Manual Chapter 0609, Appendix C, to analyze the significance of the finding. The inspector determined that the finding was of very low safety significance because it did not involve (1) ALARA planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. The finding was entered into the licensee's corrective action program as SMF-2003-3594, and the individual was appropriately disciplined. This finding also had crosscutting aspects associated with human performance.

Inspection Report# : 2004003*(pdf)*

Significance: G Apr 09, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Two examples of a 10 CFR 20.1501 violation for failure to perform a radiological survey
The NRC identified two examples of a noncited violation of 10 CFR 20.1501a because the licensee failed to perform surveys to identify dose rates and contamination levels of potential radiological hazards. On January 8, 2004, workers performing decontamination of a pole that was used for filter compaction alarmed the contamination monitors while exiting the radiologically controlled area. The licensee identified that the pole had contact dose rates of 150 millirem per hour; however, the inspector determined that the pole was not surveyed for contamination. In addition, on April 5, 2004, the inspector identified dose rates as high as 250 millirem per hour on contact and 80 millirem per hour at 30 centimeters on a containment spray line in Piping Area X-213. The posted survey map outside the room indicated general area dose rates near the pipe of between 1 and 5 millirem per hour.

The failure to perform surveys to evaluate the magnitude and extent of radiation levels and the concentrations or quantities of radioactive

materials are performance deficiencies. The finding is greater than minor because they are associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because it was not associated with as low as is reasonably achievable issues, there was no overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The two examples of the finding were entered into the licensee's corrective action program as SMF-2004-0069 and SMF-2004-1264.
Inspection Report# : 2004003*(pdf)*

Significance: G Apr 09, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Technical Specification 5.4.1 violation for failure to follow radiation work permit requirement
The inspector reviewed a self-revealing noncited violation of Technical Specification 5.4.1 for failure to follow a radiation work permit requirement. On April 4, 2004, scaffold builders constructed scaffolding up into an area of containment that had not been surveyed by radiation protection personnel and received an electronic dosimeter dose rate alarm.

The failure to follow radiation work permit requirements is a performance deficiency. The finding was greater than minor because it was associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because the finding was not associated with as low as is reasonably achievable issues, there was no overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The finding was entered into the licensee's corrective action program as SMF-2004-1202.
Inspection Report# : 2004003*(pdf)*

Significance: G Apr 09, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Two examples of a Technical Specification 5.7.1e violation for failure of personnel to receive a briefing on radiation dose rates prior to entry into a high radiation area
The NRC reviewed two examples of a self-revealing noncited violation of Technical Specification 5.7.1e for the failure of personnel to receive a briefing on radiation dose rates prior to entering a high radiation area. On February 10, 2004, an individual entered the Waste Monitor Tank Room X-185, a posted high radiation area, without being briefed on dose rates in the area and received an electronic dosimeter dose rate alarm. On February 18, 2004, an individual entered the piping penetration Train A, Room 077B, a posted high radiation area, without being briefed on the dose rates in the area before being stopped by another worker.

The failure to be briefed about radiation dose rates prior to entering a high radiation area is a performance deficiency. The finding was greater than minor because it was associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because the finding was not associated with as low as is reasonably achievable issues, there was no overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The two examples of the finding were entered into the licensee's corrective action program as SMF-2004-062 and SMF-2004-0471.
Inspection Report# : 2004003*(pdf)*

Public Radiation Safety

Significance: G Oct 22, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to maintain and analyze composite samples on two occasions
The team reviewed a self-revealing non-cited violation of Technical Specification 5.5.1, which occurred when the licensee failed on two occasions to sample in accordance with Offsite Dose Calculation Manual requirements. Specifically, during the third quarter of 2002 and the fourth quarter of 2003, the licensee failed to maintain portions of composite samples from the plant effluent tanks. The samples are required to be collected monthly and analyzed quarterly. The finding was placed into the licensee's corrective action program.

The finding is greater than minor because it is associated with one of the cornerstone attributes (effluent measurement) and affects the cornerstone objective because the failure to implement offsite dose calculation requirements decreases the licensee's assurance that the public will not receive unnecessary dose. The team determined that the finding had very low safety significance because: (1) the finding was not a radioactive material control finding, (2) it was an effluent release program finding, (3) the finding impaired the licensee's ability to assess dose, (4) the licensee did not fail to assess dose because it was able to assess dose to the public using the remaining composite samples, and (5) it did

not result in doses that exceeded 10 CFR Part 50, Appendix I or 10 CFR 20.1301(d). This finding had crosscutting aspects associated with human performance. When licensee personnel failed to store the samples properly, they directly contributed to the finding.
Inspection Report# : 2004009*(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : March 09, 2005

Comanche Peak 1
1Q/2005 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Dec 03, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to maintain design control over a safety class boundary isolation
A non-cited violation of 10CFR50 Appendix B Section III, Design Control, was identified for failure to maintain the design requirements for a safety class piping isolation boundary in the makeup line to the Condensate Storage Tank. The licensee performed plant modifications and operating procedure changes which involved a fundamental change in status of safety class piping boundary isolation valves from normally closed to normally open without determining that the new configuration did not meet the system design requirements. The issue was entered into the corrective action program as Smart Form SMF-2003-001773-00.

The licensee had performed an operability assessment of the Auxiliary Feedwater System and concluded that the system remains operable, even though it is degraded because of the lack of appropriate double valve isolation between the Class III and Class V piping in the Condensate Storage Tank makeup line. The licensee assessment showed operations personnel had over 30 minutes to manually isolate a leak from the non-safety class piping. The licensee is planning to modify the Condensate Storage Tank makeup lines to incorporate double check valve isolation meeting the appropriate design requirements for normally using the line for tank recirculation.

The team characterized this finding as greater than minor because the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage) was affected. The finding is associated with the design control attribute of the mitigating systems cornerstone. Using the Phase 1 worksheet in Manul Chapter 0609, "Significance Determination Process", this finding is determined to be of very low safety significance because there was no actual loss of a safety function.
Inspection Report# : 2004008*(pdf)*

Significance: G Dec 03, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to fully implement Commission granted relief and alternative requirements
The team identified a non-cited violation of 10 CFR 50.55a(f)(6)(i), for failure to fully implement NRC granted relief and alternative inservice testing requirements. Specifically, the licensee failed to perform the alternative requirement for periodic assessments, which precluded the reassessment of components to reflect changes in plant configuration, component performance test results, industry experience, and other inputs to the risk-informed process. The finding has very low safety significance and has been entered into the corrective action program as Smart Form SMF-2004--003883-00.

The team characterized this finding as greater than minor because the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage) was affected. The finding is associated with the equipment performance attribute of the mitigating systems cornerstone. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process", this finding is determined to be of very low safety significance because there was no actual loss of a safety function.
Inspection Report# : 2004008*(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: SL-IV May 28, 2004
Identified By: Self Disclosing
Item Type: VIO Violation
Entry into a high radiation area without a briefing on radiation dose rates
On November 4, 2003, an individual entered a high radiation area without contacting radiation protection personnel for a briefing on the dose rates in the area, despite verbal and posted instructions to the contrary. Dose rates within the room were as high as 250 millirems per hour at 30 centimeters from the source of radiation. The licensee was alerted to the situation when the individual's electronic dosimeter alarmed because the dose rate setpoint was exceeded. The occurrence was a violation of Technical Specification 5.7.1.e. The violation involved the act of a low-level individual; however, the licensee failed to promptly provide information concerning the violation to appropriate NRC personnel, in accordance with Section VI.A.1.d(1) of the NRC Enforcement Policy. Therefore, the finding could not be treated as a noncited violation.

The failure to contact radiation protection personnel for a briefing on radiation dose rates prior to entering a high radiation area is a performance deficiency because it resulted in the licensee's failure to meet a requirement in its technical specifications. Because there are willful aspects of the violation, it is subject to traditional enforcement. The willful aspects notwithstanding, the inspector used the Occupational Radiation Safety Significance Determination Process described in Manual Chapter 0609, Appendix C, to analyze the significance of the finding. The inspector determined that the finding was of very low safety significance because it did not involve (1) ALARA planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. The finding was entered into the licensee's corrective action program as SMF-2003-3594, and the individual was appropriately disciplined. This finding also had crosscutting aspects associated with human performance.

Inspection Report# : 2004003*(pdf)*

Significance: G Apr 09, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Two examples of a Technical Specification 5.7.1e violation for failure of personnel to receive a briefing on radiation dose rates prior to entry into a high radiation area
The NRC reviewed two examples of a self-revealing noncited violation of Technical Specification 5.7.1e for the failure of personnel to receive a briefing on radiation dose rates prior to entering a high radiation area. On February 10, 2004, an individual entered the Waste Monitor Tank Room X-185, a posted high radiation area, without being briefed on dose rates in the area and received an electronic dosimeter dose rate alarm. On February 18, 2004, an individual entered the piping penetration Train A, Room 077B, a posted high radiation area, without being briefed on the dose rates in the area before being stopped by another worker.

The failure to be briefed about radiation dose rates prior to entering a high radiation area is a performance deficiency. The finding was greater than minor because it was associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because the finding was not associated with as low as is reasonably achievable issues, there was no overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The two examples of the finding were entered into the licensee's corrective action program as SMF-2004-062 and SMF-2004-0471.
Inspection Report# : 2004003*(pdf)*

Significance: G Apr 09, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Two examples of a 10 CFR 20.1501 violation for failure to perform a radiological survey
The NRC identified two examples of a noncited violation of 10 CFR 20.1501a because the licensee failed to perform surveys to identify dose rates and contamination levels of potential radiological hazards. On January 8, 2004, workers performing decontamination of a pole that was used for filter compaction alarmed the contamination monitors while exiting the radiologically controlled area. The licensee identified that the pole had contact dose rates of 150 millirem per hour; however, the inspector determined that the pole was not surveyed for contamination. In addition, on April 5, 2004, the inspector identified dose rates as high as 250 millirem per hour on contact and 80 millirem per hour at 30 centimeters on a containment spray line in Piping Area X-213. The posted survey map outside the room indicated general area dose rates near the pipe of between 1 and 5 millirem per hour.

The failure to perform surveys to evaluate the magnitude and extent of radiation levels and the concentrations or quantities of radioactive materials are performance deficiencies. The finding is greater than minor because they are associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because it was not associated with as low as is reasonably achievable issues, there was no

overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The two examples of the finding were entered into the licensee's corrective action program as SMF-2004-0069 and SMF-2004-1264.
Inspection Report# : 2004003*(pdf)*

Significance: G Apr 09, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Technical Specification 5.4.1 violation for failure to follow radiation work permit requirement
The inspector reviewed a self-revealing noncited violation of Technical Specification 5.4.1 for failure to follow a radiation work permit requirement. On April 4, 2004, scaffold builders constructed scaffolding up into an area of containment that had not been surveyed by radiation protection personnel and received an electronic dosimeter dose rate alarm.

The failure to follow radiation work permit requirements is a performance deficiency. The finding was greater than minor because it was associated with the Occupational Radiation Safety cornerstone attribute of Program and Process and affected the cornerstone objective to ensure adequate protection of a worker's health and safety from exposure to radiation. When processed through the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because the finding was not associated with as low as is reasonably achievable issues, there was no overexposure or substantial potential for overexposure, and the ability to assess dose was not compromised. The finding was entered into the licensee's corrective action program as SMF-2004-1202.
Inspection Report# : 2004003*(pdf)*

Public Radiation Safety

Significance: G Oct 22, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to maintain and analyze composite samples on two occasions
The team reviewed a self-revealing non-cited violation of Technical Specification 5.5.1, which occurred when the licensee failed on two occasions to sample in accordance with Offsite Dose Calculation Manual requirements. Specifically, during the third quarter of 2002 and the fourth quarter of 2003, the licensee failed to maintain portions of composite samples from the plant effluent tanks. The samples are required to be collected monthly and analyzed quarterly. The finding was placed into the licensee's corrective action program.

The finding is greater than minor because it is associated with one of the cornerstone attributes (effluent measurement) and affects the cornerstone objective because the failure to implement offsite dose calculation requirements decreases the licensee's assurance that the public will not receive unnecessary dose. The team determined that the finding had very low safety significance because: (1) the finding was not a radioactive material control finding, (2) it was an effluent release program finding, (3) the finding impaired the licensee's ability to assess dose, (4) the licensee did not fail to assess dose because it was able to assess dose to the public using the remaining composite samples, and (5) it did not result in doses that exceeded 10 CFR Part 50, Appendix I or 10 CFR 20.1301(d). This finding had crosscutting aspects associated with human performance. When licensee personnel failed to store the samples properly, they directly contributed to the finding.
Inspection Report# : 2004009*(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : June 17, 2005

Comanche Peak 1
2Q/2005 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Jun 23, 2005
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to protect the integrity of the annual reactor operator requalification examination as described in 10 CFR 55.49
A self-revealing NCV was identified for the failure to protect the integrity of the annual reactor operator requalification examination as described in 10 CFR 55.49. The examination material was inadvertently left in the control room simulator facility following annual requalification examination administration. The material was subsequently discovered by the on-coming initial operator licensing instructors. The licensee has counseled individuals involved, reviewed and made changes to the controlling procedure, and reviewed the operator examination security processes and procedures to identify areas for improvement.

This finding was determined to be more than minor because, if left uncorrected, the finding could become a more significant safety concern. Based on the results of a Significance Determination Process using Manual Chapter 0609, Appendix I, this finding was determined to have very low safety significance, since compensatory actions were immediately taken upon discovery of the examination compromise. The cause of the finding is related to the cross cutting element of human performance (Section 1R11.3).
Inspection Report# : 2005003*(pdf)*

Significance: G Dec 03, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to maintain design control over a safety class boundary isolation
A non-cited violation of 10CFR50 Appendix B Section III, Design Control, was identified for failure to maintain the design requirements for a safety class piping isolation boundary in the makeup line to the Condensate Storage Tank. The licensee performed plant modifications and operating procedure changes which involved a fundamental change in status of safety class piping boundary isolation valves from normally closed to normally open without determining that the new configuration did not meet the system design requirements. The issue was entered into the corrective action program as Smart Form SMF-2003-001773-00.

The licensee had performed an operability assessment of the Auxiliary Feedwater System and concluded that the system remains operable, even though it is degraded because of the lack of appropriate double valve isolation between the Class III and Class V piping in the Condensate Storage Tank makeup line. The licensee assessment showed operations personnel had over 30 minutes to manually isolate a leak from the non-safety class piping. The licensee is planning to modify the Condensate Storage Tank makeup lines to incorporate double check valve isolation meeting the appropriate design requirements for normally using the line for tank recirculation.

The team characterized this finding as greater than minor because the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage) was affected. The finding is associated with the design control attribute of the mitigating systems cornerstone. Using the Phase 1 worksheet in Manul Chapter 0609, "Significance Determination Process", this finding is determined to be of very low safety significance because there was no actual loss of a safety function.
Inspection Report# : 2004008*(pdf)*

Significance: G Dec 03, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to fully implement Commission granted relief and alternative requirements
The team identified a non-cited violation of 10 CFR 50.55a(f)(6)(i), for failure to fully implement NRC granted relief and alternative inservice testing requirements. Specifically, the licensee failed to perform the alternative requirement for periodic assessments, which precluded the reassessment of components to reflect changes in plant configuration, component performance test results, industry experience, and other inputs to the risk-informed process. The finding has very low safety significance and has been entered into the corrective action program as Smart Form SMF-2004--003883-00.

The team characterized this finding as greater than minor because the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage) was affected. The finding is associated with the equipment performance attribute of the mitigating systems cornerstone. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process", this finding is determined to be of very low safety significance because there was no actual loss of a safety function.
Inspection Report# : 2004008*(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: G Oct 22, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to maintain and analyze composite samples on two occasions
The team reviewed a self-revealing non-cited violation of Technical Specification 5.5.1, which occurred when the licensee failed on two occasions to sample in accordance with Offsite Dose Calculation Manual requirements. Specifically, during the third quarter of 2002 and the fourth quarter of 2003, the licensee failed to maintain portions of composite samples from the plant effluent tanks. The samples are required to be collected monthly and analyzed quarterly. The finding was placed into the licensee's corrective action program.

The finding is greater than minor because it is associated with one of the cornerstone attributes (effluent measurement) and affects the cornerstone objective because the failure to implement offsite dose calculation requirements decreases the licensee's assurance that the public will not receive unnecessary dose. The team determined that the finding had very low safety significance because: (1) the finding was not a radioactive material control finding, (2) it was an effluent release program finding, (3) the finding impaired the licensee's ability to assess dose, (4) the licensee did not fail to assess dose because it was able to assess dose to the public using the remaining composite samples, and (5) it did not result in doses that exceeded 10 CFR Part 50, Appendix I or 10 CFR 20.1301(d). This finding had crosscutting aspects associated with human performance. When licensee personnel failed to store the samples properly, they directly contributed to the finding.
Inspection Report# : 2004009*(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : August 24, 2005

Comanche Peak 1
3Q/2005 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Sep 23, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate control room heat exchanger surveillance
NRC identified, noncited violation of Technical Specification Requirement 3.7.11.1 was identified because the licensee's surveillance that was performed to demonstrate compliance with the requirement was inadequate. Specifically, the acceptance criteria did not account for all differences between test conditions and accident conditions. The licensee performed an operability assessment to demonstrate current operability.

The failure to provide an adequate surveillance procedure to demonstrate the control room air conditioning system operability was a performance deficiency. The issue was more than minor because, if left uncorrected, it could become a more significant safety concern. Using the Phase 1 significance determination process worksheet, the finding was of very low risk significance because it was a qualification deficiency that did not result in a loss of function per Generic Letter 91-18, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," Revision 1. The licensee captured the issue in their corrective action program as Smart Form 2005-000937-00.
Inspection Report# : 2005004*(pdf)*

Significance: G Jun 23, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to protect the integrity of the annual reactor operator requalification examination as described in 10 CFR 55.49
A self-revealing NCV was identified for the failure to protect the integrity of the annual reactor operator requalification examination as described in 10 CFR 55.49. The examination material was inadvertently left in the control room simulator facility following annual requalification examination administration. The material was subsequently discovered by the on-coming initial operator licensing instructors. The licensee has counseled individuals involved, reviewed and made changes to the controlling procedure, and reviewed the operator examination security processes and procedures to identify areas for improvement.

This finding was determined to be more than minor because, if left uncorrected, the finding could become a more significant safety concern. Based on the results of a Significance Determination Process using Manual Chapter 0609, Appendix I, this finding was determined to have very low safety significance, since compensatory actions were immediately taken upon discovery of the examination compromise. The cause of the finding is related to the cross cutting element of human performance (Section 1R11.3).
Inspection Report# : 2005003*(pdf)*

Significance: G Mar 01, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Abnormal Procedure for Filling the CST during accident conditions
The examiners identified a noncited violation of Technical Specification 5.4.1 associated with an inadequate abnormal operating procedure. Specifically, the examiners determined that Procedure ABN-305, "Auxiliary Feedwater System Malfunction," Revision 5, was not adequate, in that, Attachment 4 of the procedure did not have an accurate list of all the adapters required to complete the connections to the valves listed in the attachment. Additionally, adapters required in Attachment 4 to complete connections to perform an emergency fill of the condensate storage tank with fire protection water were not readily available. This deficiency was discovered while walking down a job performance measure task during examination validation week. The licensed senior operator that was used for the task validation could not locate the required fitting in the nearby cabinets for the valve required to be used to fill the condensate storage tank in the procedure's attachment. Also, the attachment did not mention the specific types of adapters required for each of the different connection sources. The licensee is correcting the procedure to include information on the types of adapters required and the order of preference of these supply points for filling the condensate storage tank and has staged the proper adapters for each of the valve types in the area required by this procedure and has documented this issue in Condition Report/Smart Form SMF-2005-001022-00.

The finding is a performance deficiency in that the licensee failed to identify that the proper equipment was not readily available and the procedure did not correctly identify the required fittings for each of the possible supply valve choices. The finding is more than minor because it affects the Mitigating Systems Cornerstone of procedural quality and equipment performance, in that, it could result in a failure to locate and use the proper equipment to fulfill the abnormal procedure, Attachment 4, when the condensate storage tank is at a low level. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process", this finding is determined to be of very low safety significance because there was no actual loss of a safety function.
Inspection Report# : 2005301*(pdf)*

Significance: G Dec 03, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to maintain design control over a safety class boundary isolation
A non-cited violation of 10CFR50 Appendix B Section III, Design Control, was identified for failure to maintain the design requirements for a safety class piping isolation boundary in the makeup line to the Condensate Storage Tank. The licensee performed plant modifications and operating procedure changes which involved a fundamental change in status of safety class piping boundary isolation valves from normally closed to normally open without determining that the new configuration did not meet the system design requirements. The issue was entered into the corrective action program as Smart Form SMF-2003-001773-00.

The licensee had performed an operability assessment of the Auxiliary Feedwater System and concluded that the system remains operable, even though it is degraded because of the lack of appropriate double valve isolation between the Class III and Class V piping in the Condensate Storage Tank makeup line. The licensee assessment showed operations personnel had over 30 minutes to manually isolate a leak from the non-safety class piping. The licensee is planning to modify the Condensate Storage Tank makeup lines to incorporate double check valve isolation meeting the appropriate design requirements for normally using the line for tank recirculation.

The team characterized this finding as greater than minor because the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage) was affected. The finding is associated with the design control attribute of the mitigating systems cornerstone. Using the Phase 1 worksheet in Manul Chapter 0609, "Significance Determination Process", this finding is determined to be of very low safety significance because there was no actual loss of a safety function.
Inspection Report# : 2004008*(pdf)*

Significance: G Dec 03, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to fully implement Commission granted relief and alternative requirements
The team identified a non-cited violation of 10 CFR 50.55a(f)(6)(i), for failure to fully implement NRC granted relief and alternative inservice testing requirements. Specifically, the licensee failed to perform the alternative requirement for periodic assessments, which precluded the reassessment of components to reflect changes in plant configuration, component performance test results, industry experience, and other inputs to the risk-informed process. The finding has very low safety significance and has been entered into the corrective action program as Smart Form SMF-2004--003883-00.

The team characterized this finding as greater than minor because the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage) was affected. The finding is associated with the equipment performance attribute of the mitigating systems cornerstone. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process", this finding is determined to be of very low safety significance because there was no actual loss of a safety function.
Inspection Report# : 2004008*(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: G Oct 22, 2004
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to maintain and analyze composite samples on two occasions
The team reviewed a self-revealing non-cited violation of Technical Specification 5.5.1, which occurred when the licensee failed on two occasions to sample in accordance with Offsite Dose Calculation Manual requirements. Specifically, during the third quarter of 2002 and the fourth quarter of 2003, the licensee failed to maintain portions of composite samples from the plant effluent tanks. The samples are required to be collected monthly and analyzed quarterly. The finding was placed into the licensee's corrective action program.

The finding is greater than minor because it is associated with one of the cornerstone attributes (effluent measurement) and affects the cornerstone objective because the failure to implement offsite dose calculation requirements decreases the licensee's assurance that the public will not receive unnecessary dose. The team determined that the finding had very low safety significance because: (1) the finding was not a radioactive material control finding, (2) it was an effluent release program finding, (3) the finding impaired the licensee's ability to assess dose, (4) the licensee did not fail to assess dose because it was able to assess dose to the public using the remaining composite samples, and (5) it did not result in doses that exceeded 10 CFR Part 50, Appendix I or 10 CFR 20.1301(d). This finding had crosscutting aspects associated with human performance. When licensee personnel failed to store the samples properly, they directly contributed to the finding.
Inspection Report# : 2004009*(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Jul 29, 2005
Identified By: NRC
Item Type: FIN Finding
Problem Identification and Resolution Inspection (PI&R) Team's Overall Assessment of the Licensee's PI&R Program
The team reviewed 151 risk significant issues, apparent and root cause analyses, and other related documents, to assess the effectiveness of the licensee's problem identification and resolution processes and systems. The team concluded that the licensee's management systems were generally effective. However, the team identified poor evaluation, prioritization, and corrective actions associated with longstanding safety related Agastat relay problems. A similar performance concern was documented in the last problem identification and resolution assessment. The team also concluded that licensee corrective actions taken to address an historical adverse trend in human performance have not been effective.

The team concluded that the licensee established a safety-conscious work environment at Comanche Peak Steam Electric Station. The team determined that employees and contractors felt free to enter issues into the corrective action program and raise safety concerns to their supervision, to the employees concern program, and to the NRC. All plant personnel, interviewed by the team, stated that potential safety issues were addressed by the licensee. However, the licensee had identified long-term organizational effectiveness issues within the operations department, which continued to challenge the safety-conscious work environment for shift operations personnel. The team concluded that licensee's past actions to improve operations department organizational effectiveness had not been fully effective.

Inspection Report# : 2005009*(pdf)*

Last modified : November 30, 2005

Comanche Peak 1
4Q/2005 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Oct 20, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Trip of Emergency Diesel Generator Due to Lube Oil Check Valve Installed Backwards
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.
Inspection Report# : 2005005*(pdf)*

Significance: G Oct 20, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Trip of Station Service Water Pump Due to Degraded Motor Lead
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.
Inspection Report# : 2005005*(pdf)*

Significance: G Sep 23, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate control room heat exchanger surveillance
NRC identified, noncited violation of Technical Specification Requirement 3.7.11.1 was identified because the licensee's surveillance that was performed to demonstrate compliance with the requirement was inadequate. Specifically, the acceptance criteria did not account for all differences between test conditions and accident conditions. The licensee performed an operability assessment to demonstrate current operability.

The failure to provide an adequate surveillance procedure to demonstrate the control room air conditioning system operability was a performance deficiency. The issue was more than minor because, if left uncorrected, it could become a more significant safety concern. Using the Phase 1 significance determination process worksheet, the finding was of very low risk significance because it was a qualification deficiency that did not result in a loss of function per Generic Letter 91-18, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," Revision 1. The licensee captured the issue in their corrective action program as Smart Form 2005-000937-00.
Inspection Report# : 2005004*(pdf)*

Significance: G Jun 23, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to protect the integrity of the annual reactor operator requalification examination as described in 10 CFR 55.49
A self-revealing NCV was identified for the failure to protect the integrity of the annual reactor operator requalification examination as described in 10 CFR 55.49. The examination material was inadvertently left in the control room simulator facility following annual requalification examination administration. The material was subsequently discovered by the on-coming initial operator licensing instructors. The licensee has counseled individuals involved, reviewed and made changes to the controlling procedure, and reviewed the operator examination security processes and procedures to identify areas for improvement.

This finding was determined to be more than minor because, if left uncorrected, the finding could become a more significant safety concern. Based on the results of a Significance Determination Process using Manual Chapter 0609, Appendix I, this finding was determined to have very low safety significance, since compensatory actions were immediately taken upon discovery of the examination compromise. The cause of the finding is related to the cross cutting element of human performance.
Inspection Report# : 2005003*(pdf)*

Significance: G Mar 01, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Abnormal Procedure for Filling the CST during accident conditions
The examiners identified a noncited violation of Technical Specification 5.4.1 associated with an inadequate abnormal operating procedure. Specifically, the examiners determined that Procedure ABN-305, "Auxiliary Feedwater System Malfunction," Revision 5, was not adequate, in that, Attachment 4 of the procedure did not have an accurate list of all the adapters required to complete the connections to the valves listed in the attachment. Additionally, adapters required in Attachment 4 to complete connections to perform an emergency fill of the condensate storage tank with fire protection water were not readily available. This deficiency was discovered while walking down a job performance measure task during examination validation week. The licensed senior operator that was used for the task validation could not locate the required fitting in the nearby cabinets for the valve required to be used to fill the condensate storage tank in the procedure's attachment. Also, the attachment did not mention the specific types of adapters required for each of the different connection sources. The licensee is correcting the procedure to include information on the types of adapters required and the order of preference of these supply points for filling the condensate storage tank and has staged the proper adapters for each of the valve types in the area required by this procedure and has documented this issue in Condition Report/Smart Form SMF-2005-001022-00.

The finding is a performance deficiency in that the licensee failed to identify that the proper equipment was not readily available and the procedure did not correctly identify the required fittings for each of the possible supply valve choices. The finding is more than minor because it affects the Mitigating Systems Cornerstone of procedural quality and equipment performance, in that, it could result in a failure to locate and use the proper equipment to fulfill the abnormal procedure, Attachment 4, when the condensate storage tank is at a low level. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process", this finding is determined to be of very low safety significance because there was no actual loss of a safety function.
Inspection Report# : 2005301*(pdf)*

Barrier Integrity

Significance: G Oct 21, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Corrective Actions for a Leaking Valve with a Seal Weld which Subsequently Leaked
A Green noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI (Corrective Action) was identified, in that licensee personnel failed to identify the cause for a body-to-bonnet leak, a significant condition adverse to quality and take corrective action to prevent recurrence. 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 identify the root cause and to take effective corrective action to prevent recurrence 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.
Inspection Report# : 2005005*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Jul 29, 2005
Identified By: NRC
Item Type: FIN Finding
Problem Identification and Resolution Inspection (PI&R) Team's Overall Assessment of the Licensee's PI&R Program
The team reviewed 151 risk significant issues, apparent and root cause analyses, and other related documents, to assess the effectiveness of the licensee's problem identification and resolution processes and systems. The team concluded that the licensee's management systems were generally effective. However, the team identified poor evaluation, prioritization, and corrective actions associated with longstanding safety related Agastat relay problems. A similar performance concern was documented in the last problem identification and resolution assessment. The team also concluded that licensee corrective actions taken to address an historical adverse trend in human performance have not been effective.

The team concluded that the licensee established a safety-conscious work environment at Comanche Peak Steam Electric Station. The team determined that employees and contractors felt free to enter issues into the corrective action program and raise safety concerns to their supervision, to the employees concern program, and to the NRC. All plant personnel, interviewed by the team, stated that potential safety issues were addressed by the licensee. However, the licensee had identified long-term organizational effectiveness issues within the operations department, which continued to challenge the safety-conscious work environment for shift operations personnel. The team concluded that licensee's past actions to improve operations department organizational effectiveness had not been fully effective.

Inspection Report# : 2005009*(pdf)*

Last modified : March 03, 2006

Comanche Peak 1
1Q/2006 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Mar 24, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Perform an Adequate Receipt Inspection of Solenoid Valves
A self-revealing, noncited violation of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," was identified for failing to assure that purchased equipment conform to the procurement documents. This failure resulted in the installation of a solenoid coil with an alternating current voltage rating of 120 Vac, into a circuit with a direct current voltage rating of 125 Vdc, resulting in the failure of Valve 1-FV-2184. The licensee replaced the solenoid valve, reviewed for extent of condition, and revised the receipt inspection verification plan.

The violation is more than minor because it is associated with the equipment performance attribute of reliability and affected the mitigating system cornerstone objective to ensure the availability and reliability of the feedwater isolation system to respond to initiating events and prevent undesirable consequences. Using Appendix A of Manual Chapter 0609, the finding screened as very low safety significance in Phase 1 of the SDP because the finding affected the mitigation system cornerstone but did not represent a loss of system safety function, an actual loss of safety function of a single train, nor was potentially risk significant due to seismic, flooding, or severe weather initiating events. The finding has crosscutting aspects of human performance due to the inadequate receipt inspection verification plan and inattention to detail by the receipt inspection personnel.
Inspection Report# : 2006002*(pdf)*

Significance: G Mar 24, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to prevent foreign material from entering the station service water pump suction
A self-revealing, noncited violation was identified for the failure to implement effective corrective actions to prevent recurrence of a significant condition adverse to quality as described in 10 CFR Part 50, Appendix B, Criterion XVI. During cleaning activities in the station service water intake bay on August 17, 2005, the vacuum hose that was being used to clean the bay floor became lodged in the pump suction housing and caused reduced flow such that the control room operator had to secure the pump. Two very similar events had occurred in 1994 and 1996, and the corrective actions proved inadequate to prevent foreign material from becoming sucked into the pumps. The licensee is currently in the process of modifying and developing procedures and evaluating facility modifications to protect the station service water pumps from foreign material intrusion.

The failure to implement adequate corrective actions for the previous events to prevent foreign material from being sucked into the station service water pumps and causing the pumps to trip or be secured was the performance deficiency. This finding is considered more than minor because it is associated with the equipment performance attribute and affected the mitigating cornerstone objective to ensure the reliability of the station service water system to respond to initiating events and prevent undesirable consequences. The finding was processed through the significance determination process and required a Phase 3 evaluation. The finding was determined to be of very low safety significance based primarily on the short time the performance deficiency actually affected plant equipment. This finding has a crosscutting aspect of problem identification and resolution due to ineffective implementation of corrective action from previous events.
Inspection Report# : 2006002*(pdf)*

Significance: G Oct 20, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Trip of Emergency Diesel Generator Due to Lube Oil Check Valve Installed Backwards
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.
Inspection Report# : 2005005*(pdf)*

Significance: G Oct 20, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Trip of Station Service Water Pump Due to Degraded Motor Lead
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.
Inspection Report# : 2005005*(pdf)*

Significance: G Sep 23, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate control room heat exchanger surveillance
NRC identified, noncited violation of Technical Specification Requirement 3.7.11.1 was identified because the licensee's surveillance that was performed to demonstrate compliance with the requirement was inadequate. Specifically, the acceptance criteria did not account for all differences between test conditions and accident conditions. The licensee performed an operability assessment to demonstrate current operability.

The failure to provide an adequate surveillance procedure to demonstrate the control room air conditioning system operability was a performance deficiency. The issue was more than minor because, if left uncorrected, it could become a more significant safety concern. Using the Phase 1 significance determination process worksheet, the finding was of very low risk significance because it was a qualification deficiency that did not result in a loss of function per Generic Letter 91-18, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," Revision 1. The licensee captured the issue in their corrective action program as Smart Form 2005-000937-00.
Inspection Report# : 2005004*(pdf)*

Significance: G Jun 23, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to protect the integrity of the annual reactor operator requalification examination as described in 10 CFR 55.49
A self-revealing NCV was identified for the failure to protect the integrity of the annual reactor operator requalification examination as described in 10 CFR 55.49. The examination material was inadvertently left in the control room simulator facility following annual requalification examination administration. The material was subsequently discovered by the on-coming initial operator licensing instructors. The licensee has counseled individuals involved, reviewed and made changes to the controlling procedure, and reviewed the operator examination security processes and procedures to identify areas for improvement.

This finding was determined to be more than minor because, if left uncorrected, the finding could become a more significant safety concern. Based on the results of a Significance Determination Process using Manual Chapter 0609, Appendix I, this finding was determined to have very low safety significance, since compensatory actions were immediately taken upon discovery of the examination compromise. The cause of the finding is related to the cross cutting element of human performance.

Inspection Report# : 2005003*(pdf)*

Barrier Integrity

Significance: G Oct 21, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Corrective Actions for a Leaking Valve with a Seal Weld which Subsequently Leaked
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).
Inspection Report# : 2005005*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Jul 29, 2005
Identified By: NRC
Item Type: FIN Finding
Problem Identification and Resolution Inspection (PI&R) Team's Overall Assessment of the Licensee's PI&R Program
The team reviewed 151 risk significant issues, apparent and root cause analyses, and other related documents, to assess the effectiveness of the licensee's problem identification and resolution processes and systems. The team concluded that the licensee's management systems were generally effective. However, the team identified poor evaluation, prioritization, and corrective actions associated with longstanding safety related Agastat relay problems. A similar performance concern was documented in the last problem identification and resolution assessment. The team also concluded that licensee corrective actions taken to address an historical adverse trend in human performance have not been effective.

The team concluded that the licensee established a safety-conscious work environment at Comanche Peak Steam Electric Station. The team determined that employees and contractors felt free to enter issues into the corrective action program and raise safety concerns to their supervision, to the employees concern program, and to the NRC. All plant personnel, interviewed by the team, stated that potential safety

issues were addressed by the licensee. However, the licensee had identified long-term organizational effectiveness issues within the operations department, which continued to challenge the safety-conscious work environment for shift operations personnel. The team concluded that licensee's past actions to improve operations department organizational effectiveness had not been fully effective.

Inspection Report# : 2005009*(pdf)*

Last modified : May 25, 2006

Comanche Peak 1
2Q/2006 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Jun 23, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Operators Unable to Meet Some Critical Action Times During Alternate Shutdown Walkthrough
The team identified a Green noncited violation of License Condition 2.G and Technical Specification 5.4.1.d for failure to complete simulated operator actions within analyzed times and for the inability to perform some of the required actions with five examples. Specifically, the following deficiencies were identified: (1) the shift manager was unable to easily obtain the keys needed to access the transfer and hot shutdown panels, which delayed taking the required actions; (2) directions for starting the safety chiller, if not already operating, were not provided, which could have delayed accomplishing the task; (3) the licensee had not accounted for 1.5 minutes needed by operators to perform required actions prior to evacuating the control room; (4) operators took 4 minutes to mitigate a spuriously open power-operated relief valve, whereas, the analysis used 3 minutes; and (5) the 3.5 minutes needed to don the flash protective gear prevented completion of subsequent procedure steps within the time analyzed. The cause of the finding is related to the crosscutting aspect of human performance because: (1) operations personnel were unfamiliar with procedures and did not have some pertinent procedure steps available, and (2) organizations failed to communicate changes to the procedure that impacted the response time.

The team determined that this finding had more than minor significance because the inadequate procedure impacted the mitigating systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of the system that responds to the event to prevent undesirable consequences. A Phase 3 analysis of the above issues concluded the finding was of very low risk significance. Specifically, the Phase 3 analysis concluded that the 8-minute delay in transferring equipment from the control room and an additional 10-minute delay in accessing the remote shutdown room, did not result in a significant increase in risk. The analyst determined that a hot-short to a power operated relief valve was the most risk significant situation. The risk associated with a stuck open power-operated relief valve combined with a fire in the control room panel not suppressed was determined to be 2.7E-11/year. The analyst concluded that it would require a 22 percent increase in the stress levels of the operators to result in the risk exceeding the threshold to be considered greater than that of very low risk significance.
Inspection Report# : 2006003*(pdf)*

Significance: G Mar 24, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Perform an Adequate Receipt Inspection of Solenoid Valves
A self-revealing, noncited violation of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," was identified for failing to assure that purchased equipment conform to the procurement documents. This failure resulted in the installation of a solenoid coil with an alternating current voltage rating of 120 Vac, into a circuit with a direct current voltage rating of 125 Vdc, resulting in the failure of Valve 1-FV-2184. The licensee replaced the solenoid valve, reviewed for extent of condition, and revised the receipt inspection verification plan.

The violation is more than minor because it is associated with the equipment performance attribute of reliability and affected the mitigating system cornerstone objective to ensure the availability and reliability of the feedwater isolation system to respond to initiating events and prevent undesirable consequences. Using Appendix A of Manual Chapter 0609, the finding screened as very low safety significance in Phase 1 of the SDP because the finding affected the mitigation system cornerstone but did not represent a loss of system safety function, an actual loss of safety function of a single train, nor was potentially risk significant due to seismic, flooding, or severe weather initiating events. The finding has crosscutting aspects of human performance due to the inadequate receipt inspection verification plan and inattention to detail by the receipt inspection personnel.
Inspection Report# : 2006002*(pdf)*

Significance: G Mar 24, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to prevent foreign material from entering the station service water pump suction
A self-revealing, noncited violation was identified for the failure to implement effective corrective actions to prevent recurrence of a significant

condition adverse to quality as described in 10 CFR Part 50, Appendix B, Criterion XVI. During cleaning activities in the station service water intake bay on August 17, 2005, the vacuum hose that was being used to clean the bay floor became lodged in the pump suction housing and caused reduced flow such that the control room operator had to secure the pump. Two very similar events had occurred in 1994 and 1996, and the corrective actions proved inadequate to prevent foreign material from becoming sucked into the pumps. The licensee is currently in the process of modifying and developing procedures and evaluating facility modifications to protect the station service water pumps from foreign material intrusion.

The failure to implement adequate corrective actions for the previous events to prevent foreign material from being sucked into the station service water pumps and causing the pumps to trip or be secured was the performance deficiency. This finding is considered more than minor because it is associated with the equipment performance attribute and affected the mitigating cornerstone objective to ensure the reliability of the station service water system to respond to initiating events and prevent undesirable consequences. The finding was processed through the significance determination process and required a Phase 3 evaluation. The finding was determined to be of very low safety significance based primarily on the short time the performance deficiency actually affected plant equipment. This finding has a crosscutting aspect of problem identification and resolution due to ineffective implementation of corrective action from previous events.
Inspection Report# : 2006002*(pdf)*

Significance: G Oct 20, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Trip of Emergency Diesel Generator Due to Lube Oil Check Valve Installed Backwards
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.
Inspection Report# : 2005005*(pdf)*

Significance: G Oct 20, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Trip of Station Service Water Pump Due to Degraded Motor Lead
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.
Inspection Report# : 2005005*(pdf)*

Significance: G Sep 23, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate control room heat exchanger surveillance
NRC identified, noncited violation of Technical Specification Requirement 3.7.11.1 was identified because the licensee's surveillance that was performed to demonstrate compliance with the requirement was inadequate. Specifically, the acceptance criteria did not account for all differences between test conditions and accident conditions. The licensee performed an operability assessment to demonstrate current operability.

The failure to provide an adequate surveillance procedure to demonstrate the control room air conditioning system operability was a performance deficiency. The issue was more than minor because, if left uncorrected, it could become a more significant safety concern. Using the Phase 1 significance determination process worksheet, the finding was of very low risk significance because it was a qualification deficiency that did not result in a loss of function per Generic Letter 91-18, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," Revision 1. The licensee captured the issue in their corrective action program as Smart Form 2005-000937-00.
Inspection Report# : 2005004*(pdf)*

Barrier Integrity

Significance: G Oct 21, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Corrective Actions for a Leaking Valve with a Seal Weld which Subsequently Leaked
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.
Inspection Report# : 2005005*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G May 19, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Three Examples of a Failure to Conspicuously Post a Radiation Area
The inspector identified three examples of a non-cited violation of 10 CFR 20.1902(a) because the licensee failed to conspicuously post a radiation area. Specifically, on May 18, 2006, two discrete radiation areas in the fuel building and one in the auxiliary building were identified as not being conspicuously posted. The highest general area dose rate was 15 millirem per hour. The licensee conspicuously posted these areas and entered the finding into their corrective action program as Smart Form SMF-2006-001787-00.

The finding was greater than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of Program and Process and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation because not alerting workers to the presence of radiation could prevent them from taking measures to minimize radiation exposure. The finding was processed through the Occupational Radiation Safety Significance Determination Process and determined to be of very low safety significance because it was not an as low as reasonably achievable finding, there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised.
Inspection Report# : 2006003*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Jul 29, 2005
Identified By: NRC
Item Type: FIN Finding
Problem Identification and Resolution Inspection (PI&R) Team's Overall Assessment of the Licensee's PI&R Program
The team reviewed 151 risk significant issues, apparent and root cause analyses, and other related documents, to assess the effectiveness of the licensee's problem identification and resolution processes and systems. The team concluded that the licensee's management systems were generally effective. However, the team identified poor evaluation, prioritization, and corrective actions associated with longstanding safety related Agastat relay problems. A similar performance concern was documented in the last problem identification and resolution assessment. The team also concluded that licensee corrective actions taken to address an historical adverse trend in human performance have not been effective.

The team concluded that the licensee established a safety-conscious work environment at Comanche Peak Steam Electric Station. The team determined that employees and contractors felt free to enter issues into the corrective action program and raise safety concerns to their supervision, to the employees concern program, and to the NRC. All plant personnel, interviewed by the team, stated that potential safety issues were addressed by the licensee. However, the licensee had identified long-term organizational effectiveness issues within the operations department, which continued to challenge the safety-conscious work environment for shift operations personnel. The team concluded that licensee's past actions to improve operations department organizational effectiveness had not been fully effective.

Inspection Report# : 2005009*(pdf)*

Last modified : August 25, 2006

Comanche Peak 1
3Q/2006 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Jun 23, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Operators Unable to Meet Some Critical Action Times During Alternate Shutdown Walkthrough
The team identified a Green noncited violation of License Condition 2.G and Technical Specification 5.4.1.d for failure to complete simulated operator actions within analyzed times and for the inability to perform some of the required actions with five examples. Specifically, the following deficiencies were identified: (1) the shift manager was unable to easily obtain the keys needed to access the transfer and hot shutdown panels, which delayed taking the required actions; (2) directions for starting the safety chiller, if not already operating, were not provided, which could have delayed accomplishing the task; (3) the licensee had not accounted for 1.5 minutes needed by operators to perform required actions prior to evacuating the control room; (4) operators took 4 minutes to mitigate a spuriously open power-operated relief valve, whereas, the analysis used 3 minutes; and (5) the 3.5 minutes needed to don the flash protective gear prevented completion of subsequent procedure steps within the time analyzed. The cause of the finding is related to the crosscutting aspect of human performance because: (1) operations personnel were unfamiliar with procedures and did not have some pertinent procedure steps available, and (2) organizations failed to communicate changes to the procedure that impacted the response time.

The team determined that this finding had more than minor significance because the inadequate procedure impacted the mitigating systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of the system that responds to the event to prevent undesirable consequences. A Phase 3 analysis of the above issues concluded the finding was of very low risk significance. Specifically, the Phase 3 analysis concluded that the 8-minute delay in transferring equipment from the control room and an additional 10-minute delay in accessing the remote shutdown room, did not result in a significant increase in risk. The analyst determined that a hot-short to a power operated relief valve was the most risk significant situation. The risk associated with a stuck open power-operated relief valve combined with a fire in the control room panel not suppressed was determined to be 2.7E-11/year. The analyst concluded that it would require a 22 percent increase in the stress levels of the operators to result in the risk exceeding the threshold to be considered greater than that of very low risk significance.
Inspection Report# : 2006003*(pdf)*

Significance: G Mar 24, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Perform an Adequate Receipt Inspection of Solenoid Valves
A self-revealing, noncited violation of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," was identified for failing to assure that purchased equipment conform to the procurement documents. This failure resulted in the installation of a solenoid coil with an alternating current voltage rating of 120 Vac, into a circuit with a direct current voltage rating of 125 Vdc, resulting in the failure of Valve 1-FV-2184. The licensee replaced the solenoid valve, reviewed for extent of condition, and revised the receipt inspection verification plan.

The violation is more than minor because it is associated with the equipment performance attribute of reliability and affected the mitigating system cornerstone objective to ensure the availability and reliability of the feedwater isolation system to respond to initiating events and prevent undesirable consequences. Using Appendix A of Manual Chapter 0609,

the finding screened as very low safety significance in Phase 1 of the SDP because the finding affected the mitigation system cornerstone but did not represent a loss of system safety function, an actual loss of safety function of a single train, nor was potentially risk significant due to seismic, flooding, or severe weather initiating events. The finding has crosscutting aspects of human performance due to the inadequate receipt inspection verification plan and inattention to detail by the receipt inspection personnel.
Inspection Report# : 2006002*(pdf)*

Significance: G Mar 24, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to prevent foreign material from entering the station service water pump suction
A self-revealing, noncited violation was identified for the failure to implement effective corrective actions to prevent recurrence of a significant condition adverse to quality as described in 10 CFR Part 50, Appendix B, Criterion XVI. During cleaning activities in the station service water intake bay on August 17, 2005, the vacuum hose that was being used to clean the bay floor became lodged in the pump suction housing and caused reduced flow such that the control room operator had to secure the pump. Two very similar events had occurred in 1994 and 1996, and the corrective actions proved inadequate to prevent foreign material from becoming sucked into the pumps. The licensee is currently in the process of modifying and developing procedures and evaluating facility modifications to protect the station service water pumps from foreign material intrusion.

The failure to implement adequate corrective actions for the previous events to prevent foreign material from being sucked into the station service water pumps and causing the pumps to trip or be secured was the performance deficiency. This finding is considered more than minor because it is associated with the equipment performance attribute and affected the mitigating cornerstone objective to ensure the reliability of the station service water system to respond to initiating events and prevent undesirable consequences. The finding was processed through the significance determination process and required a Phase 3 evaluation. The finding was determined to be of very low safety significance based primarily on the short time the performance deficiency actually affected plant equipment. This finding has a crosscutting aspect of problem identification and resolution due to ineffective implementation of corrective action from previous events.
Inspection Report# : 2006002*(pdf)*

Significance: G Oct 20, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Trip of Emergency Diesel Generator Due to Lube Oil Check Valve Installed Backwards
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.
Inspection Report# : 2005005*(pdf)*

Significance: G Oct 20, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation

Trip of Station Service Water Pump Due to Degraded Motor Lead
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.
Inspection Report# : 2005005*(pdf)*

Barrier Integrity

Significance: G Oct 21, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Corrective Actions for a Leaking Valve with a Seal Weld which Subsequently Leaked
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.
Inspection Report# : 2005005*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G May 19, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Three Examples of a Failure to Conspicuously Post a Radiation Area
The inspector identified three examples of a non-cited violation of 10 CFR 20.1902(a) because the licensee failed to

conspicuously post a radiation area. Specifically, on May 18, 2006, two discrete radiation areas in the fuel building and one in the auxiliary building were identified as not being conspicuously posted. The highest general area dose rate was 15 millirem per hour. The licensee conspicuously posted these areas and entered the finding into their corrective action program as Smart Form SMF-2006-001787-00.

The finding was greater than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of Program and Process and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation because not alerting workers to the presence of radiation could prevent them from taking measures to minimize radiation exposure. The finding was processed through the Occupational Radiation Safety Significance Determination Process and determined to be of very low safety significance because it was not an as low as reasonably achievable finding, there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised.
Inspection Report# : 2006003*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : December 21, 2006

Comanche Peak 1
4Q/2006 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Oct 18, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Both Unit 1 Channels of Reactor Trip P4 Interlock Disabled in Mode 3
A self-revealing noncited violation of Technical Specification 5.4.1.a was identified for I&C technicians disabling both channels of P4 Reactor Trip Interlock in Unit 1, without procedural guidance, while performing main turbine stop/control valve leakage testing in Mode 3. This resulted in the turbine unexpectedly speeding up from 74 rpm to 1800 rpm within one minute. The operators attempted to trip the turbine via the turbine trip pushbutton, but the trip push-button, as well as the P4 Reactor Trip Interlock was disabled. The operators eventually closed the control valves by setting the startup/load limit device to zero percent. The licensee entered the issue into their corrective action program.

This finding is more than minor because the procedural error caused a transient in Mode 3 that resulted in the main turbine speeding up to 1800 rpm and a RCS cooldown from 511 degrees F to 499 degrees F. In addition, the finding affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of a system that responds to initiating events to prevent undesirable consequences. This finding is of very low safety significance in accordance with Phase 1 of Manual Chapter 0609, Appendix A because it was not a design or qualification deficiency, did not represent a loss of system safety function nor an actual loss of safety function, and did not screen as potentially risk significant due to external events. The cause of this finding is related to the crosscutting area of Human Performance because the licensee did not effectively communicate expectations regarding procedural compliance and personnel to follow procedures.
Inspection Report# : 2006004 *(pdf)*

Significance: G Jun 23, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Operators Unable to Meet Some Critical Action Times During Alternate Shutdown Walkthrough
The team identified a Green noncited violation of License Condition 2.G and Technical Specification 5.4.1.d for failure to complete simulated operator actions within analyzed times and for the inability to perform some of the required actions with five examples. Specifically, the following deficiencies were identified: (1) the shift manager was unable to easily obtain the keys needed to access the transfer and hot shutdown panels, which delayed taking the required actions; (2) directions for starting the safety chiller, if not already operating, were not provided, which could have delayed accomplishing the task; (3) the licensee had not accounted for 1.5 minutes needed by operators to perform required actions prior to evacuating the control room; (4) operators took 4 minutes to mitigate a spuriously open power-operated relief valve, whereas, the analysis used 3 minutes; and (5) the 3.5 minutes needed to don the flash protective gear prevented completion of subsequent procedure steps within the time analyzed. The cause of the finding is related to the crosscutting aspect of human performance because: (1) operations personnel were unfamiliar with procedures and did not have some pertinent procedure steps available, and (2) organizations failed to communicate changes to the procedure that impacted the response time.

The team determined that this finding had more than minor significance because the inadequate procedure impacted the mitigating systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of the system that responds to the event to prevent undesirable consequences. A Phase 3 analysis of the above issues concluded the finding was of very low risk significance. Specifically, the Phase 3 analysis concluded that the 8-minute

delay in transferring equipment from the control room and an additional 10-minute delay in accessing the remote shutdown room, did not result in a significant increase in risk. The analyst determined that a hot-short to a power operated relief valve was the most risk significant situation. The risk associated with a stuck open power-operated relief valve combined with a fire in the control room panel not suppressed was determined to be 2.7E-11/year. The analyst concluded that it would require a 22 percent increase in the stress levels of the operators to result in the risk exceeding the threshold to be considered greater than that of very low risk significance.
Inspection Report# : 2006003 *(pdf)*

Significance: G Mar 24, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Perform an Adequate Receipt Inspection of Solenoid Valves
A self-revealing, noncited violation of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," was identified for failing to assure that purchased equipment conform to the procurement documents. This failure resulted in the installation of a solenoid coil with an alternating current voltage rating of 120 Vac, into a circuit with a direct current voltage rating of 125 Vdc, resulting in the failure of Valve 1-FV-2184. The licensee replaced the solenoid valve, reviewed for extent of condition, and revised the receipt inspection verification plan.

The violation is more than minor because it is associated with the equipment performance attribute of reliability and affected the mitigating system cornerstone objective to ensure the availability and reliability of the feedwater isolation system to respond to initiating events and prevent undesirable consequences. Using Appendix A of Manual Chapter 0609, the finding screened as very low safety significance in Phase 1 of the SDP because the finding affected the mitigation system cornerstone but did not represent a loss of system safety function, an actual loss of safety function of a single train, nor was potentially risk significant due to seismic, flooding, or severe weather initiating events. The finding has crosscutting aspects of human performance due to the inadequate receipt inspection verification plan and inattention to detail by the receipt inspection personnel.
Inspection Report# : 2006002 *(pdf)*

Significance: G Mar 24, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to prevent foreign material from entering the station service water pump suction
A self-revealing, noncited violation was identified for the failure to implement effective corrective actions to prevent recurrence of a significant condition adverse to quality as described in 10 CFR Part 50, Appendix B, Criterion XVI. During cleaning activities in the station service water intake bay on August 17, 2005, the vacuum hose that was being used to clean the bay floor became lodged in the pump suction housing and caused reduced flow such that the control room operator had to secure the pump. Two very similar events had occurred in 1994 and 1996, and the corrective actions proved inadequate to prevent foreign material from becoming sucked into the pumps. The licensee is currently in the process of modifying and developing procedures and evaluating facility modifications to protect the station service water pumps from foreign material intrusion.

The failure to implement adequate corrective actions for the previous events to prevent foreign material from being sucked into the station service water pumps and causing the pumps to trip or be secured was the performance deficiency. This finding is considered more than minor because it is associated with the equipment performance attribute and affected the mitigating cornerstone objective to ensure the reliability of the station service water system to respond to initiating events and prevent undesirable consequences. The finding was processed through the significance determination process and required a Phase 3 evaluation. The finding was determined to be of very low safety significance based primarily on the short time the performance deficiency actually affected plant equipment. This finding has a crosscutting aspect of problem identification and resolution due to ineffective implementation of corrective action from previous events.
Inspection Report# : 2006002 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G May 19, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Three Examples of a Failure to Conspicuously Post a Radiation Area
The inspector identified three examples of a non-cited violation of 10 CFR 20.1902(a) because the licensee failed to conspicuously post a radiation area. Specifically, on May 18, 2006, two discrete radiation areas in the fuel building and one in the auxiliary building were identified as not being conspicuously posted. The highest general area dose rate was 15 millirem per hour. The licensee conspicuously posted these areas and entered the finding into their corrective action program as Smart Form SMF-2006-001787-00.

The finding was greater than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of Program and Process and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation because not alerting workers to the presence of radiation could prevent them from taking measures to minimize radiation exposure. The finding was processed through the Occupational Radiation Safety Significance Determination Process and determined to be of very low safety significance because it was not an as low as reasonably achievable finding, there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised.
Inspection Report# : 2006003 *(pdf)*

Public Radiation Safety

Significance: G Mar 17, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to train hazmat employees.
The team identified a non-cited violation of 49 CFR 172.704(a) because the licensee failed to provide required training to hazmat employees involved in the shipment of radioactive material. The licensee did not provide general awareness training of the requirements of shipping regulations, and did not provide function-specific training of applicable sections of the shipping regulations to crane operators and riggers.

The finding is greater than minor because it is associated with the Public Radiation Safety Cornerstone attribute of program and process and affects the cornerstone objective. The finding involved the potential to impact the licensee's ability to safely package and transport radioactive material on public roadways. When processed through the Public Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because it: (1) was associated with radioactive material control, (2) involved the licensee's program for radioactive material packaging and transportation, (3) did not cause radiation limits to be exceeded, (4) did not result in a breach of package during transit, (5) did not involve a certificate of compliance issue, (6) did not involve a low level burial ground nonconformance, and (7) did not involve a failure to make notifications or to provide emergency information. Corrective action is still being evaluated. Additionally, this finding had cross-cutting aspects associated with problem identification and resolution because the issue had been identified in an audit conducted by the licensee's Nuclear Overview Department, but had not been adequately evaluated and corrected.
Inspection Report# : 2006008 *(pdf)*

Significance: G Mar 17, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to prevent radioactive material from being unconditionally released from a radiologically controlled area
The team reviewed a self-revealing, non-cited violation of Technical Specification 5.4.1, resulting from the licensee's failure to prevent radioactive material from being unconditionally released from a radiologically controlled area. On April 18, 2005, the licensee released a contaminated transmitter from the RCA and in August 2005, shipped it to a facility Minnesota. The recipient surveyed the transmitter upon arrival and detected the radioactive material. The licensee's immediate corrective action was to have the transmitter returned. This finding did not have aspects associated with the transportation of hazardous material due to the low levels of radioactivity.

This finding is greater than minor because it was associated with a Public Radiation Safety cornerstone attribute (material release) and it affected the associated cornerstone objective in that the failure to control radioactive material decreases the licensee's assurance that the public will not receive unnecessary dose. Using the Public Radiation Safety Significance Determination Process, the team determined that the finding had very low safety significance because it: (1) was a radioactive material control finding, (2) was not a transportation finding, (3) did not result in public dose greater than 0.005 rem, and (4) did not result in radioactive material being released from the protected area more than five times during the biennial inspection period. Additionally, this finding had cross-cutting aspects associated with human performance because a technician's failure to perform an adequate survey directly contributed to the finding.
Inspection Report# : 2006008 *(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : March 01, 2007

Comanche Peak 1
1Q/2007 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Dec 22, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
IMPROPER EVALUATION OF POSTMAINTENANCE TEST FOR INSERVICE TESTING CREDIT
A noncited violation of Technical Specification 5.5.8 for inadequate inservice testing of safety related gate valves with stellite seats following maintenance. During maintenance a thin oxide coating forms on the internals of these valves, which acts as a lubricant and significantly reduces the torque and thrust required to operate the valves for some period of time. Contrary to the Inservice Testing Program required by Technical Specification 5.5.8, the licensee performed maintenance on 1-HV-4777 in 1998 and used the post-maintenance test for inservice test credit, despite the knowledge that these results were not representative of baseline valve performance. Since the results were not representative of baseline behavior, this test was not a valid inservice test. Therefore, no valid test was performed between 1997 and November 27, 2006, which exceeded the required test interval.

Failure to properly assess the test results following maintenance is a performance deficiency. This finding was more than minor because, if left uncorrected, it could become a more significant safety concern in that a valve performance problem might be masked following maintenance. This issue screened as Green during a Phase 1 significance determination process because the examples we reviewed indicated that this condition had never masked a condition that resulted in an inoperable valve in the past. This issue was entered into the corrective action program under SMF-2006-4161.
Inspection Report# : 2006009 *(pdf)*

Significance: G Dec 22, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
TWO CONTAINMENT SPRAY SYSTEM FUNCTIONS NOT DESCRIBED IN UFSAR OR DESIGN BASIS DOCUMENTS
A noncited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, with two examples, was identified for failure to correctly translate regulatory requirements and design bases associated with the containment spray system into specifications, drawings, procedures, and instructions. Specifically, the functioning of the vacuum breakers on the chemical additive tank and the chemical additive tank isolation valves were not described in the design basis documents for this system. The vacuum breakers must operate for the system to inject sodium hydroxide, and the isolation valves must shut prior to draining the tank to prevent injecting air into the containment spray pump. This finding was entered into the corrective action program under SMF-2006-4073 and SMF-2006-4097.

Failure to correctly translate regulatory requirements and design bases associated with the containment spray system into design basis documents was a performance deficiency. This finding was determined to be more than minor because, if left uncorrected, it could become a more significant safety concern. Absent a proper description of these important functions, operability evaluations or plant changes could be made which negatively impact the functions without being recognized. This issue screened as Green in Phase 1 because there was no identified loss of function as a result of this performance deficiency. This issue had cross-cutting aspects in Problem Identification and Resolution (Corrective Action Program, correcting problems in a timely manner), because a 2003 self-assessment identified that the isolation valves' function was not described in the UFSAR (documented in SMF-2003-3860), but this was never corrected.
Inspection Report# : 2006009 *(pdf)*

Significance: G Dec 20, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE DESIGN CONTROL TO EXCLUDE AIR FROM CONTAINMENT SPRAY PIPING
Two examples of 10 CFR 50, Appendix B, Criterion III violations were identified for failure to translate design basis into instructions, procedures, and drawings. The team found that surveillance testing drained water out of the containment sump suction line for the containment spray system with no provision to ensure the system was refilled prior to declaring it operable. Specifically, in August 2006, the Containment Spray Containment Sump Suction Valve 1-HV-4783 for Train B in Unit 1 was cycled for surveillance testing, draining approximately 61 gallons from the line. This allowed about 8 cubic feet of air into the system. The air remained in the system until it was vented on December 1, 2006, after the team questioned whether the system was filled. Also, the licensee failed to assess/prevent vortexing in the chemical additive tank for the containment spray system in the event of a design basis accident. The team independently determined that vortexing could occur for approximately 20 minutes before the tank would be isolated, entraining air in each of the running pumps.

This violation is more than minor because it affects the design control attribute of the mitigating system cornerstone objective to ensure the availability, reliability and capability of the containment spray system to respond to initiating events and prevent undesirable consequences. This finding screened as Green during a Phase 1 significance determination process because analyses showed that the small amount of air in these cases was not enough to cause a loss of function or detrimental fluid dynamic effects. This finding had cross-cutting aspects in problem identification and resolution (corrective action program, evaluating and prioritizing problems), because there were two prior opportunities to have identified that water was being drained from the suction piping. This issue was entered into the corrective action program under SMF-2006-3965.
Inspection Report# : 2006009 *(pdf)*

Significance: G Oct 18, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Both Unit 1 Channels of Reactor Trip P4 Interlock Disabled in Mode 3
A self-revealing noncited violation of Technical Specification 5.4.1.a was identified for I&C technicians disabling both channels of P4 Reactor Trip Interlock in Unit 1, without procedural guidance, while performing main turbine stop/control valve leakage testing in Mode 3. This resulted in the turbine unexpectedly speeding up from 74 rpm to 1800 rpm within one minute. The operators attempted to trip the turbine via the turbine trip pushbutton, but the trip push-button, as well as the P4 Reactor Trip Interlock was disabled. The operators eventually closed the control valves by setting the startup/load limit device to zero percent. The licensee entered the issue into their corrective action program.

This finding is more than minor because the procedural error caused a transient in Mode 3 that resulted in the main turbine speeding up to 1800 rpm and a RCS cooldown from 511 degrees F to 499 degrees F. In addition, the finding affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of a system that responds to initiating events to prevent undesirable consequences. This finding is of very low safety significance in accordance with Phase 1 of Manual Chapter 0609, Appendix A because it was not a design or qualification deficiency, did not represent a loss of system safety function nor an actual loss of safety function, and did not screen as potentially risk significant due to external events. The cause of this finding is related to the crosscutting area of Human Performance because the licensee did not effectively communicate expectations regarding procedural compliance and personnel to follow procedures.
Inspection Report# : 2006004 *(pdf)*

Significance: G Jun 23, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Operators Unable to Meet Some Critical Action Times During Alternate Shutdown Walkthrough
The team identified a Green noncited violation of License Condition 2.G and Technical Specification 5.4.1.d for failure to complete simulated operator actions within analyzed times and for the inability to perform some of the required actions with five examples. Specifically, the following deficiencies were identified: (1) the shift manager was unable to easily obtain the keys needed to access the transfer and hot shutdown panels, which delayed taking the required actions; (2) directions for starting the safety chiller, if not already operating, were not provided, which could have delayed accomplishing the task; (3) the licensee had not accounted for 1.5 minutes needed by operators to perform required actions

prior to evacuating the control room; (4) operators took 4 minutes to mitigate a spuriously open power-operated relief valve, whereas, the analysis used 3 minutes; and (5) the 3.5 minutes needed to don the flash protective gear prevented completion of subsequent procedure steps within the time analyzed. The cause of the finding is related to the crosscutting aspect of human performance because: (1) operations personnel were unfamiliar with procedures and did not have some pertinent procedure steps available, and (2) organizations failed to communicate changes to the procedure that impacted the response time.

The team determined that this finding had more than minor significance because the inadequate procedure impacted the mitigating systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of the system that responds to the event to prevent undesirable consequences. A Phase 3 analysis of the above issues concluded the finding was of very low risk significance. Specifically, the Phase 3 analysis concluded that the 8-minute delay in transferring equipment from the control room and an additional 10-minute delay in accessing the remote shutdown room, did not result in a significant increase in risk. The analyst determined that a hot-short to a power operated relief valve was the most risk significant situation. The risk associated with a stuck open power-operated relief valve combined with a fire in the control room panel not suppressed was determined to be 2.7E-11/year. The analyst concluded that it would require a 22 percent increase in the stress levels of the operators to result in the risk exceeding the threshold to be considered greater than that of very low risk significance.
Inspection Report# : 2006003 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G Dec 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to post a radiation area
The inspector reviewed a self-revealing noncited violation of 10 CFR 20.1902 for a failure to post a radiation area. The posting deficiency was identified during an investigation of a dosimeter dose alarm in Auxiliary Building Room 208. A radiological survey was performed two days prior with a radiation area being identified and documented on the survey; however, the radiation protection technician performing the survey failed to post the area. In addition, the lead technician who reviewed the survey failed to identify the posting deficiency. As an immediate corrective action, the licensee posted the area.

This finding is greater than minor because it is associated with one of the cornerstone attributes (exposure control) and affects the Occupational Radiation Safety cornerstone objective, in that the failure to post a radiation area could result in additional personnel exposure. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that this finding was of very low safety significance because it did not involve: (1) an ALARA finding, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess doses. Additionally, this finding has a cross-cutting aspect in the area of human performance related to work practices because the radiation protection technicians failed to use error prevention tools such as self and peer checking to identify the posting deficiency.
Inspection Report# : 2006005 *(pdf)*

Significance: G May 19, 2006
Identified By: NRC
Item Type: NCV NonCited Violation

Three Examples of a Failure to Conspicuously Post a Radiation Area
The inspector identified three examples of a non-cited violation of 10 CFR 20.1902(a) because the licensee failed to conspicuously post a radiation area. Specifically, on May 18, 2006, two discrete radiation areas in the fuel building and one in the auxiliary building were identified as not being conspicuously posted. The highest general area dose rate was 15 millirem per hour. The licensee conspicuously posted these areas and entered the finding into their corrective action program as Smart Form SMF-2006-001787-00.

The finding was greater than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of Program and Process and affected the cornerstone objective to ensure the adequate protection of a worker's health and safety from exposure to radiation because not alerting workers to the presence of radiation could prevent them from taking measures to minimize radiation exposure. The finding was processed through the Occupational Radiation Safety Significance Determination Process and determined to be of very low safety significance because it was not an as low as reasonably achievable finding, there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised.
Inspection Report# : 2006003 *(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : June 01, 2007

Comanche Peak 1
2Q/2007 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Dec 22, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
IMPROPER EVALUATION OF POSTMAINTENANCE TEST FOR INSERVICE TESTING CREDIT
A noncited violation of Technical Specification 5.5.8 for inadequate inservice testing of safety related gate valves with stellite seats following maintenance. During maintenance a thin oxide coating forms on the internals of these valves, which acts as a lubricant and significantly reduces the torque and thrust required to operate the valves for some period of time. Contrary to the Inservice Testing Program required by Technical Specification 5.5.8, the licensee performed maintenance on 1-HV-4777 in 1998 and used the post-maintenance test for inservice test credit, despite the knowledge that these results were not representative of baseline valve performance. Since the results were not representative of baseline behavior, this test was not a valid inservice test. Therefore, no valid test was performed between 1997 and November 27, 2006, which exceeded the required test interval.

Failure to properly assess the test results following maintenance is a performance deficiency. This finding was more than minor because, if left uncorrected, it could become a more significant safety concern in that a valve performance problem might be masked following maintenance. This issue screened as Green during a Phase 1 significance determination process because the examples we reviewed indicated that this condition had never masked a condition that resulted in an inoperable valve in the past. This issue was entered into the corrective action program under SMF-2006-4161.
Inspection Report# : 2006009 *(pdf)*

Significance: G Dec 22, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
TWO CONTAINMENT SPRAY SYSTEM FUNCTIONS NOT DESCRIBED IN UFSAR OR DESIGN BASIS DOCUMENTS
A noncited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, with two examples, was identified for failure to correctly translate regulatory requirements and design bases associated with the containment spray system into specifications, drawings, procedures, and instructions. Specifically, the functioning of the vacuum breakers on the chemical additive tank and the chemical additive tank isolation valves were not described in the design basis documents for this system. The vacuum breakers must operate for the system to inject sodium hydroxide, and the isolation valves must shut prior to draining the tank to prevent injecting air into the containment spray pump. This finding was entered into the corrective action program under SMF-2006-4073 and SMF-2006-4097.

Failure to correctly translate regulatory requirements and design bases associated with the containment spray system into design basis documents was a performance deficiency. This finding was determined to be more than minor because, if left uncorrected, it could become a more significant safety concern. Absent a proper description of these important functions, operability evaluations or plant changes could be made which negatively impact the functions without being recognized. This issue screened as Green in Phase 1 because there was no identified loss of function as a result of this performance deficiency. This issue had cross-cutting aspects in Problem Identification and Resolution (Corrective Action Program, correcting problems in a timely manner), because a 2003 self-assessment identified that the isolation valves' function was not described in the UFSAR (documented in SMF-2003-3860), but this was never corrected (P.1(d)).

Inspection Report# : 2006009 *(pdf)*

Significance: G Dec 20, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE DESIGN CONTROL TO EXCLUDE AIR FROM CONTAINMENT SPRAY PIPING
Two examples of 10 CFR 50, Appendix B, Criterion III violations were identified for failure to translate design basis into instructions, procedures, and drawings. The team found that surveillance testing drained water out of the containment sump suction line for the containment spray system with no provision to ensure the system was refilled prior to declaring it operable. Specifically, in August 2006, the Containment Spray Containment Sump Suction Valve 1-HV-4783 for Train B in Unit 1 was cycled for surveillance testing, draining approximately 61 gallons from the line. This allowed about 8 cubic feet of air into the system. The air remained in the system until it was vented on December 1, 2006, after the team questioned whether the system was filled. Also, the licensee failed to assess/prevent vortexing in the chemical additive tank for the containment spray system in the event of a design basis accident. The team independently determined that vortexing could occur for approximately 20 minutes before the tank would be isolated, entraining air in each of the running pumps.

This violation is more than minor because it affects the design control attribute of the mitigating system cornerstone objective to ensure the availability, reliability and capability of the containment spray system to respond to initiating events and prevent undesirable consequences. This finding screened as Green during a Phase 1 significance determination process because analyses showed that the small amount of air in these cases was not enough to cause a loss of function or detrimental fluid dynamic effects. This finding had cross-cutting aspects in problem identification and resolution (corrective action program, evaluating and prioritizing problems), because there were two prior opportunities to have identified that water was being drained from the suction piping. This issue was entered into the corrective action program under SMF-2006-3965 (P.1(c)).
Inspection Report# : 2006009 *(pdf)*

Significance: G Oct 18, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Both Unit 1 Channels of Reactor Trip P4 Interlock Disabled in Mode 3
A self-revealing noncited violation of Technical Specification 5.4.1.a was identified for I&C technicians disabling both channels of P4 Reactor Trip Interlock in Unit 1, without procedural guidance, while performing main turbine stop/control valve leakage testing in Mode 3. This resulted in the turbine unexpectedly speeding up from 74 rpm to 1800 rpm within one minute. The operators attempted to trip the turbine via the turbine trip pushbutton, but the trip push-button, as well as the P4 Reactor Trip Interlock was disabled. The operators eventually closed the control valves by setting the startup/load limit device to zero percent. The licensee entered the issue into their corrective action program.

This finding is more than minor because the procedural error caused a transient in Mode 3 that resulted in the main turbine speeding up to 1800 rpm and a RCS cooldown from 511 degrees F to 499 degrees F. In addition, the finding affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of a system that responds to initiating events to prevent undesirable consequences. This finding is of very low safety significance in accordance with Phase 1 of Manual Chapter 0609, Appendix A because it was not a design or qualification deficiency, did not represent a loss of system safety function nor an actual loss of safety function, and did not screen as potentially risk significant due to external events. The cause of this finding is related to the crosscutting area of Human Performance because the licensee did not effectively communicate expectations regarding procedural compliance and personnel to follow procedures (H.4(b)).
Inspection Report# : 2006004 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G Dec 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to post a radiation area
The inspector reviewed a self-revealing noncited violation of 10 CFR 20.1902 for a failure to post a radiation area. The posting deficiency was identified during an investigation of a dosimeter dose alarm in Auxiliary Building Room 208. A radiological survey was performed two days prior with a radiation area being identified and documented on the survey; however, the radiation protection technician performing the survey failed to post the area. In addition, the lead technician who reviewed the survey failed to identify the posting deficiency. As an immediate corrective action, the licensee posted the area.

This finding is greater than minor because it is associated with one of the cornerstone attributes (exposure control) and affects the Occupational Radiation Safety cornerstone objective, in that the failure to post a radiation area could result in additional personnel exposure. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that this finding was of very low safety significance because it did not involve: (1) an ALARA finding, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess doses. Additionally, this finding has a cross-cutting aspect in the area of human performance related to work practices because the radiation protection technicians failed to use error prevention tools such as self and peer checking to identify the posting deficiency (H.4(a)).
Inspection Report# : 2006005 *(pdf)*

Public Radiation Safety

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.

Miscellaneous

Last modified : August 24, 2007

Comanche Peak 1
3Q/2007 Plant Inspection Findings

Initiating Events

Significance: G Sep 25, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to appropriately secure adjustment set screw resulted in RHR valve failure.
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for failure to provide work instructions or procedures appropriate to the circumstances. Specifically, Work Order 3-05-333517-01 and Procedure INC-2085, "Rework and Replacement of I&C [Instrumentation and Control] Equipment," Revision, 3, directed the replacement of the positioner for Valve 1-HCV-0607, but did not contain appropriate instructions for applying loctite or other measures to ensure the adjustment screw remained securely in place, despite operational experience in 1999, that indicated this action was necessary. As a result Valve 1-HCV-0607 failed to operate when called upon.

When operators attempted to place the Train B residual heat removal system in service, Valve 1-HCV-0607, the Train B residual heat removal heat exchanger outlet valve would not open because the Bailey Type AV1 positioner had malfunctioned. The pilot valve stem adjustment screw (that had been replaced during a recent outage) became loose and repositioned such that it prevented the valve from stroking open. The licensee had received and reviewed 1999 operating experience information that a loose pilot valve adjustment screw was determined to be the main cause of a Bailey positioner failure that led to a reactor trip at another facility. However, the team determined that the licensee had not taken appropriate action to prevent such failures at Comanche Peak Steam Electric Station, resulting in the failure of Valve 1-HCV-0607 when called upon.

The team determined that the failure of the licensee to adequately implement operating experience into maintenance procedures was a performance deficiency. The performance deficiency had plant impact because it caused a loss of one train of a safety function (residual heat removal). The finding was determined to be more than minor because it is associated with the equipment performance attribute for assuring availability and reliability and affected the initiating events cornerstone to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. Using Appendix G, "Shutdown Operations Significance Determination Process," Checklist 2, of Manual Chapter 0609, "Significance Determination Process," the significance of the finding was determined to be Green, very low safety significance, because one train of residual heat removal was operable and at least two steam generators were available for decay heat removal.
Inspection Report# : 2007007 *(pdf)*

Significance: G Jun 22, 2007
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate restoration following valve maintenance
The inspectors reviewed a self-revealing finding for the inadequate restoration from valve maintenance which resulted in a manual turbine runback. On November 30, 2006, while Unit 1 was at 100 percent power, the 2A Feedwater Heater Normal Level Control Valve 1-LV-2509 failed closed. Operators initially ran the turbine back to 1100 MWe, but eventually reduced load to 700 MWe due to main feedwater pump suction oscillations. The root cause of the event was determined to be inadequate maintenance work practices upon restoration from maintenance on the level control valve.

The finding is more than minor because it is related to the human performance attribute and affected the initiating event cornerstone objective to limit the likelihood of those events that upset plant stability during power operations. The finding was determined to have a very low risk significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available.
Inspection Report# : 2007003 *(pdf)*

Mitigating Systems

Significance: G Dec 22, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
IMPROPER EVALUATION OF POSTMAINTENANCE TEST FOR INSERVICE TESTING CREDIT
A noncited violation of Technical Specification 5.5.8 for inadequate inservice testing of safety related gate valves with stellite seats following maintenance. During maintenance a thin oxide coating forms on the internals of these valves, which acts as a lubricant and significantly reduces the torque and thrust required to operate the valves for some period of time. Contrary to the Inservice Testing Program required by Technical Specification 5.5.8, the licensee performed maintenance on 1-HV-4777 in 1998 and used the post-maintenance test for inservice test credit, despite the knowledge that these results were not representative of baseline valve performance. Since the results were not representative of baseline behavior, this test was not a valid inservice test. Therefore, no valid test was performed between 1997 and November 27, 2006, which exceeded the required test interval.

Failure to properly assess the test results following maintenance is a performance deficiency. This finding was more than minor because, if left uncorrected, it could become a more significant safety concern in that a valve performance problem might be masked following maintenance. This issue screened as Green during a Phase 1 significance determination process because the examples we reviewed indicated that this condition had never masked a condition that resulted in an inoperable valve in the past. This issue was entered into the corrective action program under SMF-2006-4161.
Inspection Report# : 2006009 *(pdf)*

Significance: G Dec 22, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
TWO CONTAINMENT SPRAY SYSTEM FUNCTIONS NOT DESCRIBED IN UFSAR OR DESIGN BASIS DOCUMENTS
A noncited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, with two examples, was identified for failure to correctly translate regulatory requirements and design bases associated with the containment spray system into specifications, drawings, procedures, and instructions. Specifically, the functioning of the vacuum breakers on the chemical additive tank and the chemical additive tank isolation valves were not described in the design basis documents for this system. The vacuum breakers must operate for the system to inject sodium hydroxide, and the isolation valves must shut prior to draining the tank to prevent injecting air into the containment spray pump. This finding was entered into the corrective action program under SMF-2006-4073 and SMF-2006-4097.

Failure to correctly translate regulatory requirements and design bases associated with the containment spray system into design basis documents was a performance deficiency. This finding was determined to be more than minor because, if left uncorrected, it could become a more significant safety concern. Absent a proper description of these important functions, operability evaluations or plant changes could be made which negatively impact the functions without being recognized. This issue screened as Green in Phase 1 because there was no identified loss of function as a result of this performance deficiency. This issue had cross-cutting aspects in Problem Identification and Resolution (Corrective Action Program, correcting problems in a timely manner), because a 2003 self-assessment identified that the isolation valves' function was not described in the UFSAR (documented in SMF-2003-3860), but this was never corrected (P.1(d)).
Inspection Report# : 2006009 *(pdf)*

Significance: G Dec 20, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE DESIGN CONTROL TO EXCLUDE AIR FROM CONTAINMENT SPRAY PIPING
Two examples of 10 CFR 50, Appendix B, Criterion III violations were identified for failure to translate design basis

into instructions, procedures, and drawings. The team found that surveillance testing drained water out of the containment sump suction line for the containment spray system with no provision to ensure the system was refilled prior to declaring it operable. Specifically, in August 2006, the Containment Spray Containment Sump Suction Valve 1-HV-4783 for Train B in Unit 1 was cycled for surveillance testing, draining approximately 61 gallons from the line. This allowed about 8 cubic feet of air into the system. The air remained in the system until it was vented on December 1, 2006, after the team questioned whether the system was filled. Also, the licensee failed to assess/prevent vortexing in the chemical additive tank for the containment spray system in the event of a design basis accident. The team independently determined that vortexing could occur for approximately 20 minutes before the tank would be isolated, entraining air in each of the running pumps.

This violation is more than minor because it affects the design control attribute of the mitigating system cornerstone objective to ensure the availability, reliability and capability of the containment spray system to respond to initiating events and prevent undesirable consequences. This finding screened as Green during a Phase 1 significance determination process because analyses showed that the small amount of air in these cases was not enough to cause a loss of function or detrimental fluid dynamic effects. This finding had cross-cutting aspects in problem identification and resolution (corrective action program, evaluating and prioritizing problems), because there were two prior opportunities to have identified that water was being drained from the suction piping. This issue was entered into the corrective action program under SMF-2006-3965 (P.1(c)).
Inspection Report# : 2006009 *(pdf)*

Significance: G Oct 18, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Both Unit 1 Channels of Reactor Trip P4 Interlock Disabled in Mode 3
A self-revealing noncited violation of Technical Specification 5.4.1.a was identified for I&C technicians disabling both channels of P4 Reactor Trip Interlock in Unit 1, without procedural guidance, while performing main turbine stop/control valve leakage testing in Mode 3. This resulted in the turbine unexpectedly speeding up from 74 rpm to 1800 rpm within one minute. The operators attempted to trip the turbine via the turbine trip pushbutton, but the trip push-button, as well as the P4 Reactor Trip Interlock was disabled. The operators eventually closed the control valves by setting the startup/load limit device to zero percent. The licensee entered the issue into their corrective action program.

This finding is more than minor because the procedural error caused a transient in Mode 3 that resulted in the main turbine speeding up to 1800 rpm and a RCS cooldown from 511 degrees F to 499 degrees F. In addition, the finding affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of a system that responds to initiating events to prevent undesirable consequences. This finding is of very low safety significance in accordance with Phase 1 of Manual Chapter 0609, Appendix A because it was not a design or qualification deficiency, did not represent a loss of system safety function nor an actual loss of safety function, and did not screen as potentially risk significant due to external events. The cause of this finding is related to the crosscutting area of Human Performance because the licensee did not effectively communicate expectations regarding procedural compliance and personnel to follow procedures (H.4(b)).
Inspection Report# : 2006004 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 22, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Evaluate Radiological Hazards
The inspectors reviewed a self-revealing noncited violation of 10CFR20.1501(a) for the failure to adequately evaluate radiological conditions in a work area. While performing maintenance on proximity switch cable sleeves on an assembly from the spent fuel pool up-ender, one worker was exposed to concentrations of airborne radioactivity higher than anticipated, resulting in the internal contamination and unplanned dose to the individual. A committed effective dose equivalent of 27 millirem was assigned to the individual. Additionally, after the initial alarm of the airborne activity monitor, a contamination survey of the work area was not performed to evaluate conditions prior to resuming work.

The finding is more than minor because it is associated with the occupational radiation safety attribute of program and process and affected the cornerstone objective because it involves unplanned and unintended dose to a worker. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined that the finding was of very low safety significance because: (1) it was not an ALARA finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. In addition, this finding has a cross-cutting aspect in the area of human performance associated with work control because the licensee failed to appropriately coordinate work activities by incorporating actions to keep personnel apprised of conditions at the job site which impacted radiological safety (H.3(b)).
Inspection Report# : 2007003 *(pdf)*

Significance: G Jun 22, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide a Detailed Work Plan
The inspectors identified a noncited violation of Technical Specification 5.4.1.a for the failure to develop an adequately detailed work plan for the maintenance of proximity switch sleeves which resulted in the internal contamination of one individual. Specifically, the licensee did not provide adequately detailed work instructions in the work order to allow the ALARA planners to develop an adequate Radiation Work Permit and radiological controls for the maintenance evolution.

The finding is more than minor because it is associated with the occupational radiation safety attribute of program and process and affected the cornerstone objective because it involves unplanned and unintended dose to a worker. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined that the finding was of very low safety significance because: (1) it was an ALARA work planning finding, (2) the 3-year rolling average collective dose is less than 135 person-rem/unit. In addition, this finding has a cross-cutting aspect in the area of human performance associated with work control because the licensee failed to appropriately plan work activities by incorporating job site conditions which may impact radiological safety (H.3(a)).
Inspection Report# : 2007003 *(pdf)*

Significance: G Dec 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to post a radiation area
The inspector reviewed a self-revealing noncited violation of 10 CFR 20.1902 for a failure to post a radiation area. The posting deficiency was identified during an investigation of a dosimeter dose alarm in Auxiliary Building Room 208. A radiological survey was performed two days prior with a radiation area being identified and documented on the survey; however, the radiation protection technician performing the survey failed to post the area. In addition, the lead technician who reviewed the survey failed to identify the posting deficiency. As an immediate corrective action, the licensee posted the area.

This finding is greater than minor because it is associated with one of the cornerstone attributes (exposure control) and affects the Occupational Radiation Safety cornerstone objective, in that the failure to post a radiation area could result in additional personnel exposure. Using the Occupational Radiation Safety Significance Determination Process, the

inspector determined that this finding was of very low safety significance because it did not involve: (1) an ALARA finding, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess doses. Additionally, this finding has a cross-cutting aspect in the area of human performance related to work practices because the radiation protection technicians failed to use error prevention tools such as self and peer checking to identify the posting deficiency (H.4(a)).
Inspection Report# : 2006005 *(pdf)*

Public Radiation Safety

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.

Miscellaneous

Significance: N/A Sep 25, 2007
Identified By: NRC
Item Type: FIN Finding
Problem Identification and Resolution Team Inspection Results
The team reviewed approximately 189 risk significant issues, apparent and root cause analyses, and other related documents, to assess the effectiveness of the licensee's problem identification and resolution processes and systems. The team concluded that the licensee's management systems were effective, although seven examples occurred during the assessment period of failure to implement appropriate and timely corrective actions. Overall, corrective actions were appropriate to the circumstances. The licensee implemented an effective program for evaluating operational experience, although the team identified one example where ineffective use of operating experience led to a valve becoming inoperable.

The team concluded that the licensee maintained an overall safety-conscious work environment. However, based on interviews, concerns with trust in management and the ability to raise issues above direct supervision existed within the security force. A majority of security officers interviewed stated that although they would issue smart forms or inform their direct supervision with concerns, they would be hesitant to elevate issues. Individuals interviewed (outside of the security organization) were comfortable raising safety issues and elevating them to appropriate levels of management as necessary. The team concluded that the employee concerns program (SafeTeam) effectively resolved safety issues raised by plant and contract personnel. Plant personnel interviewed generally considered the employee concerns program a viable option to pursue safety issues. However, the majority of security force personnel interviewed lacked confidence in the SafeTeam's ability to resolve issues or maintain confidentiality.

The licensee overall performed effective and critical self-assessments. However, a licensee contract employee safety culture survey performed during this assessment period failed to identify the above concerns within the security force. Licensee management stated that a new safety culture survey was planned (with emphasis on ensuring a representative sample within the security force) for the fall of 2007.
Inspection Report# : 2007007 *(pdf)*

Last modified : December 07, 2007

Comanche Peak 1
4Q/2007 Plant Inspection Findings

Initiating Events

Significance: G Sep 25, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to appropriately secure adjustment set screw resulted in RHR valve failure.
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for failure to provide work instructions or procedures appropriate to the circumstances. Specifically, Work Order 3-05-333517-01 and Procedure INC-2085, "Rework and Replacement of I&C [Instrumentation and Control] Equipment," Revision, 3, directed the replacement of the positioner for Valve 1-HCV-0607, but did not contain appropriate instructions for applying loctite or other measures to ensure the adjustment screw remained securely in place, despite operational experience in 1999, that indicated this action was necessary. As a result Valve 1-HCV-0607 failed to operate when called upon.

When operators attempted to place the Train B residual heat removal system in service, Valve 1-HCV-0607, the Train B residual heat removal heat exchanger outlet valve would not open because the Bailey Type AV1 positioner had malfunctioned. The pilot valve stem adjustment screw (that had been replaced during a recent outage) became loose and repositioned such that it prevented the valve from stroking open. The licensee had received and reviewed 1999 operating experience information that a loose pilot valve adjustment screw was determined to be the main cause of a Bailey positioner failure that led to a reactor trip at another facility. However, the team determined that the licensee had not taken appropriate action to prevent such failures at Comanche Peak Steam Electric Station, resulting in the failure of Valve 1-HCV-0607 when called upon.

The team determined that the failure of the licensee to adequately implement operating experience into maintenance procedures was a performance deficiency. The performance deficiency had plant impact because it caused a loss of one train of a safety function (residual heat removal). The finding was determined to be more than minor because it is associated with the equipment performance attribute for assuring availability and reliability and affected the initiating events cornerstone to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. Using Appendix G, "Shutdown Operations Significance Determination Process," Checklist 2, of Manual Chapter 0609, "Significance Determination Process," the significance of the finding was determined to be Green, very low safety significance, because one train of residual heat removal was operable and at least two steam generators were available for decay heat removal.
Inspection Report# : 2007007 *(pdf)*

Significance: G Jun 22, 2007
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate restoration following valve maintenance
The inspectors reviewed a self-revealing finding for the inadequate restoration from valve maintenance which resulted in a manual turbine runback. On November 30, 2006, while Unit 1 was at 100 percent power, the 2A Feedwater Heater Normal Level Control Valve 1-LV-2509 failed closed. Operators initially ran the turbine back to 1100 MWe, but eventually reduced load to 700 MWe due to main feedwater pump suction oscillations. The root cause of the event was determined to be inadequate maintenance work practices upon restoration from maintenance on the level control valve.

The finding is more than minor because it is related to the human performance attribute and affected the initiating event cornerstone objective to limit the likelihood of those events that upset plant stability during power operations. The finding was determined to have a very low risk significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available.
Inspection Report# : 2007003 *(pdf)*

Mitigating Systems

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 22, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Evaluate Radiological Hazards
The inspectors reviewed a self-revealing noncited violation of 10CFR20.1501(a) for the failure to adequately evaluate radiological conditions in a work area. While performing maintenance on proximity switch cable sleeves on an assembly from the spent fuel pool up-ender, one worker was exposed to concentrations of airborne radioactivity higher than anticipated, resulting in the internal contamination and unplanned dose to the individual. A committed effective dose equivalent of 27 millirem was assigned to the individual. Additionally, after the initial alarm of the airborne activity monitor, a contamination survey of the work area was not performed to evaluate conditions prior to resuming work.

The finding is more than minor because it is associated with the occupational radiation safety attribute of program and process and affected the cornerstone objective because it involves unplanned and unintended dose to a worker. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined that the finding was of very low safety significance because: (1) it was not an ALARA finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. In addition, this finding has a cross-cutting aspect in the area of human performance associated with work control because the licensee failed to appropriately coordinate work activities by incorporating actions to keep personnel apprised of conditions at the job site which impacted radiological safety (H.3(b)).
Inspection Report# : 2007003 *(pdf)*

Significance: G Jun 22, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide a Detailed Work Plan
The inspectors identified a noncited violation of Technical Specification 5.4.1.a for the failure to develop an adequately detailed work plan for the maintenance of proximity switch sleeves which resulted in the internal contamination of one individual. Specifically, the licensee did not provide adequately detailed work instructions in the work order to allow the ALARA planners to develop an adequate Radiation Work Permit and radiological controls for the maintenance evolution.

The finding is more than minor because it is associated with the occupational radiation safety attribute of program and process and affected the cornerstone objective because it involves unplanned and unintended dose to a worker. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined that the finding was of very low safety significance because: (1) it was an ALARA work planning finding, (2) the 3-year rolling average collective dose is less than 135 person-rem/unit. In addition, this finding has a cross-cutting aspect in the area of human performance associated with work control because the licensee failed to appropriately plan work activities by

incorporating job site conditions which may impact radiological safety (H.3(a)).
Inspection Report# : 2007003 *(pdf)*

Public Radiation Safety

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.

Miscellaneous

Significance: N/A Sep 25, 2007
Identified By: NRC
Item Type: FIN Finding
Problem Identification and Resolution Team Inspection Results
The team reviewed approximately 189 risk significant issues, apparent and root cause analyses, and other related documents, to assess the effectiveness of the licensee's problem identification and resolution processes and systems. The team concluded that the licensee's management systems were effective, although seven examples occurred during the assessment period of failure to implement appropriate and timely corrective actions. Overall, corrective actions were appropriate to the circumstances. The licensee implemented an effective program for evaluating operational experience, although the team identified one example where ineffective use of operating experience led to a valve becoming inoperable.

The team concluded that the licensee maintained an overall safety-conscious work environment. However, based on interviews, concerns with trust in management and the ability to raise issues above direct supervision existed within the security force. A majority of security officers interviewed stated that although they would issue smart forms or inform their direct supervision with concerns, they would be hesitant to elevate issues. Individuals interviewed (outside of the security organization) were comfortable raising safety issues and elevating them to appropriate levels of management as necessary. The team concluded that the employee concerns program (SafeTeam) effectively resolved safety issues raised by plant and contract personnel. Plant personnel interviewed generally considered the employee concerns program a viable option to pursue safety issues. However, the majority of security force personnel interviewed lacked confidence in the SafeTeam's ability to resolve issues or maintain confidentiality.

The licensee overall performed effective and critical self-assessments. However, a licensee contract employee safety culture survey performed during this assessment period failed to identify the above concerns within the security force. Licensee management stated that a new safety culture survey was planned (with emphasis on ensuring a representative sample within the security force) for the fall of 2007.
Inspection Report# : 2007007 *(pdf)*

Last modified : February 04, 2008

Comanche Peak 1
1Q/2008 Plant Inspection Findings

Initiating Events

Significance: G Sep 25, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to appropriately secure adjustment set screw resulted in RHR valve failure.
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for failure to provide work instructions or procedures appropriate to the circumstances. Specifically, Work Order 3-05-333517-01 and Procedure INC-2085, "Rework and Replacement of I&C [Instrumentation and Control] Equipment," Revision, 3, directed the replacement of the positioner for Valve 1-HCV-0607, but did not contain appropriate instructions for applying loctite or other measures to ensure the adjustment screw remained securely in place, despite operational experience in 1999, that indicated this action was necessary. As a result Valve 1-HCV-0607 failed to operate when called upon.

When operators attempted to place the Train B residual heat removal system in service, Valve 1-HCV-0607, the Train B residual heat removal heat exchanger outlet valve would not open because the Bailey Type AV1 positioner had malfunctioned. The pilot valve stem adjustment screw (that had been replaced during a recent outage) became loose and repositioned such that it prevented the valve from stroking open. The licensee had received and reviewed 1999 operating experience information that a loose pilot valve adjustment screw was determined to be the main cause of a Bailey positioner failure that led to a reactor trip at another facility. However, the team determined that the licensee had not taken appropriate action to prevent such failures at Comanche Peak Steam Electric Station, resulting in the failure of Valve 1-HCV-0607 when called upon.

The team determined that the failure of the licensee to adequately implement operating experience into maintenance procedures was a performance deficiency. The performance deficiency had plant impact because it caused a loss of one train of a safety function (residual heat removal). The finding was determined to be more than minor because it is associated with the equipment performance attribute for assuring availability and reliability and affected the initiating events cornerstone to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. Using Appendix G, "Shutdown Operations Significance Determination Process," Checklist 2, of Manual Chapter 0609, "Significance Determination Process," the significance of the finding was determined to be Green, very low safety significance, because one train of residual heat removal was operable and at least two steam generators were available for decay heat removal.
Inspection Report# : 2007007 *(pdf)*

Significance: G Jun 22, 2007
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate restoration following valve maintenance
The inspectors reviewed a self-revealing finding for the inadequate restoration from valve maintenance which resulted in a manual turbine runback. On November 30, 2006, while Unit 1 was at 100 percent power, the 2A Feedwater Heater Normal Level Control Valve 1-LV-2509 failed closed. Operators initially ran the turbine back to 1100 MWe, but eventually reduced load to 700 MWe due to main feedwater pump suction oscillations. The root cause of the event was determined to be inadequate maintenance work practices upon restoration from maintenance on the level control valve.

The finding is more than minor because it is related to the human performance attribute and affected the initiating event cornerstone objective to limit the likelihood of those events that upset plant stability during power operations. The finding was determined to have a very low risk significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available.
Inspection Report# : 2007003 *(pdf)*

Mitigating Systems

Significance: W Jan 24, 2008
Identified By: Self-Revealing
Item Type: VIO Violation
Painting Activities Result in Inoperability of Emergency Diesel Generator
A violation of Unit 1 Technical Specification 3.8.1, "AC Sources - Operating," was identified for the licensee's failure to satisfy Limiting Condition for Operation 3.8.1 in that painting activities conducted on the Unit 1 Train B EDG 1-02 resulted in paint being deposited and left in a location that caused the EDG to become inoperable. As a result, EDG 1-02 failed to start on demand during the subsequent monthly surveillance test. Following the discovery of the condition, the required actions were satisfied; however, the time period between the occurrence of the condition and the discovery of the condition exceeded the allowed outage time. This issue was entered into the licensee's corrective action program as SMF-2007-03253.

The finding was greater than minor because it was associated with the human performance attribute of the mitigating systems cornerstone, and it affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The Phase 1 Worksheets in Manual Chapter 0609, "Significance Determination Process," were used to conclude that a Phase 2 analysis was required because the performance deficiency affected the emergency power supply system that is a support system for both mitigating and containment barrier systems. Based on the results of the Phase 2 analysis, the finding was determined to have low to moderate safety significance (White). The senior reactor analyst determined that a more detailed Phase 3 analysis was needed to fully assess the safety significance. Based on the results of the Phase 3 analysis, the finding was determined to have low to moderate safety significance (White). The Phase 1, 2, and 3 Significance Determination Process analyses associated with this finding, including assumptions and limiting core damage sequences, is included as Attachment 3 to this report. The cause of this finding was determined to have a crosscutting aspect in the area of human performance associated with work practices in that the licensee failed to provide adequate supervisory and management oversight of work activities, including contractors, such that nuclear safety is supported [H.4(c)]. Specifically, the actions planned and taken to assess and control the operational impact of the painting activities on the functionality of the emergency diesel generator were not reflective of adequate supervisory and management oversight of the activities.
Inspection Report# : 2007008 *(pdf)*

Significance: G Jan 24, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Alarm Response Procedure for EDG Failure to Start
The inspectors identified a noncited violation of Unit 1 Technical Specification 5.4.1.a, "Procedures," for an inadequate alarm response procedure. The inspectors determined that Procedure ALM-1302A, "Diesel Generator 1-02 Panel," Revision 5, was inadequate in that it was ambiguous and did not cause the responders to verify that the fuel racks were free as part of the response actions to investigate the cause of the unit failing to start. Consequently, the licensee failed to identify that the Unit 1 Train B Emergency Diesel Generator 1-02 fuel racks were not free to move, which led to an extended period of inoperability and a significant delay in diagnosing the cause of the emergency diesel generator failure to start. This issue was entered into the licensee's corrective action program as SMF-2007-03426.

The finding was determined to be more than minor because it was associated with the procedure quality attribute of the mitigating systems cornerstone, and it affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding was determined to have very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of safety function, did not represent an actual loss of a single train for greater than its Technical Specification allowed outage time, did not represent a loss of a non-Technical Specification Train of equipment for greater than 24 hours, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

Inspection Report# : 2007008 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G Oct 25, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Evaluate Radiological Conditions
The inspector reviewed a self-revealing non-cited violation of 10 CFR 20.1501(a) for failure to conduct a radiological survey. Specifically, on April 16, 2007, a worker's electronic dosimeter alarmed when the individual attempted to move a bag containing a small vacuum cleaner from a posted contaminated and radiation area. The bag of materials had not been surveyed for radiation levels and therefore had not been labeled to indicate the potential hazard. The bag was subsequently surveyed and found to have radiation levels of 600 millirem per hour on contact and 150 millirem per hour at 30 centimeters from the surface. Corrective actions include counseling of personnel, evaluation of possible organizational changes, and generation of a training request to include this event in future training.

The failure to conduct a radiological survey is a performance deficiency. This finding is greater than minor because it is associated with the Occupational Radiation Safety Program and Process attribute and affected the cornerstone objective, which is to ensure adequate protection of worker health and safety from exposure to radiation. The failure to perform the radiation survey led to a worker receiving unintended and additional exposure. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that the finding was of very low safety significance because it did not involve: (1) as low as is reasonably achievable planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. In addition, this finding has a crosscutting component associated with human performance and work coordination because the licensee failed to keep workers apprised of work status and plant conditions that may affect work activities prior to removing contaminated items from the reactor containment building. (H.3.(b3)).

Inspection Report# : 2007005 *(pdf)*

Significance: G Jun 22, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Evaluate Radiological Hazards
The inspectors reviewed a self-revealing noncited violation of 10CFR20.1501(a) for the failure to adequately evaluate radiological conditions in a work area. While performing maintenance on proximity switch cable sleeves on an assembly from the spent fuel pool up-ender, one worker was exposed to concentrations of airborne radioactivity higher than anticipated, resulting in the internal contamination and unplanned dose to the individual. A committed effective dose equivalent of 27 millirem was assigned to the individual. Additionally, after the initial alarm of the airborne activity monitor, a contamination survey of the work area was not performed to evaluate conditions prior to resuming work.

The finding is more than minor because it is associated with the occupational radiation safety attribute of program and process and affected the cornerstone objective because it involves unplanned and unintended dose to a worker. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined that the finding was of very low safety significance because: (1) it was not an ALARA finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. In addition, this finding has a cross-cutting aspect in the area of human performance associated with work control because the licensee failed to appropriately coordinate work activities by incorporating actions to keep personnel apprised of conditions at the job site which impacted radiological safety (H.3(b)).

Inspection Report# : 2007003 *(pdf)*

Significance: G Jun 22, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide a Detailed Work Plan
The inspectors identified a noncited violation of Technical Specification 5.4.1.a for the failure to develop an adequately detailed work plan for the maintenance of proximity switch sleeves which resulted in the internal contamination of one individual. Specifically, the licensee did not provide adequately detailed work instructions in the work order to allow the ALARA planners to develop an adequate Radiation Work Permit and radiological controls for the maintenance evolution.

The finding is more than minor because it is associated with the occupational radiation safety attribute of program and process and affected the cornerstone objective because it involves unplanned and unintended dose to a worker. Using the Occupational Radiation Safety Significance Determination Process, the inspectors determined that the finding was of very low safety significance because: (1) it was an ALARA work planning finding, (2) the 3-year rolling average collective dose is less than 135 person-rem/unit. In addition, this finding has a cross-cutting aspect in the area of human performance associated with work control because the licensee failed to appropriately plan work activities by incorporating job site conditions which may impact radiological safety (H.3(a)).
Inspection Report# : 2007003 *(pdf)*

Public Radiation Safety

Significance: G Feb 28, 2008
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
"Failure to ship radioactive material corrrectly"
The team reviewed a self-revealing, noncited violation of 10 CFR 71.5, which occurred when the licensee failed to ship radioactive material correctly. A radioactive shipment classified as an “excepted package-limited quantity” exceeded the external dose rate limit of 0.5 millirem per hour on the surface of the package. The package recipient identified dose rates of 0.9 millirem per hour on the exterior surface of the package and notified the licensee of the problem. The licensee revised its procedure to correct for this problem by limiting the inner package dose rate to 0.3 millirem per hour, thus reducing the risk for the external dose rate to be more than 0.5 millirem per hour. The finding was placed into the licensee’s corrective action program as Smart Form SMF-2006-2403.

The finding is greater than minor because it was associated with a Public Radiation Safety cornerstone attribute (transportation program) and it affected the associated cornerstone objective because the failure to correctly ship radioactive material decreases the licensee’s assurance that the public will not receive unnecessary dose. However, this finding cannot be evaluated by the Public Radiation Safety Significance Determination Process because it did not involve radioactive shipments classified as Schedule 5 through 11, as described in NUREG-1660, and it did not fit traditional enforcement. Therefore, the finding was reviewed by NRC management using Inspection Manual Chapter 0609, Appendix M, and determined to be of very low safety significance because the package was not accessible by the public. Additionally, this finding has a cross cutting aspect in the area of human performance, work practices component, because the worker preparing the shipment did not use self checking as an error prevention technique to ensure that the package did not exceed the dose rate limit (H4.a).
Inspection Report# : 2008007 *(pdf)*

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.

Miscellaneous

Significance: N/A Sep 25, 2007
Identified By: NRC
Item Type: FIN Finding
Problem Identification and Resolution Team Inspection Results
The team reviewed approximately 189 risk significant issues, apparent and root cause analyses, and other related documents, to assess the effectiveness of the licensee's problem identification and resolution processes and systems. The team concluded that the licensee's management systems were effective, although seven examples occurred during the assessment period of failure to implement appropriate and timely corrective actions. Overall, corrective actions were appropriate to the circumstances. The licensee implemented an effective program for evaluating operational experience, although the team identified one example where ineffective use of operating experience led to a valve becoming inoperable.

The team concluded that the licensee maintained an overall safety-conscious work environment. However, based on interviews, concerns with trust in management and the ability to raise issues above direct supervision existed within the security force. A majority of security officers interviewed stated that although they would issue smart forms or inform their direct supervision with concerns, they would be hesitant to elevate issues. Individuals interviewed (outside of the security organization) were comfortable raising safety issues and elevating them to appropriate levels of management as necessary. The team concluded that the employee concerns program (SafeTeam) effectively resolved safety issues raised by plant and contract personnel. Plant personnel interviewed generally considered the employee concerns program a viable option to pursue safety issues. However, the majority of security force personnel interviewed lacked confidence in the SafeTeam's ability to resolve issues or maintain confidentiality.

The licensee overall performed effective and critical self-assessments. However, a licensee contract employee safety culture survey performed during this assessment period failed to identify the above concerns within the security force. Licensee management stated that a new safety culture survey was planned (with emphasis on ensuring a representative sample within the security force) for the fall of 2007.
Inspection Report# : 2007007 *(pdf)*

Last modified : June 05, 2008

Comanche Peak 1
2Q/2008 Plant Inspection Findings

Initiating Events

Significance: G Sep 25, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to appropriately secure adjustment set screw resulted in RHR valve failure.
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for failure to provide work instructions or procedures appropriate to the circumstances. Specifically, Work Order 3-05-333517-01 and Procedure INC-2085, "Rework and Replacement of I&C [Instrumentation and Control] Equipment," Revision, 3, directed the replacement of the positioner for Valve 1-HCV-0607, but did not contain appropriate instructions for applying loctite or other measures to ensure the adjustment screw remained securely in place, despite operational experience in 1999, that indicated this action was necessary. As a result Valve 1-HCV-0607 failed to operate when called upon.

When operators attempted to place the Train B residual heat removal system in service, Valve 1-HCV-0607, the Train B residual heat removal heat exchanger outlet valve would not open because the Bailey Type AV1 positioner had malfunctioned. The pilot valve stem adjustment screw (that had been replaced during a recent outage) became loose and repositioned such that it prevented the valve from stroking open. The licensee had received and reviewed 1999 operating experience information that a loose pilot valve adjustment screw was determined to be the main cause of a Bailey positioner failure that led to a reactor trip at another facility. However, the team determined that the licensee had not taken appropriate action to prevent such failures at Comanche Peak Steam Electric Station, resulting in the failure of Valve 1-HCV-0607 when called upon.

The team determined that the failure of the licensee to adequately implement operating experience into maintenance procedures was a performance deficiency. The performance deficiency had plant impact because it caused a loss of one train of a safety function (residual heat removal). The finding was determined to be more than minor because it is associated with the equipment performance attribute for assuring availability and reliability and affected the initiating events cornerstone to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. Using Appendix G, "Shutdown Operations Significance Determination Process," Checklist 2, of Manual Chapter 0609, "Significance Determination Process," the significance of the finding was determined to be Green, very low safety significance, because one train of residual heat removal was operable and at least two steam generators were available for decay heat removal.
Inspection Report# : 2007007 *(pdf)*

Mitigating Systems

Significance: W Jun 06, 2008
Identified By: Self-Revealing
Item Type: VIO Violation
Painting Activities Result in Inoperability of Emergency Diesel Generator
The U.S. Nuclear Regulatory Commission performed this supplemental inspection to assess the licensee's evaluation associated with a White finding (failure of Unit 1 Train B Emergency Diesel Generator 1-02) in the first quarter of 2008. The primary reason for this finding being characterized as White was based on the results of a Phase 3 analysis performed by a region-based senior reactor analyst. The failure of Emergency Diesel Generator 1-02 was attributed to paint being deposited in a location that caused the EDG to fail to start on demand.
Inspection Report# : 2008009 *(pdf)*

Significance: G May 22, 2008

Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Fire Suppression Systems
A noncited violation of Unit 1, License Condition 2.G, “Fire Protection,” was identified for the fire suppression systems in Fire Zones SE16 and SE18 (remote safety-related panels/Train B switchgear rooms) not being installed in accordance with the approved fire protection program. The fire suppression systems in Fire Zones SE16 and SE18 are manually actuated dry pipe deluge (pre-action) systems with closed sprinkler heads. The actual configuration did not provide protection in the areas containing one train of safe shutdown cables enclosed in 1-hour fire barriers. The team determined that the fire suppression systems in Fire Zones SE16 and SE18 were not installed in accordance with the configurations in Calculation 0210-63-0064, “Partial Sprinkler Coverage Evaluation.” The configurations in this calculation were approved by the NRC as the basis for allowing suppression systems with less than full area coverage. The configuration also did not meet the National Fire Protection Association codes. The licensee entered this finding into its corrective action program under Smart Form SMF-2008-000324-00.

Failure to ensure the installed fire suppression systems met the requirements of the approved fire protection program was a performance deficiency. This finding was more than minor because it is associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone and could affect the availability, reliability, and capability of systems that respond to fire events to prevent undesirable consequences. The significance of this finding was assessed using Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process.” In completing the Fire Protection Significance Determination Process, Phase 1 and 2 worksheets, it was determined that no potential ignition source could potentially have a direct impact on the cable raceways protected by fire barriers or their supports and that the largest potential ignition sources in the fire zones could not form a hot gas layer sufficient to impact the protected cable raceways or their supports. The evaluation indicated that the finding had a very low safety significance (Green) during the Phase 2 significance determination process. (Section 1R05.4)

Inspection Report# : 2008006 *(pdf)*

Significance: G May 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Post-Fire Safe Shutdown Procedures
A noncited violation of Technical Specification 5.4.1.d was identified concerning the failure to maintain adequate written procedures covering fire protection program implementation. Specifically, procedures for operation of Valves 1-8000A and 1-8000B (power-operated relief valve block valves) and Valves 1-8701A and 1-8702B (residual heat removal loop hot-leg recirculation valves) had local manual actions that might not be completed successfully because of potential fire damage. Procedures ABN-804A, “Response to a Fire in the Safeguards Building,” Revision 5, and ABN 806A, “Response to a Fire in the Electrical and Control Building,” Revision 5, directed operators to open the valves from their electrical power supplies because of potential fire damage to control circuits between the main control room and the electrical breakers. Plant operators were instructed to depress a breaker contactor to stroke the valve open. After the operator depresses the contactor, control power is required to hold the contactor closed while the valve strokes. The team identified that potential fire damage to control circuits between the main control room and the electrical breakers could cause a control power fuse to fail, preventing the valve from stroking. The licensee has entered this issue into their corrective action program as Smart Form SMF 2008-000311-00.

Failure to provide adequate procedures for the implementation of the fire protection program was a performance deficiency. This finding was more than minor because it is associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone and could affect the availability, reliability, and capability of systems that respond to fire events to prevent undesirable consequences. The significance of this finding was assessed using Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process.” The evaluation determined that the procedural deficiency only affected valves required to reach and maintain cold shutdown conditions; therefore, the finding screened as having very low safety significance (Green).

Inspection Report# : 2008006 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G Oct 25, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Evaluate Radiological Conditions
The inspector reviewed a self-revealing non-cited violation of 10 CFR 20.1501(a) for failure to conduct a radiological survey. Specifically, on April 16, 2007, a worker's electronic dosimeter alarmed when the individual attempted to move a bag containing a small vacuum cleaner from a posted contaminated and radiation area. The bag of materials had not been surveyed for radiation levels and therefore had not been labeled to indicate the potential hazard. The bag was subsequently surveyed and found to have radiation levels of 600 millirem per hour on contact and 150 millirem per hour at 30 centimeters from the surface. Corrective actions include counseling of personnel, evaluation of possible organizational changes, and generation of a training request to include this event in future training.

The failure to conduct a radiological survey is a performance deficiency. This finding is greater than minor because it is associated with the Occupational Radiation Safety Program and Process attribute and affected the cornerstone objective, which is to ensure adequate protection of worker health and safety from exposure to radiation. The failure to perform the radiation survey led to a worker receiving unintended and additional exposure. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that the finding was of very low safety significance because it did not involve: (1) as low as is reasonably achievable planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. In addition, this finding has a crosscutting component associated with human performance and work coordination because the licensee failed to keep workers apprised of work status and plant conditions that may affect work activities prior to removing contaminated items from the reactor containment building. (H.3.(b3)).

Inspection Report# : 2007005 *(pdf)*

Public Radiation Safety

Significance: G Feb 28, 2008
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
"Failure to ship radioactive material corrrectly"
The team reviewed a self-revealing, noncited violation of 10 CFR 71.5, which occurred when the licensee failed to ship radioactive material correctly. A radioactive shipment classified as an "excepted package-limited quantity" exceeded the external dose rate limit of 0.5 millirem per hour on the surface of the package. The package recipient identified dose rates of 0.9 millirem per hour on the exterior surface of the package and notified the licensee of the problem. The licensee revised its procedure to correct for this problem by limiting the inner package dose rate to 0.3 millirem per hour, thus reducing the risk for the external dose rate to be more than 0.5 millirem per hour. The finding was placed into the licensee's corrective action program as Smart Form SMF-2006-2403.

The finding is greater than minor because it was associated with a Public Radiation Safety cornerstone attribute (transportation program) and it affected the associated cornerstone objective because the failure to correctly ship radioactive material decreases the licensee's assurance that the public will not receive unnecessary dose. However, this finding cannot be evaluated by the Public Radiation Safety Significance Determination Process because it did not involve radioactive shipments classified as Schedule 5 through 11, as described in NUREG-1660, and it did not fit traditional enforcement. Therefore, the finding was reviewed by NRC management using Inspection Manual Chapter

0609, Appendix M, and determined to be of very low safety significance because the package was not accessible by the public. Additionally, this finding has a cross cutting aspect in the area of human performance, work practices component, because the worker preparing the shipment did not use self checking as an error prevention technique to ensure that the package did not exceed the dose rate limit (H4.a).
Inspection Report# : 2008007 *(pdf)*

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.

Miscellaneous

Significance: N/A Sep 25, 2007
Identified By: NRC
Item Type: FIN Finding
Problem Identification and Resolution Team Inspection Results
The team reviewed approximately 189 risk significant issues, apparent and root cause analyses, and other related documents, to assess the effectiveness of the licensee's problem identification and resolution processes and systems. The team concluded that the licensee's management systems were effective, although seven examples occurred during the assessment period of failure to implement appropriate and timely corrective actions. Overall, corrective actions were appropriate to the circumstances. The licensee implemented an effective program for evaluating operational experience, although the team identified one example where ineffective use of operating experience led to a valve becoming inoperable.

The team concluded that the licensee maintained an overall safety-conscious work environment. However, based on interviews, concerns with trust in management and the ability to raise issues above direct supervision existed within the security force. A majority of security officers interviewed stated that although they would issue smart forms or inform their direct supervision with concerns, they would be hesitant to elevate issues. Individuals interviewed (outside of the security organization) were comfortable raising safety issues and elevating them to appropriate levels of management as necessary. The team concluded that the employee concerns program (SafeTeam) effectively resolved safety issues raised by plant and contract personnel. Plant personnel interviewed generally considered the employee concerns program a viable option to pursue safety issues. However, the majority of security force personnel interviewed lacked confidence in the SafeTeam's ability to resolve issues or maintain confidentiality.

The licensee overall performed effective and critical self-assessments. However, a licensee contract employee safety culture survey performed during this assessment period failed to identify the above concerns within the security force. Licensee management stated that a new safety culture survey was planned (with emphasis on ensuring a representative sample within the security force) for the fall of 2007.
Inspection Report# : 2007007 *(pdf)*

Last modified : August 29, 2008

Comanche Peak 1
3Q/2008 Plant Inspection Findings

Initiating Events

Significance: G Sep 21, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
"Failure to Control Transient Combustibles"
The inspectors identified a noncited violation of Technical Specification 5.4.1.d for the licensee's failure to obtain an approved transient combustible permit before introducing transient combustibles into plant areas. As a result, the licensee placed undocumented and unanalyzed transient combustibles in the plant without compensatory measures on five different occasions. The licensee entered the finding into their corrective action program for resolution.

This finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone, and it directly affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," Phase 1 worksheet, the finding was determined to have very low safety significance because the condition represented a low degradation of fire prevention and administrative controls and the amount of combustibles was within the combustible loading calculations. The cause of the finding was related to the Human Performance crosscutting component of Work Practices, in that, the licensee failed to effectively communicate expectations, and that personnel failed to follow procedures.
Inspection Report# : 2008004 *(pdf)*

Mitigating Systems

Significance: G Sep 21, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
"Failure to Ensure Roll-up Fire Doors Complied With Fire Code"
The inspectors identified a noncited violation of License Condition 2.G because the licensee failed to ensure that two fire-rated roll up doors complied with the mounting requirements in National Fire Protection Association (NFPA) 80 1977. Specifically, during original construction, the licensee used bolts with a diameter less than the required 3/8-inch. The licensee entered this finding into their corrective action program for resolution as Smartform SMF 2008 001637.

Failure to meet the mounting requirements of NFPA 80 1977 for fire-rated roll up doors is a performance deficiency. The inspectors determined this deficiency was more than minor because it was similar to the more than minor description in Manual Chapter 0612, Appendix E, Example 3.g. This finding affected the mitigating systems cornerstone. This fire confinement finding was assigned a Moderate A degradation rating because the fire-rated roll up door had improperly installed fire door hardware. Using NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," Phase 1, Step 1.3.2, Question 5, the exposed fire area contained no potential damage targets closer than 20 feet (i.e., passive barrier) to the exposing fire area that would result in a demand for safe shutdown and the fire barrier would remain functional for at least 20 minutes. Therefore, the degraded fire-rated roll up doors had very low risk significance.

Inspection Report# : 2008004 *(pdf)*

Significance: W Jun 06, 2008
Identified By: Self-Revealing
Item Type: VIO Violation
Painting Activities Result in Inoperability of Emergency Diesel Generator
The U.S. Nuclear Regulatory Commission performed this supplemental inspection to assess the licensee's evaluation associated with a White finding (failure of Unit 1 Train B Emergency Diesel Generator 1-02) in the first quarter of 2008. The primary reason for this finding being characterized as White was based on the results of a Phase 3 analysis performed by a region-based senior reactor analyst. The failure of Emergency Diesel Generator 1-02 was attributed to paint being deposited in a location that caused the EDG to fail to start on demand.
Inspection Report# : 2008009 *(pdf)*

Significance: G May 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Fire Suppression Systems
A noncited violation of Unit 1, License Condition 2.G, “Fire Protection,” was identified for the fire suppression systems in Fire Zones SE16 and SE18 (remote safety-related panels/Train B switchgear rooms) not being installed in accordance with the approved fire protection program. The fire suppression systems in Fire Zones SE16 and SE18 are manually actuated dry pipe deluge (pre-action) systems with closed sprinkler heads. The actual configuration did not provide protection in the areas containing one train of safe shutdown cables enclosed in 1-hour fire barriers. The team determined that the fire suppression systems in Fire Zones SE16 and SE18 were not installed in accordance with the configurations in Calculation 0210-63-0064, “Partial Sprinkler Coverage Evaluation.” The configurations in this calculation were approved by the NRC as the basis for allowing suppression systems with less than full area coverage. The configuration also did not meet the National Fire Protection Association codes. The licensee entered this finding into its corrective action program under Smart Form SMF-2008-000324-00.

Failure to ensure the installed fire suppression systems met the requirements of the approved fire protection program was a performance deficiency. This finding was more than minor because it is associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone and could affect the availability, reliability, and capability of systems that respond to fire events to prevent undesirable consequences. The significance of this finding was assessed using Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process.” In completing the Fire Protection Significance Determination Process, Phase 1 and 2 worksheets, it was determined that no potential ignition source could potentially have a direct impact on the cable raceways protected by fire barriers or their supports and that the largest potential ignition sources in the fire zones could not form a hot gas layer sufficient to impact the protected cable raceways or their supports. The evaluation indicated that the finding had a very low safety significance (Green) during the Phase 2 significance determination process. (Section 1R05.4)

Inspection Report# : 2008006 *(pdf)*

Significance: G May 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Post-Fire Safe Shutdown Procedures
A noncited violation of Technical Specification 5.4.1.d was identified concerning the failure to maintain adequate written procedures covering fire protection program implementation. Specifically, procedures for operation of Valves 1-8000A and 1-8000B (power-operated relief valve block valves) and Valves 1-8701A and 1-8702B (residual heat removal loop hot-leg recirculation valves) had local manual actions that might not be completed successfully because of potential fire damage. Procedures ABN-804A, “Response to a Fire in the Safeguards Building,” Revision 5, and ABN 806A, “Response to a Fire in the Electrical and Control Building,” Revision 5, directed operators to open the valves from their electrical power supplies because of potential fire damage to control circuits between the main control room and the electrical breakers. Plant operators were instructed to depress a breaker contactor to stroke the valve open. After the operator depresses the contactor, control power is required to hold the contactor closed while the valve strokes. The team identified that potential fire damage to control circuits between the main control room and the electrical breakers could cause a control power fuse to fail, preventing the valve from stroking. The licensee has entered this issue into their corrective action program as Smart Form SMF 2008-000311-00.

Failure to provide adequate procedures for the implementation of the fire protection program was a performance deficiency. This finding was more than minor because it is associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone and could affect the availability, reliability, and capability of systems that respond to fire events to prevent undesirable consequences. The significance of this finding was assessed using Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process.” The evaluation determined that the procedural deficiency only affected valves required to reach and maintain cold shutdown conditions; therefore, the finding screened as having very low safety significance (Green).

Inspection Report# : 2008006 *(pdf)*

Barrier Integrity

Significance: G Sep 15, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
B.5.b. Phase 2 and 3 Mitigating Strategy
This finding, affecting the Barrier Integrity Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are

being withheld from public disclosure. This finding has no cross-cutting aspect. See inspection report 2008-008 for more details.
Inspection Report# : 2008008 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to barricade and conspicuously post a high radiation area
The inspector identified a noncited violation of Technical Specification 5.7.1 because a high radiation area was not barricaded and conspicuously posted. The inspector identified dose rates as high as 109 millirems per hour at 30 centimeters in the compactor area on the 810-foot elevation of the fuel building. The area was controlled and posted as a radiation area. As immediate corrective action, the licensee barricaded the area with rope and posted it as a high radiation area and documented the finding in the corrective action program.

The finding is greater than minor because, if left uncorrected, the finding could become a more significant safety concern. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined the finding to have very low safety significance because (1) it was not associated with ALARA planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. Additionally, the finding had a cross-cutting aspect in the area of human performance, work control component, because the licensee did not coordinate work activities by incorporating actions to address the need for work groups to communicate, coordinate, and cooperate with each other during activities in which interdepartmental coordination is necessary to assure human performance.

Inspection Report# : 2008003 *(pdf)*

Significance: G Oct 25, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Evaluate Radiological Conditions
The inspector reviewed a self-revealing non-cited violation of 10 CFR 20.1501(a) for failure to conduct a radiological survey. Specifically, on April 16, 2007, a worker's electronic dosimeter alarmed when the individual attempted to move a bag containing a small vacuum cleaner from a posted contaminated and radiation area. The bag of materials had not been surveyed for radiation levels and therefore had not been labeled to indicate the potential hazard. The bag was subsequently surveyed and found to have radiation levels of 600 millirem per hour on contact and 150 millirem per hour at 30 centimeters from the surface. Corrective actions include counseling of personnel, evaluation of possible organizational changes, and generation of a training request to include this event in future training.

The failure to conduct a radiological survey is a performance deficiency. This finding is greater than minor because it is associated with the Occupational Radiation Safety Program and Process attribute and affected the cornerstone objective, which is to ensure adequate protection of worker health and safety from exposure to radiation. The failure to perform the radiation survey led to a worker receiving unintended and additional exposure. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined that the finding was of very low safety significance because it did not involve: (1) as low as is reasonably achievable planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. In addition, this finding has a crosscutting component associated with human performance and work coordination because the licensee failed to keep workers apprised of work status and plant conditions that may affect work activities prior to removing contaminated items from the reactor containment building. (H.3.(b3)).

Inspection Report# : 2007005 *(pdf)*

Public Radiation Safety

Significance: G Feb 28, 2008
Identified By: Self-Revealing
Item Type: NCV NonCited Violation

"Failure to ship radioactive material corrrectly"
The team reviewed a self-revealing, noncited violation of 10 CFR 71.5, which occurred when the licensee failed to ship radioactive material correctly. A radioactive shipment classified as an “excepted package-limited quantity” exceeded the external dose rate limit of 0.5 millirem per hour on the surface of the package. The package recipient identified dose rates of 0.9 millirem per hour on the exterior surface of the package and notified the licensee of the problem. The licensee revised its procedure to correct for this problem by limiting the inner package dose rate to 0.3 millirem per hour, thus reducing the risk for the external dose rate to be more than 0.5 millirem per hour. The finding was placed into the licensee’s corrective action program as Smart Form SMF-2006-2403.

The finding is greater than minor because it was associated with a Public Radiation Safety cornerstone attribute (transportation program) and it affected the associated cornerstone objective because the failure to correctly ship radioactive material decreases the licensee’s assurance that the public will not receive unnecessary dose. However, this finding cannot be evaluated by the Public Radiation Safety Significance Determination Process because it did not involve radioactive shipments classified as Schedule 5 through 11, as described in NUREG-1660, and it did not fit traditional enforcement. Therefore, the finding was reviewed by NRC management using Inspection Manual Chapter 0609, Appendix M, and determined to be of very low safety significance because the package was not accessible by the public. Additionally, this finding has a cross cutting aspect in the area of human performance, work practices component, because the worker preparing the shipment did not use self checking as an error prevention technique to ensure that the package did not exceed the dose rate limit (H4.a).
Inspection Report# : 2008007 *(pdf)*

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.

Miscellaneous

Last modified : November 26, 2008

Comanche Peak 1
4Q/2008 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Evaluate Material Condition Following a Boric Acid Leak
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to follow procedures that required an evaluation and corrective actions in response to the effects of a borated water leak on primary coolant pressure boundary components. Corrective actions described as "Fix Now" were identified as boric acid deposits or anticipated accumulation of boric acid deposits which directly impact a carbon steel pressure boundary components or subcomponents and could result in increased corrosion rates. The inspectors identified that the inadequate evaluation and corrective actions resulted in the increased corrosion rate. The licensee entered the finding into their corrective action program as Smart Form SMF-2008-003194.
The finding was more than minor using NRC Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," Example 4.a, because the inadequate evaluation led to the reactor vessel nozzle being adversely affected, in that the corrosion degraded the material condition of the carbon steel portions. The finding was determined to have very low safety significance because assuming worst case degradation, the finding would not result in exceeding the Technical Specification limit for reactor coolant system leakage or affect other mitigation systems resulting in a total loss of their safety function. The cause of the finding was related to the Human Performance crosscutting component of Decision Making in that the licensee failed to use conservative assumptions for decision making when evaluating degraded and nonconforming conditions [H1.b]

Inspection Report# : 2008005 *(pdf)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Assess and Manage Risk Associated with Maintenance Activities
The inspectors identified three examples of a noncited violation of 10 CFR 50.65(a)(4) (Maintenance Rule) for the failure to adequately assess and manage the risk of maintenance activities during the outage. In two instances the licensee performed maintenance activities that initiated plant transients and increased the time at midloop without managing the risk. First, workers created a breach of the reactor coolant system boundary and loss of nitrogen cover gas pressure in the system. This caused the pressurizer level to rapidly increase approximately two feet. Second, the licensee removed high pressure seals for the flux thimble tubes creating a cold leg vent path during nozzle dam installation. This also caused spikes in level instrumentation and operators were required to stay in a midloop condition for an additional two hours. The third example involved emergency diesel generator synchronization to the 6.9 kV bus that was supporting the only running residual heat removal pump in a midloop condition with time to boil less than 10 minutes. The testing was originally schedule outside the midloop window. The licensee had started the activity but, after the inspectors raised concerns, the shift manager took actions to back out of the testing. After being properly assessed, the risk for this activity was classified as a red condition (the highest risk threshold), but the licensee was only in an orange condition. The licensee entered the finding into their corrective action program as Smart Forms SMF-2008-003143, SMF-2008-003172, SMF-2008-003196, and SMF-2008-003209.
The finding was more than minor because it was similar to non-minor Example 7.e from Manual Chapter 0612, Appendix E, "Examples of Minor Issues," in that, for the first two examples the activities required additional risk management actions and for the third example, the plant changed from a risk level of Orange to Red. Using Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," the finding had very low safety significance because the incremental conditional core damage probability deficit was less than 1x10-6. The cause of the finding was related to the Human Performance

crosscutting component of work control for the failure of the licensee to appropriately coordinate work activities [H3.b].

Inspection Report# : 2008005 *(pdf)*

Significance: G Sep 21, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
"Failure to Control Transient Combustibles"
The inspectors identified a noncited violation of Technical Specification 5.4.1.d for the licensee's failure to obtain an approved transient combustible permit before introducing transient combustibles into plant areas. As a result, the licensee placed undocumented and unanalyzed transient combustibles in the plant without compensatory measures on five different occasions. The licensee entered the finding into their corrective action program for resolution.

This finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone, and it directly affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," Phase 1 worksheet, the finding was determined to have very low safety significance because the condition represented a low degradation of fire prevention and administrative controls and the amount of combustibles was within the combustible loading calculations. The cause of the finding was related to the Human Performance crosscutting component of Work Practices, in that, the licensee failed to effectively communicate expectations, and that personnel failed to follow procedures.
Inspection Report# : 2008004 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Non-Seismic Scaffolding Installed Over Service Water Equipment
The inspectors identified a noncited violation of Technical Specification 5.4.1.a (Procedures), for the licensee's failure to erect scaffolding over safety-related equipment with adequate seismic supports. As a result, the scaffolding would likely fail during a seismic event and impact the service water system. Contract personnel assembled the scaffolding and were under perceived time pressure to finish the work, which was their last task before departing the site. A licensee supervisor inspected the scaffolding and failed to identify the deficiency. The licensee entered the finding into their corrective action program as Smart Form SMF-2008-003683.

The finding was more than minor because it was similar to non-minor Example 4.a from Manual Chapter 0612, Appendix E, "Examples of Minor Issues," in that the scaffolding could adversely affect safety related equipment during a seismic event. Using the NRC Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was a qualification deficiency confirmed not to result in loss of operability or functionality. This finding had a Human Performance crosscutting aspect (work practices component) because the licensee failed to ensure adequate supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported [H4.c].

Inspection Report# : 2008005 *(pdf)*

Significance: G Dec 31, 2008
Identified By: NRC

Item Type: NCV NonCited Violation
Inadequate Instructions Leads to Failure to Identify Fibrous Material in Containment
The inspectors identified a noncited violation of Technical Specification 5.4.1a (Procedures) for the failure to have adequate instructions in place for containment walkdowns looking for fibrous material. As a result, the licensee entered a mode where the containment sumps were required to be operable with unidentified fibrous material in the containment. The licensee had not identified the material during several walkdowns in response to NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors," and failed to identify several additional instances of fibrous material after inspectors initially identified some of the material. The licensee entered the finding into their corrective action program for resolution as Smart Form SMF-2008-003587.
The finding was more than minor because it was associated with the procedure quality attribute of the mitigating systems cornerstone, and it affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using NRC Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the finding had very low safety significance because it did not represent a loss of system safety function or cause inoperability of a system or train. The finding had a Human Performance crosscutting aspect (work control component) in that the work instructions and pre job brief failed to effectively incorporate job site conditions into the work instructions and consider that both sides of the seals required inspection [H3.a].

Inspection Report# : 2008005 *(pdf)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Initiate Corrective Actions for the Malfunction of a Reactor Trip Bypass Breaker
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedures to enter a malfunction of a reactor trip bypass breaker into the corrective action program. The breaker tripped slower than permitted during response time testing and was inoperable. Because the condition was not entered into the corrective action program, the licensee did not evaluate the condition or assess the extent of condition. The licensee entered the finding into their corrective action program as Smart Forms SMF-2008-003735 and SMF 2008 003767.
The finding was more than minor because, if left uncorrected, it would have led to a more safety significant concern. Specifically, because the cause of the failure would not have been fully evaluated and appropriate corrective actions may not be initiated. Once entered into the corrective action program, the licensee identified additional corrective measures. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Characterization and Screening of Findings," the finding had very low safety significance because the condition did not result the inoperability of the reactor trip breaker when it was 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 their corrective action program [P1.a].

Inspection Report# : 2008005 *(pdf)*

Significance: G Sep 21, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
"Failure to Ensure Roll-up Fire Doors Complied With Fire Code"
The inspectors identified a noncited violation of License Condition 2.G because the licensee failed to ensure that two fire-rated roll up doors complied with the mounting requirements in National Fire Protection Association (NFPA) 80 1977. Specifically, during original construction, the licensee used bolts with a diameter less than the required 3/8-inch. The licensee entered this finding into their corrective action program for resolution as Smartform SMF 2008 001637.

Failure to meet the mounting requirements of NFPA 80 1977 for fire-rated roll up doors is a performance deficiency. The inspectors determined this deficiency was more than minor because it was similar to the more than minor description in Manual Chapter 0612, Appendix E, Example 3.g. This finding affected the mitigating systems

cornerstone. This fire confinement finding was assigned a Moderate A degradation rating because the fire-rated roll up door had improperly installed fire door hardware. Using NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," Phase 1, Step 1.3.2, Question 5, the exposed fire area contained no potential damage targets closer than 20 feet (i.e., passive barrier) to the exposing fire area that would result in a demand for safe shutdown and the fire barrier would remain functional for at least 20 minutes. Therefore, the degraded fire-rated roll up doors had very low risk significance.

Inspection Report# : 2008004 *(pdf)*

Significance: W Jun 06, 2008
Identified By: Self-Revealing
Item Type: VIO Violation
Painting Activities Result in Inoperability of Emergency Diesel Generator
The U.S. Nuclear Regulatory Commission performed this supplemental inspection to assess the licensee's evaluation associated with a White finding (failure of Unit 1 Train B Emergency Diesel Generator 1-02) in the first quarter of 2008. The primary reason for this finding being characterized as White was based on the results of a Phase 3 analysis performed by a region-based senior reactor analyst. The failure of Emergency Diesel Generator 1-02 was attributed to paint being deposited in a location that caused the EDG to fail to start on demand.
Inspection Report# : 2008009 *(pdf)*

Significance: G May 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Fire Suppression Systems
A noncited violation of Unit 1, License Condition 2.G, "Fire Protection," was identified for the fire suppression systems in Fire Zones SE16 and SE18 (remote safety-related panels/Train B switchgear rooms) not being installed in accordance with the approved fire protection program. The fire suppression systems in Fire Zones SE16 and SE18 are manually actuated dry pipe deluge (pre-action) systems with closed sprinkler heads. The actual configuration did not provide protection in the areas containing one train of safe shutdown cables enclosed in 1-hour fire barriers. The team determined that the fire suppression systems in Fire Zones SE16 and SE18 were not installed in accordance with the configurations in Calculation 0210-63-0064, "Partial Sprinkler Coverage Evaluation." The configurations in this calculation were approved by the NRC as the basis for allowing suppression systems with less than full area coverage. The configuration also did not meet the National Fire Protection Association codes. The licensee entered this finding into its corrective action program under Smart Form SMF-2008-000324-00.

Failure to ensure the installed fire suppression systems met the requirements of the approved fire protection program was a performance deficiency. This finding was more than minor because it is associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone and could affect the availability, reliability, and capability of systems that respond to fire events to prevent undesirable consequences. The significance of this finding was assessed using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process." In completing the Fire Protection Significance Determination Process, Phase 1 and 2 worksheets, it was determined that no potential ignition source could potentially have a direct impact on the cable raceways protected by fire barriers or their supports and that the largest potential ignition sources in the fire zones could not form a hot gas layer sufficient to impact the protected cable raceways or their supports. The evaluation indicated that the finding had a very low safety significance (Green) during the Phase 2 significance determination process. (Section 1R05.4)

Inspection Report# : 2008006 *(pdf)*

Significance: G May 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Post-Fire Safe Shutdown Procedures

A noncited violation of Technical Specification 5.4.1.d was identified concerning the failure to maintain adequate written procedures covering fire protection program implementation. Specifically, procedures for operation of Valves 1-8000A and 1-8000B (power-operated relief valve block valves) and Valves 1-8701A and 1-8702B (residual heat removal loop hot-leg recirculation valves) had local manual actions that might not be completed successfully because of potential fire damage. Procedures ABN-804A, “Response to a Fire in the Safeguards Building,” Revision 5, and ABN 806A, “Response to a Fire in the Electrical and Control Building,” Revision 5, directed operators to open the valves from their electrical power supplies because of potential fire damage to control circuits between the main control room and the electrical breakers. Plant operators were instructed to depress a breaker contactor to stroke the valve open. After the operator depresses the contactor, control power is required to hold the contactor closed while the valve strokes. The team identified that potential fire damage to control circuits between the main control room and the electrical breakers could cause a control power fuse to fail, preventing the valve from stroking. The licensee has entered this issue into their corrective action program as Smart Form SMF 2008-000311-00.

Failure to provide adequate procedures for the implementation of the fire protection program was a performance deficiency. This finding was more than minor because it is associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone and could affect the availability, reliability, and capability of systems that respond to fire events to prevent undesirable consequences. The significance of this finding was assessed using Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process.” The evaluation determined that the procedural deficiency only affected valves required to reach and maintain cold shutdown conditions; therefore, the finding screened as having very low safety significance (Green).

Inspection Report# : 2008006 *(pdf)*

Barrier Integrity

Significance: G Sep 15, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
B.5.b. Phase 2 and 3 Mitigating Strategy
This finding, affecting the Barrier Integrity Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. This finding has no cross-cutting aspect. See inspection report 2008-008 for more details.
Inspection Report# : 2008008 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to barricade and conspicuously post a high radiation area
The inspector identified a noncited violation of Technical Specification 5.7.1 because a high radiation area was not barricaded and conspicuously posted. The inspector identified dose rates as high as 109 millirems per hour at 30 centimeters in the compactor area on the 810-foot elevation of the fuel building. The area was controlled and posted as

a radiation area. As immediate corrective action, the licensee barricaded the area with rope and posted it as a high radiation area and documented the finding in the corrective action program.

The finding is greater than minor because, if left uncorrected, the finding could become a more significant safety concern. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined the finding to have very low safety significance because (1) it was not associated with ALARA planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. Additionally, the finding had a cross-cutting aspect in the area of human performance, work control component, because the licensee did not coordinate work activities by incorporating actions to address the need for work groups to communicate, coordinate, and cooperate with each other during activities in which interdepartmental coordination is necessary to assure human performance.

Inspection Report# : 2008003 *(pdf)*

Public Radiation Safety

Significance: G Feb 28, 2008
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
"Failure to ship radioactive material corrrectly"
The team reviewed a self-revealing, noncited violation of 10 CFR 71.5, which occurred when the licensee failed to ship radioactive material correctly. A radioactive shipment classified as an “excepted package-limited quantity” exceeded the external dose rate limit of 0.5 millirem per hour on the surface of the package. The package recipient identified dose rates of 0.9 millirem per hour on the exterior surface of the package and notified the licensee of the problem. The licensee revised its procedure to correct for this problem by limiting the inner package dose rate to 0.3 millirem per hour, thus reducing the risk for the external dose rate to be more than 0.5 millirem per hour. The finding was placed into the licensee’s corrective action program as Smart Form SMF-2006-2403.

The finding is greater than minor because it was associated with a Public Radiation Safety cornerstone attribute (transportation program) and it affected the associated cornerstone objective because the failure to correctly ship radioactive material decreases the licensee’s assurance that the public will not receive unnecessary dose. However, this finding cannot be evaluated by the Public Radiation Safety Significance Determination Process because it did not involve radioactive shipments classified as Schedule 5 through 11, as described in NUREG-1660, and it did not fit traditional enforcement. Therefore, the finding was reviewed by NRC management using Inspection Manual Chapter 0609, Appendix M, and determined to be of very low safety significance because the package was not accessible by the public. Additionally, this finding has a cross cutting aspect in the area of human performance, work practices component, because the worker preparing the shipment did not use self checking as an error prevention technique to ensure that the package did not exceed the dose rate limit (H4.a).
Inspection Report# : 2008007 *(pdf)*

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.

Miscellaneous

Last modified : April 07, 2009

Comanche Peak 1
1Q/2009 Plant Inspection Findings

Initiating Events

Significance: G Mar 21, 2009
Identified By: NRC
Item Type: FIN Finding
Failure to Remove Debris from Rooftop Causes Potential Missle Hazard
The inspectors identified a finding for the failure to follow housekeeping guidance in Procedure STA 607, "Housekeeping Control," Revision 19. Specifically, the licensee failed to remove several pieces of thin scrap sheet steel approximately five feet long and one foot wide from the Unit 1 diesel generator building roof following maintenance. As a result, the material could have affected the offsite power supply to safety-related electrical busses if high winds carried it on to nearby transmission lines. The inspectors determined that the material was on the rooftop during periods of severe weather. The licensee entered the finding into their corrective action program for resolution as Smart Form SMF 2008 004000.

The finding was more than minor because it was associated with the initiating events cornerstone attribute of protection against external factors and affected the cornerstone objective, in that, it increased the likelihood of an event that would upset plant stability and challenge critical safety functions during shutdown as well as power operations. 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 contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The cause of this finding was related to the Human Performance crosscutting component of work control, in that, the licensee failed to appropriately coordinate work activities.

Inspection Report# : 2009002 *(pdf)*

Significance: G 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: G Dec 31, 2008

Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Evaluate Material Condition Following a Boric Acid Leak
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to follow procedures that required an evaluation and corrective actions in response to the effects of a borated water leak on primary coolant pressure boundary components. Corrective actions described as "Fix Now" were identified as boric acid deposits or anticipated accumulation of boric acid deposits which directly impact a carbon steel pressure boundary components or subcomponents and could result in increased corrosion rates. The inspectors identified that the inadequate evaluation and corrective actions resulted in the increased corrosion rate. The licensee entered the finding into their corrective action program as Smart Form SMF-2008-003194.
The finding was more than minor using NRC Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," Example 4.a, because the inadequate evaluation led to the reactor vessel nozzle being adversely affected, in that the corrosion degraded the material condition of the carbon steel portions. The finding was determined to have very low safety significance because assuming worst case degradation, the finding would not result in exceeding the Technical Specification limit for reactor coolant system leakage or affect other mitigation systems resulting in a total loss of their safety function. The cause of the finding was related to the Human Performance crosscutting component of Decision Making in that the licensee failed to use conservative assumptions for decision making when evaluating degraded and nonconforming conditions [H1.b]

Inspection Report# : 2008005 *(pdf)*

Significance:  Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Assess and Manage Risk Associated with Maintenance Activities
The inspectors identified three examples of a noncited violation of 10 CFR 50.65(a)(4) (Maintenance Rule) for the failure to adequately assess and manage the risk of maintenance activities during the outage. In two instances the licensee performed maintenance activities that initiated plant transients and increased the time at midloop without managing the risk. First, workers created a breach of the reactor coolant system boundary and loss of nitrogen cover gas pressure in the system. This caused the pressurizer level to rapidly increase approximately two feet. Second, the licensee removed high pressure seals for the flux thimble tubes creating a cold leg vent path during nozzle dam installation. This also caused spikes in level instrumentation and operators were required to stay in a midloop condition for an additional two hours. The third example involved emergency diesel generator synchronization to the 6.9 kV bus that was supporting the only running residual heat removal pump in a midloop condition with time to boil less than 10 minutes. The testing was originally schedule outside the midloop window. The licensee had started the activity but, after the inspectors raised concerns, the shift manager took actions to back out of the testing. After being properly assessed, the risk for this activity was classified as a red condition (the highest risk threshold), but the licensee was only in an orange condition. The licensee entered the finding into their corrective action program as Smart Forms SMF-2008-003143, SMF-2008-003172, SMF-2008-003196, and SMF-2008-003209.
The finding was more than minor because it was similar to non-minor Example 7.e from Manual Chapter 0612, Appendix E, "Examples of Minor Issues," in that, for the first two examples the activities required additional risk management actions and for the third example, the plant changed from a risk level of Orange to Red. Using Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," the finding had very low safety significance because the incremental conditional core damage probability deficit was less than 1x10-6. The cause of the finding was related to the Human Performance crosscutting component of work control for the failure of the licensee to appropriately coordinate work activities [H3.b].

Inspection Report# : 2008005 *(pdf)*

Significance:  Sep 21, 2008
Identified By: NRC
Item Type: NCV NonCited Violation

"Failure to Control Transient Combustibles"
The inspectors identified a noncited violation of Technical Specification 5.4.1.d for the licensee's failure to obtain an approved transient combustible permit before introducing transient combustibles into plant areas. As a result, the licensee placed undocumented and unanalyzed transient combustibles in the plant without compensatory measures on five different occasions. The licensee entered the finding into their corrective action program for resolution.

This finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone, and it directly affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," Phase 1 worksheet, the finding was determined to have very low safety significance because the condition represented a low degradation of fire prevention and administrative controls and the amount of combustibles was within the combustible loading calculations. The cause of the finding was related to the Human Performance crosscutting component of Work Practices, in that, the licensee failed to effectively communicate expectations, and that personnel failed to follow procedures.
Inspection Report# : 2008004 *(pdf)*

Mitigating Systems

Significance: G 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)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Non-Seismic Scaffolding Installed Over Service Water Equipment
The inspectors identified a noncited violation of Technical Specification 5.4.1.a (Procedures), for the licensee's failure to erect scaffolding over safety-related equipment with adequate seismic supports. As a result, the scaffolding would likely fail during a seismic event and impact the service water system. Contract personnel assembled the scaffolding and were under perceived time pressure to finish the work, which was their last task before departing the site. A licensee supervisor inspected the scaffolding and failed to identify the deficiency. The licensee entered the finding into their corrective action program as Smart Form SMF-2008-003683.

The finding was more than minor because it was similar to non-minor Example 4.a from Manual Chapter 0612,

Appendix E, "Examples of Minor Issues," in that the scaffolding could adversely affect safety related equipment during a seismic event. Using the NRC Manual Chapter 0609, Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was a qualification deficiency confirmed not to result in loss of operability or functionality. This finding had a Human Performance crosscutting aspect (work practices component) because the licensee failed to ensure adequate supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported [H4.c].

Inspection Report# : 2008005 *(pdf)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Instructions Leads to Failure to Identify Fibrous Material in Containment
The inspectors identified a noncited violation of Technical Specification 5.4.1a (Procedures) for the failure to have adequate instructions in place for containment walkdowns looking for fibrous material. As a result, the licensee entered a mode where the containment sumps were required to be operable with unidentified fibrous material in the containment. The licensee had not identified the material during several walkdowns in response to NRC Generic Letter 2004-02, “Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors,” and failed to identify several additional instances of fibrous material after inspectors initially identified some of the material. The licensee entered the finding into their corrective action program for resolution as Smart Form SMF-2008-003587.
The finding was more than minor because it was associated with the procedure quality attribute of the mitigating systems cornerstone, and it affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using NRC Manual Chapter 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings,” the finding had very low safety significance because it did not represent a loss of system safety function or cause inoperability of a system or train. The finding had a Human Performance crosscutting aspect (work control component) in that the work instructions and pre job brief failed to effectively incorporate job site conditions into the work instructions and consider that both sides of the seals required inspection [H3.a].

Inspection Report# : 2008005 *(pdf)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Initiate Corrective Actions for the Malfunction of a Reactor Trip Bypass Breaker
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedures to enter a malfunction of a reactor trip bypass breaker into the corrective action program. The breaker tripped slower than permitted during response time testing and was inoperable. Because the condition was not entered into the corrective action program, the licensee did not evaluate the condition or assess the extent of condition. The licensee entered the finding into their corrective action program as Smart Forms SMF-2008-003735 and SMF 2008 003767.
The finding was more than minor because, if left uncorrected, it would have led to a more safety significant concern. Specifically, because the cause of the failure would not have been fully evaluated and appropriate corrective actions may not be initiated. Once entered into the corrective action program, the licensee identified additional corrective measures. Using NRC Inspection Manual Chapter 0609, Attachment 4, “Phase 1 - Initial Characterization and Screening of Findings,” the finding had very low safety significance because the condition did not result the inoperability of the reactor trip breaker when it was 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 their corrective action program [P1.a].

Inspection Report# : 2008005 *(pdf)*

Significance: G Sep 21, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
"Failure to Ensure Roll-up Fire Doors Complied With Fire Code"
The inspectors identified a noncited violation of License Condition 2.G because the licensee failed to ensure that two fire-rated roll up doors complied with the mounting requirements in National Fire Protection Association (NFPA) 80 1977. Specifically, during original construction, the licensee used bolts with a diameter less than the required 3/8-inch. The licensee entered this finding into their corrective action program for resolution as Smartform SMF 2008 001637.

Failure to meet the mounting requirements of NFPA 80 1977 for fire-rated roll up doors is a performance deficiency. The inspectors determined this deficiency was more than minor because it was similar to the more than minor description in Manual Chapter 0612, Appendix E, Example 3.g. This finding affected the mitigating systems cornerstone. This fire confinement finding was assigned a Moderate A degradation rating because the fire-rated roll up door had improperly installed fire door hardware. Using NRC Inspection Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” Phase 1, Step 1.3.2, Question 5, the exposed fire area contained no potential damage targets closer than 20 feet (i.e., passive barrier) to the exposing fire area that would result in a demand for safe shutdown and the fire barrier would remain functional for at least 20 minutes. Therefore, the degraded fire-rated roll up doors had very low risk significance.

Inspection Report# : 2008004 *(pdf)*

Significance: G May 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Fire Suppression Systems
A noncited violation of Unit 1, License Condition 2.G, “Fire Protection,” was identified for the fire suppression systems in Fire Zones SE16 and SE18 (remote safety-related panels/Train B switchgear rooms) not being installed in accordance with the approved fire protection program. The fire suppression systems in Fire Zones SE16 and SE18 are manually actuated dry pipe deluge (pre-action) systems with closed sprinkler heads. The actual configuration did not provide protection in the areas containing one train of safe shutdown cables enclosed in 1-hour fire barriers. The team determined that the fire suppression systems in Fire Zones SE16 and SE18 were not installed in accordance with the configurations in Calculation 0210-63-0064, “Partial Sprinkler Coverage Evaluation.” The configurations in this calculation were approved by the NRC as the basis for allowing suppression systems with less than full area coverage. The configuration also did not meet the National Fire Protection Association codes. The licensee entered this finding into its corrective action program under Smart Form SMF-2008-000324-00.

Failure to ensure the installed fire suppression systems met the requirements of the approved fire protection program was a performance deficiency. This finding was more than minor because it is associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone and could affect the availability, reliability, and capability of systems that respond to fire events to prevent undesirable consequences. The significance of this finding was assessed using Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process.” In completing the Fire Protection Significance Determination Process, Phase 1 and 2 worksheets, it was determined that no potential ignition source could potentially have a direct impact on the cable raceways protected by fire barriers or their supports and that the largest potential ignition sources in the fire zones could not form a hot gas layer sufficient to impact the protected cable raceways or their supports. The evaluation indicated that the finding had a very low safety significance (Green) during the Phase 2 significance determination process. (Section 1R05.4)

Inspection Report# : 2008006 *(pdf)*

Significance: G May 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation

Inadequate Post-Fire Safe Shutdown Procedures
A noncited violation of Technical Specification 5.4.1.d was identified concerning the failure to maintain adequate written procedures covering fire protection program implementation. Specifically, procedures for operation of Valves 1-8000A and 1-8000B (power-operated relief valve block valves) and Valves 1-8701A and 1-8702B (residual heat removal loop hot-leg recirculation valves) had local manual actions that might not be completed successfully because of potential fire damage. Procedures ABN-804A, “Response to a Fire in the Safeguards Building,” Revision 5, and ABN 806A, “Response to a Fire in the Electrical and Control Building,” Revision 5, directed operators to open the valves from their electrical power supplies because of potential fire damage to control circuits between the main control room and the electrical breakers. Plant operators were instructed to depress a breaker contactor to stroke the valve open. After the operator depresses the contactor, control power is required to hold the contactor closed while the valve strokes. The team identified that potential fire damage to control circuits between the main control room and the electrical breakers could cause a control power fuse to fail, preventing the valve from stroking. The licensee has entered this issue into their corrective action program as Smart Form SMF 2008-000311-00.

Failure to provide adequate procedures for the implementation of the fire protection program was a performance deficiency. This finding was more than minor because it is associated with the Protection Against External Factors attribute of the Mitigating Systems Cornerstone and could affect the availability, reliability, and capability of systems that respond to fire events to prevent undesirable consequences. The significance of this finding was assessed using Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process.” The evaluation determined that the procedural deficiency only affected valves required to reach and maintain cold shutdown conditions; therefore, the finding screened as having very low safety significance (Green).

Inspection Report# : 2008006 *(pdf)*

Barrier Integrity

Significance: G Sep 15, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
B.5.b. Phase 2 and 3 Mitigating Strategy
This finding, affecting the Barrier Integrity Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. This finding has no cross-cutting aspect. See inspection report 2008-008 for more details.
Inspection Report# : 2008008 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to barricade and conspicuously post a high radiation area
The inspector identified a noncited violation of Technical Specification 5.7.1 because a high radiation area was not barricaded and conspicuously posted. The inspector identified dose rates as high as 109 millirems per hour at 30

centimeters in the compactor area on the 810-foot elevation of the fuel building. The area was controlled and posted as a radiation area. As immediate corrective action, the licensee barricaded the area with rope and posted it as a high radiation area and documented the finding in the corrective action program.

The finding is greater than minor because, if left uncorrected, the finding could become a more significant safety concern. Using the Occupational Radiation Safety Significance Determination Process, the inspector determined the finding to have very low safety significance because (1) it was not associated with ALARA planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. Additionally, the finding had a cross-cutting aspect in the area of human performance, work control component, because the licensee did not coordinate work activities by incorporating actions to address the need for work groups to communicate, coordinate, and cooperate with each other during activities in which interdepartmental coordination is necessary to assure human performance.

Inspection Report# : 2008003 *(pdf)*

Public Radiation Safety

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.

Miscellaneous

Last modified : May 29, 2009

Comanche Peak 1
2Q/2009 Plant Inspection Findings

Initiating Events

Significance: G Mar 21, 2009
Identified By: NRC
Item Type: FIN Finding
Failure to Remove Debris from Rooftop Causes Potential Missle Hazard
The inspectors identified a finding for the failure to follow housekeeping guidance in Procedure STA 607, "Housekeeping Control," Revision 19. Specifically, the licensee failed to remove several pieces of thin scrap sheet steel approximately five feet long and one foot wide from the Unit 1 diesel generator building roof following maintenance. As a result, the material could have affected the offsite power supply to safety-related electrical busses if high winds carried it on to nearby transmission lines. The inspectors determined that the material was on the rooftop during periods of severe weather. The licensee entered the finding into their corrective action program for resolution as Smart Form SMF 2008 004000.

The finding was more than minor because it was associated with the initiating events cornerstone attribute of protection against external factors and affected the cornerstone objective, in that, it increased the likelihood of an event that would upset plant stability and challenge critical safety functions during shutdown as well as power operations. 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 contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The cause of this finding was related to the Human Performance crosscutting component of work control, in that, the licensee failed to appropriately coordinate work activities.

Inspection Report# : 2009002 *(pdf)*

Significance: G 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: G Dec 31, 2008

Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Evaluate Material Condition Following a Boric Acid Leak
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to follow procedures that required an evaluation and corrective actions in response to the effects of a borated water leak on primary coolant pressure boundary components. Corrective actions described as "Fix Now" were identified as boric acid deposits or anticipated accumulation of boric acid deposits which directly impact a carbon steel pressure boundary components or subcomponents and could result in increased corrosion rates. The inspectors identified that the inadequate evaluation and corrective actions resulted in the increased corrosion rate. The licensee entered the finding into their corrective action program as Smart Form SMF-2008-003194.
The finding was more than minor using NRC Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," Example 4.a, because the inadequate evaluation led to the reactor vessel nozzle being adversely affected, in that the corrosion degraded the material condition of the carbon steel portions. The finding was determined to have very low safety significance because assuming worst case degradation, the finding would not result in exceeding the Technical Specification limit for reactor coolant system leakage or affect other mitigation systems resulting in a total loss of their safety function. The cause of the finding was related to the Human Performance crosscutting component of Decision Making in that the licensee failed to use conservative assumptions for decision making when evaluating degraded and nonconforming conditions [H1.b]

Inspection Report# : 2008005 *(pdf)*

Significance:  Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Assess and Manage Risk Associated with Maintenance Activities
The inspectors identified three examples of a noncited violation of 10 CFR 50.65(a)(4) (Maintenance Rule) for the failure to adequately assess and manage the risk of maintenance activities during the outage. In two instances the licensee performed maintenance activities that initiated plant transients and increased the time at midloop without managing the risk. First, workers created a breach of the reactor coolant system boundary and loss of nitrogen cover gas pressure in the system. This caused the pressurizer level to rapidly increase approximately two feet. Second, the licensee removed high pressure seals for the flux thimble tubes creating a cold leg vent path during nozzle dam installation. This also caused spikes in level instrumentation and operators were required to stay in a midloop condition for an additional two hours. The third example involved emergency diesel generator synchronization to the 6.9 kV bus that was supporting the only running residual heat removal pump in a midloop condition with time to boil less than 10 minutes. The testing was originally schedule outside the midloop window. The licensee had started the activity but, after the inspectors raised concerns, the shift manager took actions to back out of the testing. After being properly assessed, the risk for this activity was classified as a red condition (the highest risk threshold), but the licensee was only in an orange condition. The licensee entered the finding into their corrective action program as Smart Forms SMF-2008-003143, SMF-2008-003172, SMF-2008-003196, and SMF-2008-003209.
The finding was more than minor because it was similar to non-minor Example 7.e from Manual Chapter 0612, Appendix E, "Examples of Minor Issues," in that, for the first two examples the activities required additional risk management actions and for the third example, the plant changed from a risk level of Orange to Red. Using Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," the finding had very low safety significance because the incremental conditional core damage probability deficit was less than 1x10-6. The cause of the finding was related to the Human Performance crosscutting component of work control for the failure of the licensee to appropriately coordinate work activities [H3.b].

Inspection Report# : 2008005 *(pdf)*

Significance:  Sep 21, 2008
Identified By: NRC
Item Type: NCV NonCited Violation

"Failure to Control Transient Combustibles"
The inspectors identified a noncited violation of Technical Specification 5.4.1.d for the licensee's failure to obtain an approved transient combustible permit before introducing transient combustibles into plant areas. As a result, the licensee placed undocumented and unanalyzed transient combustibles in the plant without compensatory measures on five different occasions. The licensee entered the finding into their corrective action program for resolution.

This finding was more than minor because it affected the protection against external factors attribute of the initiating events cornerstone, and it directly affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using NRC Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," Phase 1 worksheet, the finding was determined to have very low safety significance because the condition represented a low degradation of fire prevention and administrative controls and the amount of combustibles was within the combustible loading calculations. The cause of the finding was related to the Human Performance crosscutting component of Work Practices, in that, the licensee failed to effectively communicate expectations, and that personnel failed to follow procedures.
Inspection Report# : 2008004 *(pdf)*

Mitigating Systems

Significance: G 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)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Non-Seismic Scaffolding Installed Over Service Water Equipment
The inspectors identified a noncited violation of Technical Specification 5.4.1.a (Procedures), for the licensee's failure to erect scaffolding over safety-related equipment with adequate seismic supports. As a result, the scaffolding would likely fail during a seismic event and impact the service water system. Contract personnel assembled the scaffolding and were under perceived time pressure to finish the work, which was their last task before departing the site. A licensee supervisor inspected the scaffolding and failed to identify the deficiency. The licensee entered the finding into their corrective action program as Smart Form SMF-2008-003683.

The finding was more than minor because it was similar to non-minor Example 4.a from Manual Chapter 0612,

Appendix E, "Examples of Minor Issues," in that the scaffolding could adversely affect safety related equipment during a seismic event. Using the NRC Manual Chapter 0609, Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was a qualification deficiency confirmed not to result in loss of operability or functionality. This finding had a Human Performance crosscutting aspect (work practices component) because the licensee failed to ensure adequate supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported [H4.c].

Inspection Report# : 2008005 *(pdf)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Instructions Leads to Failure to Identify Fibrous Material in Containment
The inspectors identified a noncited violation of Technical Specification 5.4.1a (Procedures) for the failure to have adequate instructions in place for containment walkdowns looking for fibrous material. As a result, the licensee entered a mode where the containment sumps were required to be operable with unidentified fibrous material in the containment. The licensee had not identified the material during several walkdowns in response to NRC Generic Letter 2004-02, “Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors,” and failed to identify several additional instances of fibrous material after inspectors initially identified some of the material. The licensee entered the finding into their corrective action program for resolution as Smart Form SMF-2008-003587.
The finding was more than minor because it was associated with the procedure quality attribute of the mitigating systems cornerstone, and it affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using NRC Manual Chapter 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings,” the finding had very low safety significance because it did not represent a loss of system safety function or cause inoperability of a system or train. The finding had a Human Performance crosscutting aspect (work control component) in that the work instructions and pre job brief failed to effectively incorporate job site conditions into the work instructions and consider that both sides of the seals required inspection [H3.a].

Inspection Report# : 2008005 *(pdf)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Initiate Corrective Actions for the Malfunction of a Reactor Trip Bypass Breaker
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedures to enter a malfunction of a reactor trip bypass breaker into the corrective action program. The breaker tripped slower than permitted during response time testing and was inoperable. Because the condition was not entered into the corrective action program, the licensee did not evaluate the condition or assess the extent of condition. The licensee entered the finding into their corrective action program as Smart Forms SMF-2008-003735 and SMF 2008 003767.
The finding was more than minor because, if left uncorrected, it would have led to a more safety significant concern. Specifically, because the cause of the failure would not have been fully evaluated and appropriate corrective actions may not be initiated. Once entered into the corrective action program, the licensee identified additional corrective measures. Using NRC Inspection Manual Chapter 0609, Attachment 4, “Phase 1 - Initial Characterization and Screening of Findings,” the finding had very low safety significance because the condition did not result the inoperability of the reactor trip breaker when it was 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 their corrective action program [P1.a].

Inspection Report# : 2008005 *(pdf)*

Significance: G Sep 21, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
"Failure to Ensure Roll-up Fire Doors Complied With Fire Code"
The inspectors identified a noncited violation of License Condition 2.G because the licensee failed to ensure that two fire-rated roll up doors complied with the mounting requirements in National Fire Protection Association (NFPA) 80 1977. Specifically, during original construction, the licensee used bolts with a diameter less than the required 3/8-inch. The licensee entered this finding into their corrective action program for resolution as Smartform SMF 2008 001637.

Failure to meet the mounting requirements of NFPA 80 1977 for fire-rated roll up doors is a performance deficiency. The inspectors determined this deficiency was more than minor because it was similar to the more than minor description in Manual Chapter 0612, Appendix E, Example 3.g. This finding affected the mitigating systems cornerstone. This fire confinement finding was assigned a Moderate A degradation rating because the fire-rated roll up door had improperly installed fire door hardware. Using NRC Inspection Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” Phase 1, Step 1.3.2, Question 5, the exposed fire area contained no potential damage targets closer than 20 feet (i.e., passive barrier) to the exposing fire area that would result in a demand for safe shutdown and the fire barrier would remain functional for at least 20 minutes. Therefore, the degraded fire-rated roll up doors had very low risk significance.

Inspection Report# : 2008004 *(pdf)*

Barrier Integrity

Significance: G Sep 15, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
B.5.b. Phase 2 and 3 Mitigating Strategy
This finding, affecting the Barrier Integrity Cornerstone, is related to mitigative measures developed to cope with losses of large areas of the plant; in response to Section B.5.b. of the February 25, 2002, Interim Compensatory Measures (ICM) Order (EA-02-026) and related NRC guidance. This finding has been designated as "Official Use Only - Security-Related Information;" therefore, the details of this finding are being withheld from public disclosure. This finding has no cross-cutting aspect. See inspection report 2008-008 for more details.
Inspection Report# : 2008008 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

Last modified : August 31, 2009

Comanche Peak 1
3Q/2009 Plant Inspection Findings

Initiating Events

Significance: G Mar 21, 2009
Identified By: NRC
Item Type: FIN Finding
Failure to Remove Debris from Rooftop Causes Potential Missle Hazard
The inspectors identified a finding for the failure to follow housekeeping guidance in Procedure STA 607, "Housekeeping Control," Revision 19. Specifically, the licensee failed to remove several pieces of thin scrap sheet steel approximately five feet long and one foot wide from the Unit 1 diesel generator building roof following maintenance. As a result, the material could have affected the offsite power supply to safety-related electrical busses if high winds carried it on to nearby transmission lines. The inspectors determined that the material was on the rooftop during periods of severe weather. The licensee entered the finding into their corrective action program for resolution as Smart Form SMF 2008 004000.

The finding was more than minor because it was associated with the initiating events cornerstone attribute of protection against external factors and affected the cornerstone objective, in that, it increased the likelihood of an event that would upset plant stability and challenge critical safety functions during shutdown as well as power operations. 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 contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The cause of this finding was related to the Human Performance crosscutting component of work control, in that, the licensee failed to appropriately coordinate work activities.

Inspection Report# : 2009002 *(pdf)*

Significance: G 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: G Dec 31, 2008
Identified By: NRC

Item Type: NCV NonCited Violation
Failure to Adequately Evaluate Material Condition Following a Boric Acid Leak
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to follow procedures that required an evaluation and corrective actions in response to the effects of a borated water leak on primary coolant pressure boundary components. Corrective actions described as "Fix Now" were identified as boric acid deposits or anticipated accumulation of boric acid deposits which directly impact a carbon steel pressure boundary components or subcomponents and could result in increased corrosion rates. The inspectors identified that the inadequate evaluation and corrective actions resulted in the increased corrosion rate. The licensee entered the finding into their corrective action program as Smart Form SMF-2008-003194.
The finding was more than minor using NRC Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," Example 4.a, because the inadequate evaluation led to the reactor vessel nozzle being adversely affected, in that the corrosion degraded the material condition of the carbon steel portions. The finding was determined to have very low safety significance because assuming worst case degradation, the finding would not result in exceeding the Technical Specification limit for reactor coolant system leakage or affect other mitigation systems resulting in a total loss of their safety function. The cause of the finding was related to the Human Performance crosscutting component of Decision Making in that the licensee failed to use conservative assumptions for decision making when evaluating degraded and nonconforming conditions [H1.b]

Inspection Report# : 2008005 *(pdf)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Assess and Manage Risk Associated with Maintenance Activities
The inspectors identified three examples of a noncited violation of 10 CFR 50.65(a)(4) (Maintenance Rule) for the failure to adequately assess and manage the risk of maintenance activities during the outage. In two instances the licensee performed maintenance activities that initiated plant transients and increased the time at midloop without managing the risk. First, workers created a breach of the reactor coolant system boundary and loss of nitrogen cover gas pressure in the system. This caused the pressurizer level to rapidly increase approximately two feet. Second, the licensee removed high pressure seals for the flux thimble tubes creating a cold leg vent path during nozzle dam installation. This also caused spikes in level instrumentation and operators were required to stay in a midloop condition for an additional two hours. The third example involved emergency diesel generator synchronization to the 6.9 kV bus that was supporting the only running residual heat removal pump in a midloop condition with time to boil less than 10 minutes. The testing was originally schedule outside the midloop window. The licensee had started the activity but, after the inspectors raised concerns, the shift manager took actions to back out of the testing. After being properly assessed, the risk for this activity was classified as a red condition (the highest risk threshold), but the licensee was only in an orange condition. The licensee entered the finding into their corrective action program as Smart Forms SMF-2008-003143, SMF-2008-003172, SMF-2008-003196, and SMF-2008-003209.
The finding was more than minor because it was similar to non-minor Example 7.e from Manual Chapter 0612, Appendix E, "Examples of Minor Issues," in that, for the first two examples the activities required additional risk management actions and for the third example, the plant changed from a risk level of Orange to Red. Using Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," the finding had very low safety significance because the incremental conditional core damage probability deficit was less than 1x10-6. The cause of the finding was related to the Human Performance crosscutting component of work control for the failure of the licensee to appropriately coordinate work activities [H3.b].

Inspection Report# : 2008005 *(pdf)*

Mitigating Systems

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: G 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: G 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: G 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: G 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)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Non-Seismic Scaffolding Installed Over Service Water Equipment
The inspectors identified a noncited violation of Technical Specification 5.4.1.a (Procedures), for the licensee's failure to erect scaffolding over safety-related equipment with adequate seismic supports. As a result, the scaffolding would likely fail during a seismic event and impact the service water system. Contract personnel assembled the scaffolding and were under perceived time pressure to finish the work, which was their last task before departing the site. A licensee supervisor inspected the scaffolding and failed to identify the deficiency. The licensee entered the finding into their corrective action program as Smart Form SMF-2008-003683.

The finding was more than minor because it was similar to non-minor Example 4.a from Manual Chapter 0612, Appendix E, "Examples of Minor Issues," in that the scaffolding could adversely affect safety related equipment during a seismic event. Using the NRC Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was a qualification deficiency confirmed not to result in loss of operability or functionality. This finding had a Human Performance crosscutting aspect (work practices component) because the licensee failed to ensure adequate supervisory and management oversight of work activities, including contractors, such that nuclear safety was supported [H4.c].

Inspection Report# : 2008005 *(pdf)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Instructions Leads to Failure to Identify Fibrous Material in Containment
The inspectors identified a noncited violation of Technical Specification 5.4.1a (Procedures) for the failure to have adequate instructions in place for containment walkdowns looking for fibrous material. As a result, the licensee entered a mode where the containment sumps were required to be operable with unidentified fibrous material in the containment. The licensee had not identified the material during several walkdowns in response to NRC Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation during Design Basis Accidents at Pressurized-Water Reactors," and failed to identify several additional instances of fibrous material after inspectors initially identified some of the material. The licensee entered the finding into their corrective action program for resolution as Smart Form SMF-2008-003587.
The finding was more than minor because it was associated with the procedure quality attribute of the mitigating systems cornerstone, and it affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using NRC Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the finding had very low safety significance because it did not represent a loss of system safety function or cause inoperability of a system or train. The finding had a Human Performance crosscutting aspect (work control component) in that the work instructions and pre job brief failed to effectively incorporate job site conditions into the work instructions and consider that both sides of the seals required inspection [H3.a].

Inspection Report# : 2008005 *(pdf)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Initiate Corrective Actions for the Malfunction of a Reactor Trip Bypass Breaker
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedures to enter a malfunction of a reactor trip bypass breaker into the corrective action program. The breaker tripped slower than permitted during response time testing and was inoperable. Because the condition was not entered into the corrective action program, the licensee did not evaluate the condition or assess the extent of condition. The licensee entered the finding into their corrective action program as Smart Forms SMF-2008-003735 and SMF 2008 003767.

The finding was more than minor because, if left uncorrected, it would have led to a more safety significant concern. Specifically, because the cause of the failure would not have been fully evaluated and appropriate corrective actions may not be initiated. Once entered into the corrective action program, the licensee identified additional corrective measures. Using NRC Inspection Manual Chapter 0609, Attachment 4, “Phase 1 - Initial Characterization and Screening of Findings,” the finding had very low safety significance because the condition did not result the inoperability of the reactor trip breaker when it was 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 their corrective action program [P1.a].

Inspection Report# : 2008005 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

Last modified : December 10, 2009

Comanche Peak 1
4Q/2009 Plant Inspection Findings

Initiating Events

Significance: G Mar 21, 2009
Identified By: NRC
Item Type: FIN Finding
Failure to Remove Debris from Rooftop Causes Potential Missle Hazard
The inspectors identified a finding for the failure to follow housekeeping guidance in Procedure STA 607, "Housekeeping Control," Revision 19. Specifically, the licensee failed to remove several pieces of thin scrap sheet steel approximately five feet long and one foot wide from the Unit 1 diesel generator building roof following maintenance. As a result, the material could have affected the offsite power supply to safety-related electrical busses if high winds carried it on to nearby transmission lines. The inspectors determined that the material was on the rooftop during periods of severe weather. The licensee entered the finding into their corrective action program for resolution as Smart Form SMF 2008 004000.

The finding was more than minor because it was associated with the initiating events cornerstone attribute of protection against external factors and affected the cornerstone objective, in that, it increased the likelihood of an event that would upset plant stability and challenge critical safety functions during shutdown as well as power operations. 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 contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment would not be available. The cause of this finding was related to the Human Performance crosscutting component of work control, in that, the licensee failed to appropriately coordinate work activities.

Inspection Report# : 2009002 *(pdf)*

Significance: G 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)*

Mitigating Systems

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: G 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: G 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: G 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: G 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: G 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)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

Last modified : March 01, 2010

Comanche Peak 1
1Q/2010 Plant Inspection Findings

Initiating Events

Mitigating Systems

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: G 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: G 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: G 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: G 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)*

Barrier Integrity

Significance: G Dec 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate procedure for environmentally qualified actuator refurbishment
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure of the licensee to translate environmental qualification requirements for motor operated valve and damper actuators into procedures. Specifically, actuator refurbishment procedures directed the removal of conduit plugs, drain plugs, and T-drains, but did not require them to be re-installed in the correct configuration. As a result, multiple actuators were not in their specified condition for environmental qualification. After evaluation, the licensee determined that the actuators were still environmentally qualified in the as-found configuration. The licensee entered the finding into the corrective action program as Condition Report CR 2009 000848.

The finding was more than minor because it was associated with the containment configuration control attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective, in that, the licensee's procedure for actuator refurbishment did not provide reasonable assurance that actuators would continue to be environmentally qualified in order to protect the public from radionuclide releases caused by accidents or events. 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 finding did not represent an actual open pathway in the physical integrity of reactor containment. The finding has a human performance cross cutting aspect associated with resources because the licensee failed to maintain complete and accurate procedures.

Inspection Report# : 2009005 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Dec 31, 2009
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to barricade and post a high radiation area
A self-revealing noncited violation of Technical Specification 5.7.1.a was identified for failure to maintain a high radiation area barricaded and conspicuously posted. The lower valve gallery on the 832-foot elevation of the auxiliary

building had been de-posted from a locked high radiation area to radiation area after a resin transfer and flush operation. Radiation protection had mistakenly determined, by a partial radiation survey, that the entire lower valve gallery was a radiation area. Consequently, two workers received unexpected electronic dose rate alarms because the workers entered a high radiation area without knowledge that dose rates measured 900 millirem per hour. The licensee revised Procedure RPI-624, “Resin Transfer Job Coverage,” to provide clear instructions requiring that radiation surveys of the whole system after resin transfers and flushes are completed. The licensee entered the finding into the corrective action program as Condition Report CR 2009 002876.

The failure to barricade and post a high radiation area is a performance deficiency. The finding was more than minor because it was associated with the occupational radiation safety cornerstone attribute (exposure control) of program and process and affected the cornerstone objective, in that, the failure to properly control a high radiation area had the potential to increase personnel dose. Using the occupational radiation safety significance determination process, the inspectors determined the finding to have very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with resources because the licensee did not ensure that the procedure was complete and accurate.
Inspection Report# : 2009005 *(pdf)*

Public Radiation Safety

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.

Miscellaneous

Last modified : May 26, 2010

Comanche Peak 1
2Q/2010 Plant Inspection Findings

Initiating Events

Significance: G Jun 19, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure Causes Inadvertent Power Reduction
The inspectors identified a noncited violation of Technical Specification 5.4.1.a, for the failure to have an adequate procedure for placing a demineralizer resin bed in service. As a result, a reactivity management event occurred when the reactor coolant system was inadvertently borated. This caused an automatic rod withdrawal to maintain reactor coolant system temperature. Operators ultimately reduced power approximately 20 megawatts electric to stabilize the plant. The licensee entered the finding into the corrective action program as Condition Report CR-2010-002725.

The failure to adequately maintain a procedure required by Technical Specification 5.4.1.a was a performance deficiency and resulted in an unplanned boration, automatic rod withdrawal, and 20 megawatt power reduction. The finding was more than minor because it was associated with the procedure quality attribute of the initiating events cornerstone and affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. This finding has a human performance crosscutting aspect associated with the decision making, in that, the licensee did not use conservative assumptions in the decision making process that lead to the use of the demineralizer [H.1b].

Inspection Report# : 2010003 *(pdf)*

Mitigating Systems

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: G 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: G 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: G 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: G 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)*

Barrier Integrity

Significance: G Dec 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate procedure for environmentally qualified actuator refurbishment
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure of the licensee to translate environmental qualification requirements for motor operated valve and damper actuators into procedures. Specifically, actuator refurbishment procedures directed the removal of conduit plugs, drain plugs, and T-drains, but did not require them to be re-installed in the correct configuration. As a result, multiple actuators were not in their specified condition for environmental qualification. After evaluation, the licensee determined that the actuators were still environmentally qualified in the as-found configuration. The licensee entered the finding into the corrective action program as Condition Report CR 2009 000848.

The finding was more than minor because it was associated with the containment configuration control attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective, in that, the licensee’s procedure for actuator refurbishment did not provide reasonable assurance that actuators would continue to be environmentally qualified in order to protect the public from radionuclide releases caused by accidents or events. 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 finding did not represent an actual open pathway in the physical integrity of reactor containment. The finding has a human performance cross cutting aspect associated with resources because the licensee failed to maintain complete and accurate procedures.

Inspection Report# : 2009005 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 19, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Barricade and Post a High Radiation Area
The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.7.1.a for the failure to maintain a high radiation area barricaded and conspicuously posted. A high radiation area in the Unit 1 containment was posted as a radiation area. Consequently, an individual received unexpected electronic dosimeter dose rate alarm while building scaffolding in the Unit 1 containment building because the worker entered a high radiation area without the knowledge that the dose rates measured 145 millirem per hour. Subsequently, a radiation protection technician barricaded the area with rope and posted it as a high radiation area. The licensee entered the finding into the corrective action program as Condition Report CR 2010 003382.

The failure to barricade and post a high radiation area was a performance deficiency. The finding was more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective, in that, the failure to properly control a high radiation area had the potential to increase personnel dose. Using NRC Manual Chapter 0609, Appendix C, “Occupational Radiation Safety Significance Determination Process,” the finding was determined to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work control because the licensee did not appropriately plan work activities by incorporating job site conditions or radiological safety [H.3a].

Inspection Report# : 2010003 *(pdf)*

Significance: G Jun 19, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow the Radiation Work Permit Requirements
Inspectors identified a noncited violation of Technical Specification 5.4.1.a for the failure of a rigger to follow radiation work permit requirements. Specifically, a rigger made an unauthorized entry into a high radiation area on a radiation work permit that did not grant access to that area. A radiation protection technician confirmed that the rigger was not briefed and not authorized to enter the high radiation area and had the rigger exit the area. The licensee entered the finding into the corrective action program as Condition Report CR 2010-003458.
The failure to follow the instructions on a radiation work permit was a performance deficiency. The finding was more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective, in that, the failure to follow a radiation work permit instruction had the potential to increase personnel dose. Using NRC Manual Chapter 0609, Appendix C, “Occupational Radiation Safety Significance Determination Process,” the finding was determined to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) planning or work controls, (2) there was no

overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work practices because the licensee failed to effectively communicate expectations regarding procedural compliance to the rigger [H.4b].

Inspection Report# : 2010003 *(pdf)*

Significance: G Dec 31, 2009
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to barricade and post a high radiation area
A self-revealing noncited violation of Technical Specification 5.7.1.a was identified for failure to maintain a high radiation area barricaded and conspicuously posted. The lower valve gallery on the 832-foot elevation of the auxiliary building had been de-posted from a locked high radiation area to radiation area after a resin transfer and flush operation. Radiation protection had mistakenly determined, by a partial radiation survey, that the entire lower valve gallery was a radiation area. Consequently, two workers received unexpected electronic dose rate alarms because the workers entered a high radiation area without knowledge that dose rates measured 900 millirem per hour. The licensee revised Procedure RPI-624, “Resin Transfer Job Coverage,” to provide clear instructions requiring that radiation surveys of the whole system after resin transfers and flushes are completed. The licensee entered the finding into the corrective action program as Condition Report CR 2009 002876.

The failure to barricade and post a high radiation area is a performance deficiency. The finding was more than minor because it was associated with the occupational radiation safety cornerstone attribute (exposure control) of program and process and affected the cornerstone objective, in that, the failure to properly control a high radiation area had the potential to increase personnel dose. Using the occupational radiation safety significance determination process, the inspectors determined the finding to have very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with resources because the licensee did not ensure that the procedure was complete and accurate.
Inspection Report# : 2009005 *(pdf)*

Public Radiation Safety

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.

Miscellaneous

Last modified : September 02, 2010

Comanche Peak 1
3Q/2010 Plant Inspection Findings

Initiating Events

Significance: G Jun 19, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure Causes Inadvertent Power Reduction
The inspectors identified a noncited violation of Technical Specification 5.4.1.a, for the failure to have an adequate procedure for placing a demineralizer resin bed in service. As a result, a reactivity management event occurred when the reactor coolant system was inadvertently borated. This caused an automatic rod withdrawal to maintain reactor coolant system temperature. Operators ultimately reduced power approximately 20 megawatts electric to stabilize the plant. The licensee entered the finding into the corrective action program as Condition Report CR-2010-002725.

The failure to adequately maintain a procedure required by Technical Specification 5.4.1.a was a performance deficiency and resulted in an unplanned boration, automatic rod withdrawal, and 20 megawatt power reduction. The finding was more than minor because it was associated with the procedure quality attribute of the initiating events cornerstone and affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. This finding has a human performance crosscutting aspect associated with the decision making, in that, the licensee did not use conservative assumptions in the decision making process that lead to the use of the demineralizer [H.1b].

Inspection Report# : 2010003 *(pdf)*

Mitigating Systems

Barrier Integrity

Significance: G Sep 18, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
"Failure to Consider Temperature Effects on Air Accumulator Overpressure Protection"
The inspectors identified a noncited violation of 10 CFR 50 Appendix B, Criterion III, “Design Control” for the failure to consider the temperature effect on the pressurization of safety-related air accumulators for containment isolation valves in the main steam line penetration room. As a result, the accumulators could exceed their design pressure during a steam line break. The licensee entered the finding into the corrective action program as Condition Report CR-2010-006349.

The finding was more than minor because it was associated with the design control attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical barriers protect the public from radionuclide releases caused by events. 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 finding did not result in an actual open pathway in the physical integrity of reactor containment. The finding did not have a crosscutting aspect because the performance deficiency was not

representative of current licensee performance

Inspection Report# : 2010004 *(pdf)*

Significance: G Dec 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate procedure for environmentally qualified actuator refurbishment
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure of the licensee to translate environmental qualification requirements for motor operated valve and damper actuators into procedures. Specifically, actuator refurbishment procedures directed the removal of conduit plugs, drain plugs, and T-drains, but did not require them to be re-installed in the correct configuration. As a result, multiple actuators were not in their specified condition for environmental qualification. After evaluation, the licensee determined that the actuators were still environmentally qualified in the as-found configuration. The licensee entered the finding into the corrective action program as Condition Report CR 2009 000848.

The finding was more than minor because it was associated with the containment configuration control attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective, in that, the licensee's procedure for actuator refurbishment did not provide reasonable assurance that actuators would continue to be environmentally qualified in order to protect the public from radionuclide releases caused by accidents or events. 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 finding did not represent an actual open pathway in the physical integrity of reactor containment. The finding has a human performance cross cutting aspect associated with resources because the licensee failed to maintain complete and accurate procedures.

Inspection Report# : 2009005 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 19, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Barricade and Post a High Radiation Area
The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.7.1.a for the failure to maintain a high radiation area barricaded and conspicuously posted. A high radiation area in the Unit 1 containment was posted as a radiation area. Consequently, an individual received unexpected electronic dosimeter dose rate alarm while building scaffolding in the Unit 1 containment building because the worker entered a high radiation area without the knowledge that the dose rates measured 145 millirem per hour. Subsequently, a radiation protection technician barricaded the area with rope and posted it as a high radiation area. The licensee entered the finding into the corrective action program as Condition Report CR 2010 003382.

The failure to barricade and post a high radiation area was a performance deficiency. The finding was more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective, in that, the failure to properly control a high radiation area had the potential to increase personnel dose. Using NRC Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not

compromised. The finding has a human performance crosscutting aspect associated with work control because the licensee did not appropriately plan work activities by incorporating job site conditions or radiological safety [H.3a].

Inspection Report# : 2010003 *(pdf)*

Significance: G Jun 19, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow the Radiation Work Permit Requirements
Inspectors identified a noncited violation of Technical Specification 5.4.1.a for the failure of a rigger to follow radiation work permit requirements. Specifically, a rigger made an unauthorized entry into a high radiation area on a radiation work permit that did not grant access to that area. A radiation protection technician confirmed that the rigger was not briefed and not authorized to enter the high radiation area and had the rigger exit the area. The licensee entered the finding into the corrective action program as Condition Report CR 2010-003458.
The failure to follow the instructions on a radiation work permit was a performance deficiency. The finding was more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective, in that, the failure to follow a radiation work permit instruction had the potential to increase personnel dose. Using NRC Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work practices because the licensee failed to effectively communicate expectations regarding procedural compliance to the rigger [H.4b].

Inspection Report# : 2010003 *(pdf)*

Significance: G Dec 31, 2009
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to barricade and post a high radiation area
A self-revealing noncited violation of Technical Specification 5.7.1.a was identified for failure to maintain a high radiation area barricaded and conspicuously posted. The lower valve gallery on the 832-foot elevation of the auxiliary building had been de-posted from a locked high radiation area to radiation area after a resin transfer and flush operation. Radiation protection had mistakenly determined, by a partial radiation survey, that the entire lower valve gallery was a radiation area. Consequently, two workers received unexpected electronic dose rate alarms because the workers entered a high radiation area without knowledge that dose rates measured 900 millirem per hour. The licensee revised Procedure RPI-624, "Resin Transfer Job Coverage," to provide clear instructions requiring that radiation surveys of the whole system after resin transfers and flushes are completed. The licensee entered the finding into the corrective action program as Condition Report CR 2009 002876.

The failure to barricade and post a high radiation area is a performance deficiency. The finding was more than minor because it was associated with the occupational radiation safety cornerstone attribute (exposure control) of program and process and affected the cornerstone objective, in that, the failure to properly control a high radiation area had the potential to increase personnel dose. Using the occupational radiation safety significance determination process, the inspectors determined the finding to have very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with resources because the licensee did not ensure that the procedure was complete and accurate.
Inspection Report# : 2009005 *(pdf)*

Public Radiation Safety

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.

Miscellaneous

Last modified : January 06, 2011

Comanche Peak 1
4Q/2010 Plant Inspection Findings

Initiating Events

Significance: G Jun 19, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure Causes Inadvertent Power Reduction
The inspectors identified a noncited violation of Technical Specification 5.4.1.a, for the failure to have an adequate procedure for placing a demineralizer resin bed in service. As a result, a reactivity management event occurred when the reactor coolant system was inadvertently borated. This caused an automatic rod withdrawal to maintain reactor coolant system temperature. Operators ultimately reduced power approximately 20 megawatts electric to stabilize the plant. The licensee entered the finding into the corrective action program as Condition Report CR-2010-002725.

The failure to adequately maintain a procedure required by Technical Specification 5.4.1.a was a performance deficiency and resulted in an unplanned boration, automatic rod withdrawal, and 20 megawatt power reduction. The finding was more than minor because it was associated with the procedure quality attribute of the initiating events cornerstone and affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. This finding has a human performance crosscutting aspect associated with the decision making, in that, the licensee did not use conservative assumptions in the decision making process that lead to the use of the demineralizer [H.1b].

Inspection Report# : 2010003 *(pdf)*

Mitigating Systems

Significance: TBD Nov 04, 2010
Identified By: NRC
Item Type: AV Apparent Violation
Failure to Incorporate Relevant Operating Experience Information into Station Procedures Regarding the Condensate Storage Tank and Diaphragm
The team identified an apparent violation of 10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, involving the failure of personnel to initiate a SmartForm to enter actual or potential adverse conditions into the corrective action program following receipt of operating experience. Specifically, in July 2002, the licensee received relevant information provided by the manufacturer of the Unit 1 and 2 condensate storage tank diaphragms to ensure the diaphragm integrity would be maintained but failed to enter the issue into the corrective action program as required by Comanche Peak Station Procedure STA-206, "Review of Vendor Documents and Vendor Technical Manuals," Revision 20. In addition, in November 2007, the licensee received industry-operating experience regarding a condensate storage tank diaphragm failure at the Farley Nuclear Plant but failed to enter this issue into the corrective action program as required by Procedure STA-426, "Industry Operating Experience Program," Revision 1. Because actions were not taken in response to the vendor and operating experience information, the diaphragm was susceptible to failure, which could cause a loss of suction to all three auxiliary feedwater pumps. This finding was entered into the licensee's corrective action program as Condition Reports CR 2010-005508, CR-2010-005581 and CR-2010-005962.

The team determined that the failure to incorporate relevant operating experience information into station instructions, procedures, or drawings to maintain the condensate storage tank diaphragm in a configuration where its performance during accident conditions would preclude blockage of the suction pipes to the auxiliary feedwater pumps was a

performance deficiency. The finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening, in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding represented the degradation of equipment and functions specifically designed to mitigate the loss of feedwater and that during an event the loss would degrade or make inoperable all three of the auxiliary feedwater pumps. Therefore, the finding was potentially risk significant and a Phase 3 analysis was required. The preliminary significance determination was based on Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria," and indicated that the finding was of low to moderate safety significance (White). This finding has a crosscutting aspect in the area of human performance, work practices, because the licensee did not define and effectively communicate expectations regarding procedural compliance and personnel following procedures involving evaluation of operating experience.

Inspection Report# : 2010006 *(pdf)*

Significance:  Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Test Control of the Diesel Generator Air Starting System
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XI, Test Control, which states, in part, that all testing required to demonstrate that structures, systems, components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. Specifically, as of June 18, 2010, the licensee failed to complete pre-operational testing required to demonstrate that the emergency diesel generator air start system receivers satisfied the requirements and acceptance limits contained in applicable design documents. This finding was entered into the licensee's corrective action program as Condition Report CR-2010-005924.

The team determined that the failure to ensure that the testing required to demonstrate that the Unit 1 emergency diesel generator air start systems will perform satisfactorily in service and in accordance with written test procedures which incorporated the requirements and acceptance limits contained in applicable design documents was a performance deficiency. The finding was more than minor because it was associated with the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability and capability of safety systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Significance:  Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Analysis of Emergency Diesel Generator Frequency
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control, which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to properly translate technical specification allowable diesel generator frequency range to design documents. This finding was entered into the licensee's corrective action program as Condition Report CR-2010-

005563.

The team determined that the failure to analyze the emergency diesel generators for operation over the entire range of allowed frequency was a performance deficiency. This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of safety systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding has a crosscutting aspect in the area of problem identification and resolution because the licensee did not effectively incorporate operating experience into the preventive maintenance program for the emergency diesel generators. Specifically, the licensee failed to incorporate information provided in Information Notice 2008-02, which could have affected the capability of equipment such as safety related motor operated pumps to perform their safety function under the most limiting conditions.

Inspection Report# : 2010006 *(pdf)*

Significance:  Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Evaluation of Hydrogen Generation for Safety-Related and NonSafety-Related Batteries
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to perform an adequate hydrogen evolution calculation, for the safety-related and nonsafety-related batteries, using the most limiting expected condition of forcing maximum current into a fully charged battery which led to a ventilation system design that did not limit hydrogen accumulation to less than two percent of the total volume of the battery areas during all conditions. This finding was entered into the licensee's corrective action program as Condition Reports CR 2010 005941, CR 2010 005941, and CR-2010-006561.

The team determined that the failure to adequately perform the hydrogen evolution calculation for the safety-related battery, using the most limiting condition, was a performance deficiency. This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone attribute of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Significance: SL-IV Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients
The team identified a noncited violation of 10 CFR 50.9, Completeness and Accuracy of Information, which states, in part, that information provided to the Commission by a licensee shall be complete and accurate in all material respects. Specifically, on June 20, 2007, the licensee asserted in their response to Generic Letter 2007-01,

“Inaccessible or Underground Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients,” Request 2, that Comanche Peak “periodically performs visual inspection for corrosion and degradation of cable tray supports and a preventive maintenance program for inspection/removal of water from manholes.” The team determined the licensee had no preventive maintenance program or procedures in place to govern the inspection or preventive maintenance activities described in their response, and there was no evidence that these manholes, raceways, and supports had ever been inspected prior to November 2009. This finding was entered into the licensee’s corrective action program as Condition Report CR-2010-005784.

The team determined that the failure to provide accurate information in the licensee’s response to Generic Letter 2007-01 was a performance deficiency. The finding is more than minor because the information was material to the NRC’s decision-making processes. Specifically, the information requested by Generic Letter 2007-01 was to enable NRC staff to determine whether the applicable regulatory requirements identified in the generic letter (10 CFR Part 50, Appendix A, General Design Criteria 4, 17, and 18; 10 CFR 50.65(a)(1); 10 CFR Part 50, Appendix B, Criterion XI), were being met with regard to the operational readiness of critical systems that could cause a plant transient or mitigate accidents, and to obtain further information on cable failures.

Inspection Report# : 2010006 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Design Features for Precluding or Minimizing Long- Term Accumulation of Water in Underground Conduits Contaning Medium Voltage Safety Related Cables
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to perform an adequate hydrogen evolution calculation, for the safety-related and nonsafety-related batteries, using the most limiting expected condition of forcing maximum current into a fully charged battery which led to a ventilation system design that did not limit hydrogen accumulation to less than two percent of the total volume of the battery areas during all conditions. This finding was entered into the licensee’s corrective action program as Condition Reports CR 2010 005941, CR 2010 005941, and CR-2010-006561.

The team determined that the failure to adequately perform the hydrogen evolution calculation for the safety-related battery, using the most limiting condition, was a performance deficiency. This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone attribute of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings,” and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Significance: G Mar 20, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Initiate a Condition Report for Degraded Undervoltage Relay
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 condition report for degradation to safety-related equipment. During a surveillance activity, maintenance personnel discovered that an undervoltage relay was outside the as-found setpoint for pick-up voltage and failed to enter the condition into the corrective action program. As a result, the cause and effect of the

degraded condition was not evaluated. The licensee entered the finding into the corrective action program as Condition Report CR 2010 001429.

The finding was more than minor because if the licensee continues to fail to document degraded safety-related equipment in the corrective action database, there is potential that this could lead to a more significant safety concern, in that, the cause of the degradation will not be evaluated and corrected. 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 finding did not result in the inoperability of safety-related relays. This finding has a problem identification and resolution crosscutting aspect associated with the corrective action program, in that, the licensee did not implement a corrective action program with a low threshold for identifying issues.

Inspection Report# : 2010002 *(pdf)*

Barrier Integrity

Significance: G Sep 18, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
"Failure to Consider Temperature Effects on Air Accumulator Overpressure Protection"
The inspectors identified a noncited violation of 10 CFR 50 Appendix B, Criterion III, “Design Control” for the failure to consider the temperature effect on the pressurization of safety-related air accumulators for containment isolation valves in the main steam line penetration room. As a result, the accumulators could exceed their design pressure during a steam line break. The licensee entered the finding into the corrective action program as Condition Report CR-2010-006349.

The finding was more than minor because it was associated with the design control attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical barriers protect the public from radionuclide releases caused by events. 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 finding did not result in an actual open pathway in the physical integrity of reactor containment. The finding did not have a crosscutting aspect because the performance deficiency was not representative of current licensee performance

Inspection Report# : 2010004 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 19, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Barricade and Post a High Radiation Area
The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.7.1.a for the failure to maintain a high radiation area barricaded and conspicuously posted. A high radiation area in the Unit 1 containment was posted as a radiation area. Consequently, an individual received unexpected electronic dosimeter dose rate alarm while building scaffolding in the Unit 1 containment building because the worker entered a high radiation area without the knowledge that the dose rates measured 145 millirem per hour. Subsequently, a radiation protection

technician barricaded the area with rope and posted it as a high radiation area. The licensee entered the finding into the corrective action program as Condition Report CR 2010 003382.

The failure to barricade and post a high radiation area was a performance deficiency. The finding was more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective, in that, the failure to properly control a high radiation area had the potential to increase personnel dose. Using NRC Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work control because the licensee did not appropriately plan work activities by incorporating job site conditions or radiological safety [H.3a].

Inspection Report# : 2010003 *(pdf)*

Significance:  Jun 19, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow the Radiation Work Permit Requirements
Inspectors identified a noncited violation of Technical Specification 5.4.1.a for the failure of a rigger to follow radiation work permit requirements. Specifically, a rigger made an unauthorized entry into a high radiation area on a radiation work permit that did not grant access to that area. A radiation protection technician confirmed that the rigger was not briefed and not authorized to enter the high radiation area and had the rigger exit the area. The licensee entered the finding into the corrective action program as Condition Report CR 2010-003458.
The failure to follow the instructions on a radiation work permit was a performance deficiency. The finding was more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective, in that, the failure to follow a radiation work permit instruction had the potential to increase personnel dose. Using NRC Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work practices because the licensee failed to effectively communicate expectations regarding procedural compliance to the rigger [H.4b].

Inspection Report# : 2010003 *(pdf)*

Public Radiation Safety

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.

Miscellaneous

Last modified : March 03, 2011

Comanche Peak 1
1Q/2011 Plant Inspection Findings

Initiating Events

Significance: G Jun 19, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure Causes Inadvertent Power Reduction
The inspectors identified a noncited violation of Technical Specification 5.4.1.a, for the failure to have an adequate procedure for placing a demineralizer resin bed in service. As a result, a reactivity management event occurred when the reactor coolant system was inadvertently borated. This caused an automatic rod withdrawal to maintain reactor coolant system temperature. Operators ultimately reduced power approximately 20 megawatts electric to stabilize the plant. The licensee entered the finding into the corrective action program as Condition Report CR-2010-002725.

The failure to adequately maintain a procedure required by Technical Specification 5.4.1.a was a performance deficiency and resulted in an unplanned boration, automatic rod withdrawal, and 20 megawatt power reduction. The finding was more than minor because it was associated with the procedure quality attribute of the initiating events cornerstone and affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. This finding has a human performance crosscutting aspect associated with the decision making, in that, the licensee did not use conservative assumptions in the decision making process that lead to the use of the demineralizer [H.1b].

Inspection Report# : 2010003 *(pdf)*

Mitigating Systems

Significance: G Mar 19, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Fire Drill Evaluation
The inspectors identified a noncited violation of Technical Specification 5.4.1.d for the failure of the licensee to identify a critical item failure during an unannounced fire drill. As a result, the licensee evaluated the control room operators' performance during a fire drill as being successful when the actual performance resulted in a drill failure. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001803.

The finding was more than minor because the failure of the licensee to identify fire drill performance deficiencies, if left uncorrected, would have the potential to lead to a more significant safety concern. Findings associated with operator performance during dire drills are not evaluated using NRC Manual Chapter 0609, Attachment F, "Fire Protection Significance Determination Process," and require NRC management review using Appendix M, "Significance Determination Process Using Qualitative Criteria." Regional management concluded that the finding was of very low safety significance because it reflected personnel performance during a training drill rather that during an actual fire. The finding has a human performance crosscutting aspect associated with resources because the licensee failed to ensure that the procedure, drill package F11-01, was complete to adequately assure nuclear safety.

Inspection Report# : 2011002 *(pdf)*

Significance: G Mar 19, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and Correct Safety Injection Reset Malfunction
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action” for the failure of the licensee to promptly identify and correct a safety injection reset malfunction caused by a design error. As a result, this malfunction could have delayed the termination of an inadvertent safety injection, a time critical action for avoiding the reactor coolant system reaching water solid conditions. The licensee entered the finding into the corrective action program as Condition Report CR-2011-003476.

The finding was more than minor because it was associated with the design control attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, the finding increased the likelihood of the reactor coolant system reaching water solid conditions during an inadvertent safety injection. Using NRC Manual Chapter 0609, Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to require a phase 2 analysis because, as a potential loss of coolant accident initiator, the worst case degradation of ineffective operator actions would result in exceeding reactor coolant system leakage limits. The inspectors determined that a phase 2 analysis was not applicable to the performance deficiency. A senior reactor analyst reviewed the licensee’s risk estimate and determined that no further analysis was needed to conclude that the conditional risk of an inadvertent safety injection was very low. The licensee’s analysis did not consider the risk related to a steam line break inside containment where the recovery would be complicated by multiple valve manipulations needed to restore reactor coolant pump thermal barrier cooling before securing the charging pumps. However, the low frequency of a sufficiently-sized steam line break inside containment combined with the low probability, two percent, that the safety injection could not be reset reduced the scenario of concern to a frequency of less than 1.0E-6/yr. Therefore, the analyst concluded that the performance deficiency was of very low safety significance. The finding has a problem identification and resolution crosscutting aspect associated with the corrective action program because the licensee failed to thoroughly evaluate the problem.

Inspection Report# : 2011002 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Incorporate Relevant Operating Experience Information into Station Procedures Regarding the Condensate Storage Tank and Diaphragm
The team identified an apparent violation of 10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, involving the failure of personnel to initiate a SmartForm to enter actual or potential adverse conditions into the corrective action program following receipt of operating experience. Specifically, in July 2002, the licensee received relevant information provided by the manufacturer of the Unit 1 and 2 condensate storage tank diaphragms to ensure the diaphragm integrity would be maintained but failed to enter the issue into the corrective action program as required by Comanche Peak Station Procedure STA-206, “Review of Vendor Documents and Vendor Technical Manuals,” Revision 20. In addition, in November 2007, the licensee received industry-operating experience regarding a condensate storage tank diaphragm failure at the Farley Nuclear Plant but failed to enter this issue into the corrective action program as required by Procedure STA-426, “Industry Operating Experience Program,” Revision 1. Because actions were not taken in response to the vendor and operating experience information, the diaphragm was susceptible to failure, which could cause a loss of suction to all three auxiliary feedwater pumps. This finding was entered into the licensee’s corrective action program as Condition Reports CR 2010-005508, CR-2010-005581 and CR-2010-005962.

The team determined that the failure to incorporate relevant operating experience information into station instructions, procedures, or drawings to maintain the condensate storage tank diaphragm in a configuration where its performance during accident conditions would preclude blockage of the suction pipes to the auxiliary feedwater pumps was a performance deficiency. The finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening, in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings,” and determined that the finding represented the degradation of equipment and

functions specifically designed to mitigate the loss of feedwater and that during an event the loss would degrade or make inoperable all three of the auxiliary feedwater pumps. Therefore, the finding was potentially risk significant and a Phase 3 analysis was required. The preliminary significance determination was based on Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria," and indicated that the finding was of low to moderate safety significance (White). This finding has a crosscutting aspect in the area of human performance, work practices, because the licensee did not define and effectively communicate expectations regarding procedural compliance and personnel following procedures involving evaluation of operating experience.

Inspection Report# : 2011009 *(pdf)*
Inspection Report# : 2010006 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Test Control of the Diesel Generator Air Starting System
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XI, Test Control, which states, in part, that all testing required to demonstrate that structures, systems, components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. Specifically, as of June 18, 2010, the licensee failed to complete pre-operational testing required to demonstrate that the emergency diesel generator air start system receivers satisfied the requirements and acceptance limits contained in applicable design documents. This finding was entered into the licensee's corrective action program as Condition Report CR-2010-005924.

The team determined that the failure to ensure that the testing required to demonstrate that the Unit 1 emergency diesel generator air start systems will perform satisfactorily in service and in accordance with written test procedures which incorporated the requirements and acceptance limits contained in applicable design documents was a performance deficiency. The finding was more than minor because it was associated with the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability and capability of safety systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Analysis of Emergency Diesel Generator Frequency
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control, which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to properly translate technical specification allowable diesel generator frequency range to design documents. This finding was entered into the licensee's corrective action program as Condition Report CR-2010-005563.

The team determined that the failure to analyze the emergency diesel generators for operation over the entire range of allowed frequency was a performance deficiency. This finding was more than minor because it was associated with

the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of safety systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding has a crosscutting aspect in the area of problem identification and resolution because the licensee did not effectively incorporate operating experience into the preventive maintenance program for the emergency diesel generators. Specifically, the licensee failed to incorporate information provided in Information Notice 2008-02, which could have affected the capability of equipment such as safety related motor operated pumps to perform their safety function under the most limiting conditions.

Inspection Report# : 2010006 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Evaluation of Hydrogen Generation for Safety-Related and NonSafety-Related Batteries
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to perform an adequate hydrogen evolution calculation, for the safety-related and nonsafety-related batteries, using the most limiting expected condition of forcing maximum current into a fully charged battery which led to a ventilation system design that did not limit hydrogen accumulation to less than two percent of the total volume of the battery areas during all conditions. This finding was entered into the licensee's corrective action program as Condition Reports CR 2010 005941, CR 2010 005941, and CR-2010-006561.

The team determined that the failure to adequately perform the hydrogen evolution calculation for the safety-related battery, using the most limiting condition, was a performance deficiency. This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone attribute of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Significance: SL-IV Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients
The team identified a noncited violation of 10 CFR 50.9, Completeness and Accuracy of Information, which states, in part, that information provided to the Commission by a licensee shall be complete and accurate in all material respects. Specifically, on June 20, 2007, the licensee asserted in their response to Generic Letter 2007-01, "Inaccessible or Underground Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients," Request 2, that Comanche Peak "periodically performs visual inspection for corrosion and degradation of cable tray supports and a preventive maintenance program for inspection/removal of water from manholes." The team determined the licensee had no preventive maintenance program or procedures in place to govern the inspection or

preventive maintenance activities described in their response, and there was no evidence that these manholes, raceways, and supports had ever been inspected prior to November 2009. This finding was entered into the licensee's corrective action program as Condition Report CR-2010-005784.

The team determined that the failure to provide accurate information in the licensee's response to Generic Letter 2007-01 was a performance deficiency. The finding is more than minor because the information was material to the NRC's decision-making processes. Specifically, the information requested by Generic Letter 2007-01 was to enable NRC staff to determine whether the applicable regulatory requirements identified in the generic letter (10 CFR Part 50, Appendix A, General Design Criteria 4, 17, and 18; 10 CFR 50.65(a)(1); 10 CFR Part 50, Appendix B, Criterion XI), were being met with regard to the operational readiness of critical systems that could cause a plant transient or mitigate accidents, and to obtain further information on cable failures.

Inspection Report# : 2010006 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Design Features for Precluding or Minimizing Long- Term Accumulation of Water in Underground Conduits Contaning Medium Voltage Safety Related Cables
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to perform an adequate hydrogen evolution calculation, for the safety-related and nonsafety-related batteries, using the most limiting expected condition of forcing maximum current into a fully charged battery which led to a ventilation system design that did not limit hydrogen accumulation to less than two percent of the total volume of the battery areas during all conditions. This finding was entered into the licensee's corrective action program as Condition Reports CR 2010 005941, CR 2010 005941, and CR-2010-006561.

The team determined that the failure to adequately perform the hydrogen evolution calculation for the safety-related battery, using the most limiting condition, was a performance deficiency. This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone attribute of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Barrier Integrity

Significance: G Sep 18, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
"Failure to Consider Temperature Effects on Air Accumulator Overpressure Protection"
The inspectors identified a noncited violation of 10 CFR 50 Appendix B, Criterion III, "Design Control" for the failure to consider the temperature effect on the pressurization of safety-related air accumulators for containment isolation valves in the main steam line penetration room. As a result, the accumulators could exceed their design pressure during a steam line break. The licensee entered the finding into the corrective action program as Condition

Report CR-2010-006349.

The finding was more than minor because it was associated with the design control attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical barriers protect the public from radionuclide releases caused by events. 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 finding did not result in an actual open pathway in the physical integrity of reactor containment. The finding did not have a crosscutting aspect because the performance deficiency was not representative of current licensee performance

Inspection Report# : 2010004 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 19, 2010
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Barricade and Post a High Radiation Area
The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.7.1.a for the failure to maintain a high radiation area barricaded and conspicuously posted. A high radiation area in the Unit 1 containment was posted as a radiation area. Consequently, an individual received unexpected electronic dosimeter dose rate alarm while building scaffolding in the Unit 1 containment building because the worker entered a high radiation area without the knowledge that the dose rates measured 145 millirem per hour. Subsequently, a radiation protection technician barricaded the area with rope and posted it as a high radiation area. The licensee entered the finding into the corrective action program as Condition Report CR 2010 003382.

The failure to barricade and post a high radiation area was a performance deficiency. The finding was more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective, in that, the failure to properly control a high radiation area had the potential to increase personnel dose. Using NRC Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work control because the licensee did not appropriately plan work activities by incorporating job site conditions or radiological safety [H.3a].

Inspection Report# : 2010003 *(pdf)*

Significance: G Jun 19, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow the Radiation Work Permit Requirements
Inspectors identified a noncited violation of Technical Specification 5.4.1.a for the failure of a rigger to follow radiation work permit requirements. Specifically, a rigger made an unauthorized entry into a high radiation area on a radiation work permit that did not grant access to that area. A radiation protection technician confirmed that the rigger was not briefed and not authorized to enter the high radiation area and had the rigger exit the area. The licensee entered the finding into the corrective action program as Condition Report CR 2010-003458.
The failure to follow the instructions on a radiation work permit was a performance deficiency. The finding was more

than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone and affected the cornerstone objective, in that, the failure to follow a radiation work permit instruction had the potential to increase personnel dose. Using NRC Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance because: (1) it was not associated with as low as reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work practices because the licensee failed to effectively communicate expectations regarding procedural compliance to the rigger [H.4b].

Inspection Report# : 2010003 *(pdf)*

Public Radiation Safety

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.

Miscellaneous

Last modified : June 07, 2011

Comanche Peak 1
2Q/2011 Plant Inspection Findings

Initiating Events

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate External Flooding Instructions
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" for the failure to have adequate external flooding instructions. The licensee's technical requirements manual included circulating water system stop gates as a flood protection measure. This statement was not accurate for a reservoir level greater than 778 feet. As a result, the licensee failed to provide specific instructions for flood protection during circulating water system maintenance with wood barriers in place. In addition, during service water travelling screen replacement, the licensee failed to provide adequate guidance to mitigate debris from entering the service water pump suctions if water level were to increase above 778 feet. As a result, the service water system was susceptible to fouling during a flooding event. The licensee entered the finding into the corrective action program as Condition Report CR-2011-004062.
The licensee's failure to have adequate external flooding instructions that resulted in safety related equipment being vulnerable to external flooding was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external factors attribute of the initiating events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using NRC Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to involve equipment designed to mitigate an external flood and could result in a plant trip or affect more than one train of safety equipment and required a Phase 3 analysis. A senior reactor analyst determined that the finding was of very low safety significance because the calculated bounding delta core damage frequency was 1.9E-8. The finding has a human performance crosscutting aspect associated with decision-making because the licensee failed to demonstrate that nuclear safety is an overriding priority when faced with unexpected plant conditions.
Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 18, 2011
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Properly Install Insulation Results in Frozen Feedwater Flow Sensing Lines
The inspectors reviewed a self-revealing finding for the failure of the licensee to provide adequate instructions to maintenance personnel when installing insulation on feedwater flow sensing lines. As a result, three sensing lines froze and caused a feedwater perturbation that required operators to take control of the system to stabilize the plant. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001224.
The licensee's failure to provide adequate instructions for the installation of insulation on feedwater flow sensing lines was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 18, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Correct a Degraded Charging System Valve
The inspectors reviewed a self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the licensee's failure to correct a deficiency with a charging header vent valve. As a result, the valve failed open after an operator attempted to close the valve resulting in a 40 gpm charging system leak. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001876.

The licensee's failure to correct a leaking vent valve was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : 2011003 *(pdf)*

Mitigating Systems

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: FIN Finding
Inadequate Alternate Power Generator Procedure
The inspectors identified a finding for the failure of the licensee to provide adequate procedure instructions for refueling the alternate power generators. As a result, during a station blackout event, the alternate power generators could have ran out of fuel since the fuel tank was sized for approximately 2.6 hours of operation at full load and instructions for obtaining additional fuel did not exist. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR 2011 005399.
The licensee's failure to provide adequate instructions for replenishing the alternate power generators fuel tank 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, in that, the inadequate instructions did not ensure the availability, reliability, and capability of the alternate power generators to electrical power to the units during a station blackout event. 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 finding did not result in an actual loss safety related equipment for greater than its technical specification allowed outage time and did not represent a loss of equipment designated as risk-significant in the maintenance rule. The finding has a human performance crosscutting aspect associated with resources, in that, the licensee failed to ensure that adequate procedures and equipment were available.

Inspection Report# : 2011003 *(pdf)*

Significance: G May 03, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Effective Corrective Actions for a Condition Adverse to Fire Protection
The team identified a noncited violation of License Condition 2.G for the failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the team identified two examples where the licensee failed to implement effective corrective actions to ensure that time-critical manual actions would be

accomplished within analyzed times for alternative shutdown scenarios. The first example involved the failure to close a spuriously opened pressurizer power-operated relief valve within the time allowed by the postfire safe shutdown analysis. The second example involved the failure to restore station service water cooling before damage could occur to the credited emergency diesel generator in the event of a control room fire with a loss of offsite power. The licensee entered this issue into their corrective action program as Condition Reports CR-2011-001647, CR-2011-001742 and CR-2011-001836. In response to this issue, the licensee re-ordered the procedure steps to isolate the power-operated relief valves and ensure the standby service water pump was running sooner. The licensee planned to perform a validation of the revised procedures.

Failure to implement effective corrective actions to ensure that time-critical manual actions would be accomplished within analyzed times for alternative shutdown scenarios is a performance deficiency. This performance deficiency was more than minor because it was associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The significance of this finding could not be evaluated using Inspection Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” because the performance deficiency involved a control room fire that led to control room abandonment. A senior reactor analyst performed a Phase 3 evaluation bounding analysis that concluded this finding had very low safety significance (Green) because the number of electrical cabinets in the control room and cable spreading room that contained circuits that could have a fire that could affect the power-operated relief valves or station service water system was a small fraction of the total. This performance deficiency had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with their safety significance.
Inspection Report# : 2011007 *(pdf)*

Significance:  May 03, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and Mitigate or Correct Potential Single Spurious Fire Damage Scenario
The team identified a noncited violation of License Condition 2.G for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the licensee failed to recognize that electrical cables for the pressurizer power-operated relief valves and associated block valves were installed in many of the same cable trays, leaving the plant susceptible to fire damage that could spuriously open the power-operated relief valve and prevent the ability to shut the block valve. This scenario could challenge operators by creating a loss of coolant during a plant fire. The licensee entered this issue into their corrective action program as Condition Reports CR-011-001319, CR-2011-001807, CR-2011-001808 and CR-2011-002430. As a compensatory measure, the licensee revised attachment 17 to Procedure ABN-901, “Fire Protection System Alarms or Malfunctions,” Revision 9, to close the affected pressurizer block valves in the event of a fire in the Auxiliary or Safeguards buildings in order to mitigate potential circuit interactions that could spuriously open a power-operated relief valve.

Failure to identify and mitigate or correct an existing plant configuration that was susceptible to single spurious failures while performing expert panel reviews of fire damage scenarios that could prevent safely shutting down the plant in the event of a fire is a performance deficiency. This performance deficiency was more than minor because it is associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team used Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” because the performance deficiency affected fire protection defense-in-depth strategies involving post-fire safe shutdown. Because the Phase 1 screening criteria were not met, the analysis continued to Phase 2. Because the finding did not screen as Green during the Phase 2 analysis, a senior reactor analyst performed a Phase 3 analysis. Using information from the Phase 2 worksheets and discussions with the licensee PRA staff, the senior reactor analyst’s Phase 3 analysis calculated the total change in core damage frequency to be 3.2E-7/yr (Green), based on the proximity of fire sources available to damage these circuits. This finding had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee did not identify the issues completely, accurately, and in a timely manner commensurate with their safety significance while conducting expert panel reviews of this and other scenarios in 2009.

Inspection Report# : 2011007 *(pdf)*

Significance: G May 03, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure Emergency Lights in Safe Shutdown Areas had an 8-Hour Capacity
The team identified a noncited violation of License Condition 2.G for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the licensee failed to establish a maintenance and/or test program that demonstrated that emergency lighting had an 8-hour capacity in areas required for safe shutdown. When inspectors questioned the licensee's practice of replacing the emergency light batteries without ever testing to confirm that the replacement interval was appropriate to ensure an 8-hour capacity, the licensee conducted tests that showed that 22 percent of the batteries on a 3-year replacement interval failed in less than 8 hours. The licensee entered this issue into their corrective action program as Condition Report CR-2011-001821. The licensee created action items to CR-2011-001821 for additional testing on a broader sample of emergency lights to aid in determining the correct replacement interval to ensure operability, and shortened the 3-year replacement interval for lights which failed to meet operability requirements as a result of testing to a more conservative 2-year replacement interval which had no demonstrated testing failures.

The failure to establish a maintenance and/or test program that demonstrated operability for 8-hour emergency lighting required for operator manual actions at safe shutdown equipment is a performance deficiency. The performance deficiency was more than minor because it is associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure of the emergency lights to last 8 hours could adversely affect the ability of operators to perform the manual actions required to support safe shutdown in the event of a fire. The significance of this finding was evaluated using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because the performance deficiency affected fire protection defense-in-depth strategies involving post-fire safe shutdown systems. Using Appendix F, Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements," the finding was assigned a low degradation rating because the finding minimally impacted the performance and reliability of the fire protection program element. The team also noted that operators were required to obtain and carry flashlights. Therefore, the finding screened as having very low safety significance (Green). This finding did not have a crosscutting aspect because it was not indicative of current licensee performance, in that the replacement program had been used for longer than 3 years.

Inspection Report# : 2011007 *(pdf)*

Significance: G Mar 19, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Fire Drill Evaluation
The inspectors identified a noncited violation of Technical Specification 5.4.1.d for the failure of the licensee to identify a critical item failure during an unannounced fire drill. As a result, the licensee evaluated the control room operators' performance during a fire drill as being successful when the actual performance resulted in a drill failure. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001803.

The finding was more than minor because the failure of the licensee to identify fire drill performance deficiencies, if left uncorrected, would have the potential to lead to a more significant safety concern. Findings associated with operator performance during dire drills are not evaluated using NRC Manual Chapter 0609, Attachment F, "Fire Protection Significance Determination Process," and require NRC management review using Appendix M, "Significance Determination Process Using Qualitative Criteria." Regional management concluded that the finding was of very low safety significance because it reflected personnel performance during a training drill rather that during an actual fire. The finding has a human performance crosscutting aspect associated with resources because the licensee failed to ensure that the procedure, drill package F11-01, was complete to adequately assure nuclear safety.

Inspection Report# : 2011002 *(pdf)*

Significance: G Mar 19, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and Correct Safety Injection Reset Malfunction
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action" for the failure of the licensee to promptly identify and correct a safety injection reset malfunction caused by a design error. As a result, this malfunction could have delayed the termination of an inadvertent safety injection, a time critical action for avoiding the reactor coolant system reaching water solid conditions. The licensee entered the finding into the corrective action program as Condition Report CR-2011-003476.

The finding was more than minor because it was associated with the design control attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, the finding increased the likelihood of the reactor coolant system reaching water solid conditions during an inadvertent safety injection. Using NRC Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to require a phase 2 analysis because, as a potential loss of coolant accident initiator, the worst case degradation of ineffective operator actions would result in exceeding reactor coolant system leakage limits. The inspectors determined that a phase 2 analysis was not applicable to the performance deficiency. A senior reactor analyst reviewed the licensee's risk estimate and determined that no further analysis was needed to conclude that the conditional risk of an inadvertent safety injection was very low. The licensee's analysis did not consider the risk related to a steam line break inside containment where the recovery would be complicated by multiple valve manipulations needed to restore reactor coolant pump thermal barrier cooling before securing the charging pumps. However, the low frequency of a sufficiently-sized steam line break inside containment combined with the low probability, two percent, that the safety injection could not be reset reduced the scenario of concern to a frequency of less than 1.0E-6/yr. Therefore, the analyst concluded that the performance deficiency was of very low safety significance. The finding has a problem identification and resolution crosscutting aspect associated with the corrective action program because the licensee failed to thoroughly evaluate the problem.

Inspection Report# : 2011002 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Incorporate Relevant Operating Experience Information into Station Procedures Regarding the Condensate Storage Tank and Diaphragm
The team identified an apparent violation of 10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, involving the failure of personnel to initiate a SmartForm to enter actual or potential adverse conditions into the corrective action program following receipt of operating experience. Specifically, in July 2002, the licensee received relevant information provided by the manufacturer of the Unit 1 and 2 condensate storage tank diaphragms to ensure the diaphragm integrity would be maintained but failed to enter the issue into the corrective action program as required by Comanche Peak Station Procedure STA-206, "Review of Vendor Documents and Vendor Technical Manuals," Revision 20. In addition, in November 2007, the licensee received industry-operating experience regarding a condensate storage tank diaphragm failure at the Farley Nuclear Plant but failed to enter this issue into the corrective action program as required by Procedure STA-426, "Industry Operating Experience Program," Revision 1. Because actions were not taken in response to the vendor and operating experience information, the diaphragm was susceptible to failure, which could cause a loss of suction to all three auxiliary feedwater pumps. This finding was entered into the licensee's corrective action program as Condition Reports CR 2010-005508, CR-2010-005581 and CR-2010-005962.

The team determined that the failure to incorporate relevant operating experience information into station instructions, procedures, or drawings to maintain the condensate storage tank diaphragm in a configuration where its performance during accident conditions would preclude blockage of the suction pipes to the auxiliary feedwater pumps was a performance deficiency. The finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a

Phase 1 screening, in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding represented the degradation of equipment and functions specifically designed to mitigate the loss of feedwater and that during an event the loss would degrade or make inoperable all three of the auxiliary feedwater pumps. Therefore, the finding was potentially risk significant and a Phase 3 analysis was required. The preliminary significance determination was based on Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria," and indicated that the finding was of low to moderate safety significance (White). This finding has a crosscutting aspect in the area of human performance, work practices, because the licensee did not define and effectively communicate expectations regarding procedural compliance and personnel following procedures involving evaluation of operating experience.

Inspection Report# : 2010006 *(pdf)*
Inspection Report# : 2011009 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Test Control of the Diesel Generator Air Starting System
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XI, Test Control, which states, in part, that all testing required to demonstrate that structures, systems, components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. Specifically, as of June 18, 2010, the licensee failed to complete pre-operational testing required to demonstrate that the emergency diesel generator air start system receivers satisfied the requirements and acceptance limits contained in applicable design documents. This finding was entered into the licensee's corrective action program as Condition Report CR-2010-005924.

The team determined that the failure to ensure that the testing required to demonstrate that the Unit 1 emergency diesel generator air start systems will perform satisfactorily in service and in accordance with written test procedures which incorporated the requirements and acceptance limits contained in applicable design documents was a performance deficiency. The finding was more than minor because it was associated with the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability and capability of safety systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Analysis of Emergency Diesel Generator Frequency
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control, which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to properly translate technical specification allowable diesel generator frequency range to design documents. This finding was entered into the licensee's corrective action program as Condition Report CR-2010-005563.

The team determined that the failure to analyze the emergency diesel generators for operation over the entire range of allowed frequency was a performance deficiency. This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of safety systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding has a crosscutting aspect in the area of problem identification and resolution because the licensee did not effectively incorporate operating experience into the preventive maintenance program for the emergency diesel generators. Specifically, the licensee failed to incorporate information provided in Information Notice 2008-02, which could have affected the capability of equipment such as safety related motor operated pumps to perform their safety function under the most limiting conditions.

Inspection Report# : 2010006 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Evaluation of Hydrogen Generation for Safety-Related and NonSafety-Related Batteries
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to perform an adequate hydrogen evolution calculation, for the safety-related and nonsafety-related batteries, using the most limiting expected condition of forcing maximum current into a fully charged battery which led to a ventilation system design that did not limit hydrogen accumulation to less than two percent of the total volume of the battery areas during all conditions. This finding was entered into the licensee's corrective action program as Condition Reports CR 2010 005941, CR 2010 005941, and CR-2010-006561.

The team determined that the failure to adequately perform the hydrogen evolution calculation for the safety-related battery, using the most limiting condition, was a performance deficiency. This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone attribute of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Significance: SL-IV Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients
The team identified a noncited violation of 10 CFR 50.9, Completeness and Accuracy of Information, which states, in part, that information provided to the Commission by a licensee shall be complete and accurate in all material respects. Specifically, on June 20, 2007, the licensee asserted in their response to Generic Letter 2007-01, "Inaccessible or Underground Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients," Request 2, that Comanche Peak "periodically performs visual inspection for corrosion and degradation of cable tray

supports and a preventive maintenance program for inspection/removal of water from manholes." The team determined the licensee had no preventive maintenance program or procedures in place to govern the inspection or preventive maintenance activities described in their response, and there was no evidence that these manholes, raceways, and supports had ever been inspected prior to November 2009. This finding was entered into the licensee's corrective action program as Condition Report CR-2010-005784.

The team determined that the failure to provide accurate information in the licensee's response to Generic Letter 2007-01 was a performance deficiency. The finding is more than minor because the information was material to the NRC's decision-making processes. Specifically, the information requested by Generic Letter 2007-01 was to enable NRC staff to determine whether the applicable regulatory requirements identified in the generic letter (10 CFR Part 50, Appendix A, General Design Criteria 4, 17, and 18; 10 CFR 50.65(a)(1); 10 CFR Part 50, Appendix B, Criterion XI), were being met with regard to the operational readiness of critical systems that could cause a plant transient or mitigate accidents, and to obtain further information on cable failures.

Inspection Report# : 2010006 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Design Features for Precluding or Minimizing Long- Term Accumulation of Water in Underground Conduits Contaning Medium Voltage Safety Related Cables
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to perform an adequate hydrogen evolution calculation, for the safety-related and nonsafety-related batteries, using the most limiting expected condition of forcing maximum current into a fully charged battery which led to a ventilation system design that did not limit hydrogen accumulation to less than two percent of the total volume of the battery areas during all conditions. This finding was entered into the licensee's corrective action program as Condition Reports CR 2010 005941, CR 2010 005941, and CR-2010-006561.

The team determined that the failure to adequately perform the hydrogen evolution calculation for the safety-related battery, using the most limiting condition, was a performance deficiency. This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone attribute of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Barrier Integrity

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Develop Adequate Guidance for Extreme Damage Mitigation Procedures
The inspectors identified a noncited violation of 10 CFR 50.54(hh)(2) for the licensee's failure to develop adequate guidance to restore core and spent fuel cooling capabilities for a postulated loss of large areas of the plant.

Specifically, the licensee failed to ensure suction hose size derived from an engineering report was translated into procedures, failed to provide adequate procedure guidance for use of a fire truck to draw water from the reservoir, and failed to stage hoses in the location specified by procedure. The licensee entered the finding into the corrective action program as Condition Report CR 2011 005830.
The licensee's failure to develop adequate guidance to restore core and spent fuel cooling capabilities for a postulated loss of large areas of the plant was a performance deficiency. The finding was more than minor because it was associated with the procedure quality attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding and containment) protect the public from radionuclide releases caused by accidents or events. Using NRC Manual Chapter 0609, Appendix L, "B.5.b Significance Determination Process," the finding was determined to be of very low safety significance because the finding did not affect both the recoverability and availability of an individual mitigating strategy. The finding has a human performance crosscutting aspect associated with resources, in that, the licensee failed to ensure adequate facilities, equipment, and trained personnel were available to ensure nuclear safety is maintained.

Inspection Report# : 2011003 *(pdf)*

Significance: G Sep 18, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
"Failure to Consider Temperature Effects on Air Accumulator Overpressure Protection"
The inspectors identified a noncited violation of 10 CFR 50 Appendix B, Criterion III, "Design Control" for the failure to consider the temperature effect on the pressurization of safety-related air accumulators for containment isolation valves in the main steam line penetration room. As a result, the accumulators could exceed their design pressure during a steam line break. The licensee entered the finding into the corrective action program as Condition Report CR-2010-006349.

The finding was more than minor because it was associated with the design control attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical barriers protect the public from radionuclide releases caused by events. 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 finding did not result in an actual open pathway in the physical integrity of reactor containment. The finding did not have a crosscutting aspect because the performance deficiency was not representative of current licensee performance

Inspection Report# : 2010004 *(pdf)*

Emergency Preparedness

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: FIN Finding
Failure to Update Severe Accident Management Guidelines
The inspectors identified a finding for the licensee's failure to follow procedure guidance and update the severe accident management guidelines. As a result, as of May 16, 2011, the severe accident management guidelines did not incorporate the latest owners' group guidance, plant hardware changes, and incorporation of extreme damage mitigation guideline actions. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR 2011-005982.
The licensee's failure to follow procedure guidance and update the severe accident management guidelines was a performance deficiency. The finding was more than minor because if left uncorrected, the finding would have a potential to lead to a more significant safety concern. Using NRC Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," the finding was determined to be of very low safety significance

because the finding was not associated with an emergency preparedness planning standard. The finding has a human performance crosscutting aspect associated with resources, in that, personnel failed to follow expectations regarding procedural compliance and closed a condition report without addressing the deficiencies identified in the condition report.

Inspection Report# : 2011003 *(pdf)*

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

Last modified : October 14, 2011

Comanche Peak 1
3Q/2011 Plant Inspection Findings

Initiating Events

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate External Flooding Instructions
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" for the failure to have adequate external flooding instructions. The licensee's technical requirements manual included circulating water system stop gates as a flood protection measure. This statement was not accurate for a reservoir level greater than 778 feet. As a result, the licensee failed to provide specific instructions for flood protection during circulating water system maintenance with wood barriers in place. In addition, during service water travelling screen replacement, the licensee failed to provide adequate guidance to mitigate debris from entering the service water pump suctions if water level were to increase above 778 feet. As a result, the service water system was susceptible to fouling during a flooding event. The licensee entered the finding into the corrective action program as Condition Report CR-2011-004062.
The licensee's failure to have adequate external flooding instructions that resulted in safety related equipment being vulnerable to external flooding was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external factors attribute of the initiating events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using NRC Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to involve equipment designed to mitigate an external flood and could result in a plant trip or affect more than one train of safety equipment and required a Phase 3 analysis. A senior reactor analyst determined that the finding was of very low safety significance because the calculated bounding delta core damage frequency was 1.9E-8. The finding has a human performance crosscutting aspect associated with decision-making because the licensee failed to demonstrate that nuclear safety is an overriding priority when faced with unexpected plant conditions.
Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 18, 2011
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Properly Install Insulation Results in Frozen Feedwater Flow Sensing Lines
The inspectors reviewed a self-revealing finding for the failure of the licensee to provide adequate instructions to maintenance personnel when installing insulation on feedwater flow sensing lines. As a result, three sensing lines froze and caused a feedwater perturbation that required operators to take control of the system to stabilize the plant. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001224.
The licensee's failure to provide adequate instructions for the installation of insulation on feedwater flow sensing lines was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 18, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Correct a Degraded Charging System Valve
The inspectors reviewed a self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the licensee's failure to correct a deficiency with a charging header vent valve. As a result, the valve failed open after an operator attempted to close the valve resulting in a 40 gpm charging system leak. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001876.

The licensee's failure to correct a leaking vent valve was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : 2011003 *(pdf)*

Mitigating Systems

Significance: G Sep 17, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain Operator Licensing Examination Integrity
The inspectors identified a noncited violation of 10 CFR Part 55.49, "Integrity of Examinations and Tests," for the failure of the licensee to ensure the integrity of annual operating exams. During the 2009 annual operating exam, 17 licensed operators received three of five job performance measures, and 17 additional licensed operators received four of five job performance measures for their operating tests that had been administered to other licensed operators in previous weeks. In addition, five licensed operators received two of three crew simulator scenarios as part of their operating test that had been administered to other licensed operators in previous weeks. Allowing more than 50 percent of an operating test section to be comprised of exam material previously administered on any other test in the same examination cycle is considered an exam integrity compromise. However, evaluation of the 2009 exam results for the affected population showed that the compromise did not have an actual effect on the equitable and consistent administration of the examination. The licensee entered the finding into the corrective action program as Condition Report
CR-2010-010851.
The failure of the licensee's training staff to maintain the integrity of examinations administered to licensed operations personnel was a performance deficiency. The finding was more than minor because it adversely impacted the human performance attribute of the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Additionally, if left uncorrected, the performance deficiency could have become more significant in that allowing licensed operators to return to the control room without valid demonstration of appropriate knowledge on the annual operating examinations could be a precursor to a more significant event. Using NRC Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, and the corresponding Appendix I, "Licensed Operator Requalification Significance Determination Process," the finding was determined to have very low safety significance because, although the 2009 finding resulted in a compromise of the integrity of operating test job performance measures and simulator scenarios with no compensatory actions immediately taken when the compromise should have been discovered in 2009. The equitable and consistent administration of the test was not actually impacted by this compromise. This finding has a crosscutting aspect in the area of resources associated with ensuring that procedures are accurately translated from industry standards, such that the 50 percent maximum overlap criteria was not exceeded [H.2c]

Inspection Report# : 2011004 *(pdf)*

Significance: G Sep 17, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure All License Conditions Are Met for Licensed Operators
The inspectors identified a noncited violation of 10 CFR 55.53, "Conditions of License," for the failure of the licensee to ensure that licensed operators met all the conditions of their licenses in order to be considered an active watch stander. Specifically, the licensee failed to ensure that three licensed operators met the complete plant tour requirement specified in 10 CFR 55.53(f) prior to license reactivation and subsequent performance of licensed operator duties. The licensee entered the finding into the corrective action program as Condition Report CR-2011-004990.
- 4 - Enclosure
The failure of the licensee to ensure that all individuals authorized by a license to operate the controls of the facility met the conditions of their licenses as defined in 10 CFR Part 55.53 was a performance deficiency. This finding was more than minor because it was associated with the human performance attribute of the mitigating system cornerstone and affects the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using NRC Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, and the corresponding Appendix I, "Licensed Operator Requalification Significance Determination Process," the finding was determined to have very low safety significance because more than 20 percent of the license reactivation records reviewed contained these deficiencies. This finding has a crosscutting aspect in the area of resources that support human performance in that the licensee failed to ensure that procedures are complete and accurate to ensure licensed operators maintain all conditions of their licenses in accordance with 10 CFR 55.53 [H.2c].
Inspection Report# : 2011004 *(pdf)*

Significance: G Sep 17, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Supervision Causes Inadvertent Engineered Safety Features Actuation
The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.4.1.a for the failure of the unit supervisor to adequately maintain responsibility for the operation of Unit 1 and the supervision of operations personnel during preparations for a reactor startup. As a result, when an operator performed a trip of the main feedwater pump, the motor driven auxiliary feedwater pumps received an engineered safety features actuation and initiated full auxiliary feedwater flow to the steam generators. Operators throttled feedwater flow to prevent overfill of the steam generators and excessive cool down of the reactor coolant system. The licensee entered the finding into the corrective action program as Condition Report CR-2011-008052.
The failure of the unit supervisor to maintain responsibility for the operation of Unit 1 and the supervision of operations personnel during preparations for a reactor startup was a performance deficiency and resulted in an unplanned engineered safety features actuation of the auxiliary feedwater pumps. The finding was more than minor because it was associated with the configuration control attribute of the initiating events cornerstone and affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. This finding has a human performance crosscutting aspect associated with decision making, in that, the unit supervisor failed to communicate the decision to install the auxiliary feedwater pump auto start fuses to all control room personnel [H.1c].
Inspection Report# : 2011004 *(pdf)*

Significance: SL-IV Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Conclude a Change from the UFSAR Required Prior NRC Review and Approval
The inspectors identified a Severity Level IV Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments," associated with the failure to conclude that a change from the UFSAR required prior NRC review and

approval prior to implementation. Specifically, the licensee made changes to the acceptance criteria for allowable diesel generator jacket water leakage in the UFSAR that resulted in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety. The licensee captured this finding in their corrective action program as Condition Report CR 2011-008509.
This finding was more than minor because there was a reasonable likelihood that the change would require a prior NRC approval. Violations of 10 CFR 50.59 are violations that potentially impede or impact the regulatory process and are processed through Traditional Enforcement. As required by Section 6.1 of the Enforcement Policy, the inspectors performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," to determine the significance of the finding. The inspectors determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; and (4) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. Since violations of Title 10 CFR 50.59 may result in conditions evaluated as having very low safety significance by the Significance Determination Process, the inspectors categorized the finding as Severity Level IV in accordance with the Enforcement Manual. The finding was a violation determined to be of very low safety significance, was not repetitive or willful, and was entered into the corrective action program. Therefore, this violation is being treated as a noncited violation consistent with the NRC Enforcement Policy. The inspectors did not identify a crosscutting aspect with this finding since this performance issue occurred in 2004 and is not reflective of current performance (Section 4OA2.5a).
Inspection Report# : 2011006 *(pdf)*

Significance: G Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Diesel Generator Jacket Water Instructions
The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to have documented instructions for an activity affecting quality. Specifically, the licensee did not have documented instructions for filling the diesel generator jacket water system when the normal fill method would not be available during a loss of offsite power. Specifically, prior to July 27, 2011, the licensee failed to have adequate instructions for filling the diesel generator jacket water system, an activity affecting quality, during a loss of offsite power. This issue was entered into the licensee's corrective action program as Condition Report CR 2011 008510.
This performance deficiency was determined 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 IMC 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding is determined to be of very low safety significance because the finding did not result in an actual loss safety related equipment for greater than its technical specification allowed outage time and did not represent a loss of equipment designated as risk-significant in the maintenance rule. The finding did not have a crosscutting aspect because it was not representative of current licensee performance. (Section 4OA2.5b).
Inspection Report# : 2011006 *(pdf)*

Significance: G Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Operability Determination Process for a Degraded Condition Related to Emergency Diesel Generator
The inspectors identified a Green noncited violation of Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of the licensee to follow the operability determination Procedure ODA-309, "Operability Determination and Functionality Assessment Program." Specifically, the licensee did not appropriately evaluate a long-standing degraded condition such that the emergency diesel generators would remain operable for their mission time duration as required by ODA-309. As a result, adequate compensatory measures were not established to ensure operability. This issue was entered into the licensee's corrective action program as Condition Report CR 2011-008508.
The performance deficiency was determined to be more than minor because it was associated with the equipment

performance attribute of the Mitigating System cornerstone and affects the cornerstone objective to ensure the availability and reliability of emergency diesel generators that respond to initiating events to prevent undesirable consequences in that the emergency diesel generators supply power to vital and safety related loads. Because Manual Chapter 0609, Attachment 4, “Phase 1-Initial Screening and Characterization of Findings,” was not well suited for this finding a Phase 3 Risk Significance Estimation was required. A Region IV senior reactor analyst performed a bounding Phase 3 significance determination and found that the finding was of very low safety significance. The bounding change to core damage frequency was 6.7E-7/year. The simplified plant analysis risk (SPAR) model does not include the contribution of the recently installed alternate power generators, which would considerably lower the risk significance of an emergency diesel generator failure for the station blackout sequences, which comprise most of the risk of this finding. The inspectors determined that there was a crosscutting aspect in the area of human performance decision-making because the licensee failed to use conservative assumptions in decision making in the assessment of operability [H.1(b)] (Section 4OA2.5c).
Inspection Report# : 2011006 *(pdf)*

Significance: G Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Repeated Diesel Generator Cam Cover Bolt Failures
The inspectors identified a Green noncited violation of Title 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” in that the licensee did not correct a condition adverse to quality regarding the safety related emergency diesel generators. Specifically, as of July 12, 2011, the licensee failed to assure that the identified broken cam cover bolts on the emergency diesel generators were adequately corrected. This issue was entered into the licensee’s corrective action program as Condition Report CR 2011-008505.
The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating System cornerstone and affects the cornerstone objective to ensure the availability and reliability of emergency diesel generators that respond to initiating events to prevent undesirable consequences in that the emergency diesel generators supply power to vital and safety related loads. Because Manual Chapter 0609, Attachment 4, “Phase 1-Initial Screening and Characterization of Findings,” was not well suited for this finding a Phase 3 Risk Significance Estimation was required. A Region IV senior reactor analyst performed a bounding Phase 3 significance determination and found that the finding was of very low safety significance. The bounding change to core damage frequency was 6.7E-7/year. The simplified plant analysis risk (SPAR) model does not include the contribution of the recently installed alternate power generators, which would considerably lower the risk significance of emergency diesel generator failure for the station blackout sequences, which comprise most of the risk of this finding. The inspectors determined that there was a crosscutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary [P.1(c)] (Section 4OA2.5d).
Inspection Report# : 2011006 *(pdf)*

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: FIN Finding
Inadequate Alternate Power Generator Procedure
The inspectors identified a finding for the failure of the licensee to provide adequate procedure instructions for refueling the alternate power generators. As a result, during a station blackout event, the alternate power generators could have ran out of fuel since the fuel tank was sized for approximately 2.6 hours of operation at full load and instructions for obtaining additional fuel did not exist. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR 2011 005399.
The licensee’s failure to provide adequate instructions for replenishing the alternate power generators fuel tank 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, in that, the inadequate instructions did not ensure the availability, reliability, and capability of the alternate power generators to electrical power to the units during a station blackout event. 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 finding did not result in an actual loss safety related equipment for greater than its technical specification allowed

outage time and did not represent a loss of equipment designated as risk-significant in the maintenance rule. The finding has a human performance crosscutting aspect associated with resources, in that, the licensee failed to ensure that adequate procedures and equipment were available.

Inspection Report# : 2011003 *(pdf)*

Significance: G May 03, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Effective Corrective Actions for a Condition Adverse to Fire Protection
The team identified a noncited violation of License Condition 2.G for the failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the team identified two examples where the licensee failed to implement effective corrective actions to ensure that time-critical manual actions would be accomplished within analyzed times for alternative shutdown scenarios. The first example involved the failure to close a spuriously opened pressurizer power-operated relief valve within the time allowed by the postfire safe shutdown analysis. The second example involved the failure to restore station service water cooling before damage could occur to the credited emergency diesel generator in the event of a control room fire with a loss of offsite power. The licensee entered this issue into their corrective action program as Condition Reports CR-2011-001647, CR-2011-001742 and CR-2011-001836. In response to this issue, the licensee re-ordered the procedure steps to isolate the power-operated relief valves and ensure the standby service water pump was running sooner. The licensee planned to perform a validation of the revised procedures.

Failure to implement effective corrective actions to ensure that time-critical manual actions would be accomplished within analyzed times for alternative shutdown scenarios is a performance deficiency. This performance deficiency was more than minor because it was associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The significance of this finding could not be evaluated using Inspection Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” because the performance deficiency involved a control room fire that led to control room abandonment. A senior reactor analyst performed a Phase 3 evaluation bounding analysis that concluded this finding had very low safety significance (Green) because the number of electrical cabinets in the control room and cable spreading room that contained circuits that could have a fire that could affect the power-operated relief valves or station service water system was a small fraction of the total. This performance deficiency had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with their safety significance.
Inspection Report# : 2011007 *(pdf)*

Significance: G May 03, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and Mitigate or Correct Potential Single Spurious Fire Damage Scenario
The team identified a noncited violation of License Condition 2.G for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the licensee failed to recognize that electrical cables for the pressurizer power-operated relief valves and associated block valves were installed in many of the same cable trays, leaving the plant susceptible to fire damage that could spuriously open the power-operated relief valve and prevent the ability to shut the block valve. This scenario could challenge operators by creating a loss of coolant during a plant fire. The licensee entered this issue into their corrective action program as Condition Reports CR-011-001319, CR-2011-001807, CR-2011-001808 and CR-2011-002430. As a compensatory measure, the licensee revised attachment 17 to Procedure ABN-901, “Fire Protection System Alarms or Malfunctions,” Revision 9, to close the affected pressurizer block valves in the event of a fire in the Auxiliary or Safeguards buildings in order to mitigate potential circuit interactions that could spuriously open a power-operated relief valve.

Failure to identify and mitigate or correct an existing plant configuration that was susceptible to single spurious failures while performing expert panel reviews of fire damage scenarios that could prevent safely shutting down the

plant in the event of a fire is a performance deficiency. This performance deficiency was more than minor because it is associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team used Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because the performance deficiency affected fire protection defense-in-depth strategies involving post-fire safe shutdown. Because the Phase 1 screening criteria were not met, the analysis continued to Phase 2. Because the finding did not screen as Green during the Phase 2 analysis, a senior reactor analyst performed a Phase 3 analysis. Using information from the Phase 2 worksheets and discussions with the licensee PRA staff, the senior reactor analyst's Phase 3 analysis calculated the total change in core damage frequency to be 3.2E-7/yr (Green), based on the proximity of fire sources available to damage these circuits. This finding had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee did not identify the issues completely, accurately, and in a timely manner commensurate with their safety significance while conducting expert panel reviews of this and other scenarios in 2009.

Inspection Report# : 2011007 *(pdf)*

Significance: G May 03, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure Emergency Lights in Safe Shutdown Areas had an 8-Hour Capacity
The team identified a noncited violation of License Condition 2.G for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the licensee failed to establish a maintenance and/or test program that demonstrated that emergency lighting had an 8-hour capacity in areas required for safe shutdown. When inspectors questioned the licensee's practice of replacing the emergency light batteries without ever testing to confirm that the replacement interval was appropriate to ensure an 8-hour capacity, the licensee conducted tests that showed that 22 percent of the batteries on a 3-year replacement interval failed in less than 8 hours. The licensee entered this issue into their corrective action program as Condition Report CR-2011-001821. The licensee created action items to CR-2011-001821 for additional testing on a broader sample of emergency lights to aid in determining the correct replacement interval to ensure operability, and shortened the 3-year replacement interval for lights which failed to meet operability requirements as a result of testing to a more conservative 2-year replacement interval which had no demonstrated testing failures.

The failure to establish a maintenance and/or test program that demonstrated operability for 8-hour emergency lighting required for operator manual actions at safe shutdown equipment is a performance deficiency. The performance deficiency was more than minor because it is associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure of the emergency lights to last 8 hours could adversely affect the ability of operators to perform the manual actions required to support safe shutdown in the event of a fire. The significance of this finding was evaluated using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because the performance deficiency affected fire protection defense-in-depth strategies involving post-fire safe shutdown systems. Using Appendix F, Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements," the finding was assigned a low degradation rating because the finding minimally impacted the performance and reliability of the fire protection program element. The team also noted that operators were required to obtain and carry flashlights. Therefore, the finding screened as having very low safety significance (Green). This finding did not have a crosscutting aspect because it was not indicative of current licensee performance, in that the replacement program had been used for longer than 3 years.

Inspection Report# : 2011007 *(pdf)*

Significance: G Mar 19, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Fire Drill Evaluation

The inspectors identified a noncited violation of Technical Specification 5.4.1.d for the failure of the licensee to identify a critical item failure during an unannounced fire drill. As a result, the licensee evaluated the control room operators' performance during a fire drill as being successful when the actual performance resulted in a drill failure. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001803.

The finding was more than minor because the failure of the licensee to identify fire drill performance deficiencies, if left uncorrected, would have the potential to lead to a more significant safety concern. Findings associated with operator performance during dire drills are not evaluated using NRC Manual Chapter 0609, Attachment F, "Fire Protection Significance Determination Process," and require NRC management review using Appendix M, "Significance Determination Process Using Qualitative Criteria." Regional management concluded that the finding was of very low safety significance because it reflected personnel performance during a training drill rather that during an actual fire. The finding has a human performance crosscutting aspect associated with resources because the licensee failed to ensure that the procedure, drill package F11-01, was complete to adequately assure nuclear safety.

Inspection Report# : 2011002 *(pdf)*

Significance: G Mar 19, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and Correct Safety Injection Reset Malfunction
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action" for the failure of the licensee to promptly identify and correct a safety injection reset malfunction caused by a design error. As a result, this malfunction could have delayed the termination of an inadvertent safety injection, a time critical action for avoiding the reactor coolant system reaching water solid conditions. The licensee entered the finding into the corrective action program as Condition Report CR-2011-003476.

The finding was more than minor because it was associated with the design control attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, the finding increased the likelihood of the reactor coolant system reaching water solid conditions during an inadvertent safety injection. Using NRC Manual Chapter 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to require a phase 2 analysis because, as a potential loss of coolant accident initiator, the worst case degradation of ineffective operator actions would result in exceeding reactor coolant system leakage limits. The inspectors determined that a phase 2 analysis was not applicable to the performance deficiency. A senior reactor analyst reviewed the licensee's risk estimate and determined that no further analysis was needed to conclude that the conditional risk of an inadvertent safety injection was very low. The licensee's analysis did not consider the risk related to a steam line break inside containment where the recovery would be complicated by multiple valve manipulations needed to restore reactor coolant pump thermal barrier cooling before securing the charging pumps. However, the low frequency of a sufficiently-sized steam line break inside containment combined with the low probability, two percent, that the safety injection could not be reset reduced the scenario of concern to a frequency of less than 1.0E-6/yr. Therefore, the analyst concluded that the performance deficiency was of very low safety significance. The finding has a problem identification and resolution crosscutting aspect associated with the corrective action program because the licensee failed to thoroughly evaluate the problem.

Inspection Report# : 2011002 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Incorporate Relevant Operating Experience Information into Station Procedures Regarding the Condensate Storage Tank and Diaphragm
The team identified an apparent violation of 10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, involving the failure of personnel to initiate a SmartForm to enter actual or potential adverse conditions into the corrective action program following receipt of operating experience. Specifically, in July 2002, the licensee received relevant information provided by the manufacturer of the Unit 1 and 2 condensate storage tank diaphragms to ensure the diaphragm integrity would be maintained but failed to enter the issue into the corrective action program as

required by Comanche Peak Station Procedure STA-206, “Review of Vendor Documents and Vendor Technical Manuals,” Revision 20. In addition, in November 2007, the licensee received industry-operating experience regarding a condensate storage tank diaphragm failure at the Farley Nuclear Plant but failed to enter this issue into the corrective action program as required by Procedure STA-426, “Industry Operating Experience Program,” Revision 1. Because actions were not taken in response to the vendor and operating experience information, the diaphragm was susceptible to failure, which could cause a loss of suction to all three auxiliary feedwater pumps. This finding was entered into the licensee’s corrective action program as Condition Reports CR 2010-005508, CR-2010-005581 and CR-2010-005962.

The team determined that the failure to incorporate relevant operating experience information into station instructions, procedures, or drawings to maintain the condensate storage tank diaphragm in a configuration where its performance during accident conditions would preclude blockage of the suction pipes to the auxiliary feedwater pumps was a performance deficiency. The finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening, in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings,” and determined that the finding represented the degradation of equipment and functions specifically designed to mitigate the loss of feedwater and that during an event the loss would degrade or make inoperable all three of the auxiliary feedwater pumps. Therefore, the finding was potentially risk significant and a Phase 3 analysis was required. The preliminary significance determination was based on Inspection Manual Chapter 0609, Appendix M, “Significance Determination Process Using Qualitative Criteria,” and indicated that the finding was of low to moderate safety significance (White). This finding has a crosscutting aspect in the area of human performance, work practices, because the licensee did not define and effectively communicate expectations regarding procedural compliance and personnel following procedures involving evaluation of operating experience.

Inspection Report# : 2010006 *(pdf)*
Inspection Report# : 2011009 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Test Control of the Diesel Generator Air Starting System
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XI, Test Control, which states, in part, that all testing required to demonstrate that structures, systems, components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. Specifically, as of June 18, 2010, the licensee failed to complete pre-operational testing required to demonstrate that the emergency diesel generator air start system receivers satisfied the requirements and acceptance limits contained in applicable design documents. This finding was entered into the licensee’s corrective action program as Condition Report CR-2010-005924.

The team determined that the failure to ensure that the testing required to demonstrate that the Unit 1 emergency diesel generator air start systems will perform satisfactorily in service and in accordance with written test procedures which incorporated the requirements and acceptance limits contained in applicable design documents was a performance deficiency. The finding was more than minor because it was associated with the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability and capability of safety systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Inspection Manual Chapter 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings,” and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Analysis of Emergency Diesel Generator Frequency
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control, which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to properly translate technical specification allowable diesel generator frequency range to design documents. This finding was entered into the licensee's corrective action program as Condition Report CR-2010-005563.

The team determined that the failure to analyze the emergency diesel generators for operation over the entire range of allowed frequency was a performance deficiency. This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability, reliability, and capability of safety systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Inspection Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding has a crosscutting aspect in the area of problem identification and resolution because the licensee did not effectively incorporate operating experience into the preventive maintenance program for the emergency diesel generators. Specifically, the licensee failed to incorporate information provided in Information Notice 2008-02, which could have affected the capability of equipment such as safety related motor operated pumps to perform their safety function under the most limiting conditions.

Inspection Report# : 2010006 *(pdf)*

Significance: G Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Evaluation of Hydrogen Generation for Safety-Related and NonSafety-Related Batteries
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to perform an adequate hydrogen evolution calculation, for the safety-related and nonsafety-related batteries, using the most limiting expected condition of forcing maximum current into a fully charged battery which led to a ventilation system design that did not limit hydrogen accumulation to less than two percent of the total volume of the battery areas during all conditions. This finding was entered into the licensee's corrective action program as Condition Reports CR 2010 005941, CR 2010 005941, and CR-2010-006561.

The team determined that the failure to adequately perform the hydrogen evolution calculation for the safety-related battery, using the most limiting condition, was a performance deficiency. This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone attribute of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the

most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Significance: SL-IV Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients
The team identified a noncited violation of 10 CFR 50.9, Completeness and Accuracy of Information, which states, in part, that information provided to the Commission by a licensee shall be complete and accurate in all material respects. Specifically, on June 20, 2007, the licensee asserted in their response to Generic Letter 2007-01, "Inaccessible or Underground Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients," Request 2, that Comanche Peak "periodically performs visual inspection for corrosion and degradation of cable tray supports and a preventive maintenance program for inspection/removal of water from manholes." The team determined the licensee had no preventive maintenance program or procedures in place to govern the inspection or preventive maintenance activities described in their response, and there was no evidence that these manholes, raceways, and supports had ever been inspected prior to November 2009. This finding was entered into the licensee's corrective action program as Condition Report CR-2010-005784.

The team determined that the failure to provide accurate information in the licensee's response to Generic Letter 2007-01 was a performance deficiency. The finding is more than minor because the information was material to the NRC's decision-making processes. Specifically, the information requested by Generic Letter 2007-01 was to enable NRC staff to determine whether the applicable regulatory requirements identified in the generic letter (10 CFR Part 50, Appendix A, General Design Criteria 4, 17, and 18; 10 CFR 50.65(a)(1); 10 CFR Part 50, Appendix B, Criterion XI), were being met with regard to the operational readiness of critical systems that could cause a plant transient or mitigate accidents, and to obtain further information on cable failures.

Inspection Report# : 2010006 *(pdf)*

Significance:  Nov 04, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Design Features for Precluding or Minimizing Long- Term Accumulation of Water in Underground Conduits Contaning Medium Voltage Safety Related Cables
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control which states, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, as of June 18, 2010, the licensee failed to perform an adequate hydrogen evolution calculation, for the safety-related and nonsafety-related batteries, using the most limiting expected condition of forcing maximum current into a fully charged battery which led to a ventilation system design that did not limit hydrogen accumulation to less than two percent of the total volume of the battery areas during all conditions. This finding was entered into the licensee's corrective action program as Condition Reports CR 2010 005941, CR 2010 005941, and CR-2010-006561.

The team determined that the failure to adequately perform the hydrogen evolution calculation for the safety-related battery, using the most limiting condition, was a performance deficiency. This finding was more than minor because it was associated with the design control attribute of the Mitigating Systems Cornerstone and affected the cornerstone attribute of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined that the finding was of very low safety significance (Green) because it was a design or qualification issue confirmed not to result in a loss of operability or functionality, it did not result in the loss of a system safety function, it did not represent the loss of a single train for greater than technical specification allowed outage time, it did not represent a loss of one or more non-technical specification risk significant equipment for greater than 24 hours, and it did not screen as potentially risk significant due to seismic, flooding, or severe weather. This finding did not have a crosscutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2010006 *(pdf)*

Barrier Integrity

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Develop Adequate Guidance for Extreme Damage Mitigation Procedures
The inspectors identified a noncited violation of 10 CFR 50.54(hh)(2) for the licensee's failure to develop adequate guidance to restore core and spent fuel cooling capabilities for a postulated loss of large areas of the plant. Specifically, the licensee failed to ensure suction hose size derived from an engineering report was translated into procedures, failed to provide adequate procedure guidance for use of a fire truck to draw water from the reservoir, and failed to stage hoses in the location specified by procedure. The licensee entered the finding into the corrective action program as Condition Report CR 2011 005830.
The licensee's failure to develop adequate guidance to restore core and spent fuel cooling capabilities for a postulated loss of large areas of the plant was a performance deficiency. The finding was more than minor because it was associated with the procedure quality attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding and containment) protect the public from radionuclide releases caused by accidents or events. Using NRC Manual Chapter 0609, Appendix L, "B.5.b Significance Determination Process," the finding was determined to be of very low safety significance because the finding did not affect both the recoverability and availability of an individual mitigating strategy. The finding has a human performance crosscutting aspect associated with resources, in that, the licensee failed to ensure adequate facilities, equipment, and trained personnel were available to ensure nuclear safety is maintained.

Inspection Report# : 2011003 *(pdf)*

Emergency Preparedness

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: FIN Finding
Failure to Update Severe Accident Management Guidelines
The inspectors identified a finding for the licensee's failure to follow procedure guidance and update the severe accident management guidelines. As a result, as of May 16, 2011, the severe accident management guidelines did not incorporate the latest owners' group guidance, plant hardware changes, and incorporation of extreme damage mitigation guideline actions. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR 2011-005982.
The licensee's failure to follow procedure guidance and update the severe accident management guidelines was a performance deficiency. The finding was more than minor because if left uncorrected, the finding would have a potential to lead to a more significant safety concern. Using NRC Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," the finding was determined to be of very low safety significance because the finding was not associated with an emergency preparedness planning standard. The finding has a human performance crosscutting aspect associated with resources, in that, personnel failed to follow expectations regarding procedural compliance and closed a condition report without addressing the deficiencies identified in the condition report.

Inspection Report# : 2011003 *(pdf)*

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

Last modified : January 04, 2012

Comanche Peak 1
4Q/2011 Plant Inspection Findings

Initiating Events

Significance: G Sep 17, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Supervision Causes Inadvertent Engineered Safety Features Actuation
The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.4.1.a for the failure of the unit supervisor to adequately maintain responsibility for the operation of Unit 1 and the supervision of operations personnel during preparations for a reactor startup. As a result, when an operator performed a trip of the main feedwater pump, the motor driven auxiliary feedwater pumps received an engineered safety features actuation and initiated full auxiliary feedwater flow to the steam generators. Operators throttled feedwater flow to prevent overfill of the steam generators and excessive cool down of the reactor coolant system. The licensee entered the finding into the corrective action program as Condition Report CR-2011-008052.

The failure of the unit supervisor to maintain responsibility for the operation of Unit 1 and the supervision of operations personnel during preparations for a reactor startup was a performance deficiency and resulted in an unplanned engineered safety features actuation of the auxiliary feedwater pumps. The finding was more than minor because it was associated with the configuration control attribute of the initiating events cornerstone and affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. This finding has a human performance crosscutting aspect associated with decision making, in that, the unit supervisor failed to communicate the decision to install the auxiliary feedwater pump auto start fuses to all control room personnel.
Inspection Report# : 2011004 *(pdf)*

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate External Flooding Instructions
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control” for the failure to have adequate external flooding instructions. The licensee’s technical requirements manual included circulating water system stop gates as a flood protection measure. This statement was not accurate for a reservoir level greater than 778 feet. As a result, the licensee failed to provide specific instructions for flood protection during circulating water system maintenance with wood barriers in place. In addition, during service water travelling screen replacement, the licensee failed to provide adequate guidance to mitigate debris from entering the service water pump suctions if water level were to increase above 778 feet. As a result, the service water system was susceptible to fouling during a flooding event. The licensee entered the finding into the corrective action program as Condition Report CR-2011-004062.

The licensee’s failure to have adequate external flooding instructions that resulted in safety related equipment being vulnerable to external flooding was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external factors attribute of the initiating events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using NRC Manual Chapter 0609, Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to involve equipment designed to mitigate an external flood and could result in a plant trip or affect more than one train of safety equipment and required a Phase 3 analysis. A senior reactor analyst determined that the finding was of very low safety significance because the calculated bounding delta core damage frequency was 1.9E-8. The finding has a human

performance crosscutting aspect associated with decision-making because the licensee failed to demonstrate that nuclear safety is an overriding priority when faced with unexpected plant conditions.
Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 18, 2011
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Properly Install Insulation Results in Frozen Feedwater Flow Sensing Lines
The inspectors reviewed a self-revealing finding for the failure of the licensee to provide adequate instructions to maintenance personnel when installing insulation on feedwater flow sensing lines. As a result, three sensing lines froze and caused a feedwater perturbation that required operators to take control of the system to stabilize the plant. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001224.

The licensee's failure to provide adequate instructions for the installation of insulation on feedwater flow sensing lines was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 18, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Correct a Degraded Charging System Valve
The inspectors reviewed a self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the licensee's failure to correct a deficiency with a charging header vent valve. As a result, the valve failed open after an operator attempted to close the valve resulting in a 40 gpm charging system leak. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001876.

The licensee's failure to correct a leaking vent valve was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : 2011003 *(pdf)*

Significance: G Mar 19, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and Correct Safety Injection Reset Malfunction
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action" for the failure of the licensee to promptly identify and correct a safety injection reset malfunction caused by a design error. As a result, this malfunction could have delayed the termination of an inadvertent safety injection, a time critical action for avoiding the reactor coolant system reaching water solid conditions. The licensee entered the finding into the corrective action program as Condition Report CR-2011-003476.

The finding was more than minor because it was associated with the design control attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, the finding increased the likelihood of the reactor coolant system reaching water solid conditions during an inadvertent safety injection. Using NRC Manual Chapter 0609, Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to require a phase 2 analysis because, as a potential loss of coolant accident initiator, the worst case degradation of ineffective operator actions would result in exceeding reactor coolant system leakage limits. The inspectors determined that a phase 2 analysis was not applicable to the performance deficiency. A senior reactor analyst reviewed the licensee’s risk estimate and determined that no further analysis was needed to conclude that the conditional risk of an inadvertent safety injection was very low. The licensee’s analysis did not consider the risk related to a steam line break inside containment where the recovery would be complicated by multiple valve manipulations needed to restore reactor coolant pump thermal barrier cooling before securing the charging pumps. However, the low frequency of a sufficiently-sized steam line break inside containment combined with the low probability, two percent, that the safety injection could not be reset reduced the scenario of concern to a frequency of less than 1.0E-6/yr. Therefore, the analyst concluded that the performance deficiency was of very low safety significance. The finding has a problem identification and resolution crosscutting aspect associated with the corrective action program because the licensee failed to thoroughly evaluate the problem.

Inspection Report# : 2011002 *(pdf)*

Mitigating Systems

Significance: G Sep 17, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain Operator Licensing Examination Integrity
The inspectors identified a noncited violation of 10 CFR Part 55.49, “Integrity of Examinations and Tests,” for the failure of the licensee to ensure the integrity of annual operating exams. During the 2009 annual operating exam, 17 licensed operators received three of five job performance measures, and 17 additional licensed operators received four of five job performance measures for their operating tests that had been administered to other licensed operators in previous weeks. In addition, five licensed operators received two of three crew simulator scenarios as part of their operating test that had been administered to other licensed operators in previous weeks. Allowing more than 50 percent of an operating test section to be comprised of exam material previously administered on any other test in the same examination cycle is considered an exam integrity compromise. However, evaluation of the 2009 exam results for the affected population showed that the compromise did not have an actual effect on the equitable and consistent administration of the examination. The licensee entered the finding into the corrective action program as Condition Report
CR-2010-010851.

The failure of the licensee’s training staff to maintain the integrity of examinations administered to licensed operations personnel was a performance deficiency. The finding was more than minor because it adversely impacted the human performance attribute of the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Additionally, if left uncorrected, the performance deficiency could have become more significant in that allowing licensed operators to return to the control room without valid demonstration of appropriate knowledge on the annual operating examinations could be a precursor to a more significant event. Using NRC Manual Chapter 0609, “Significance Determination Process,” Phase 1 worksheets, and the corresponding Appendix I, “Licensed Operator Requalification Significance Determination Process,” the finding was determined to have very low safety significance because, although the 2009 finding resulted in a compromise of the integrity of operating test job performance measures and simulator scenarios with no compensatory actions immediately taken when the compromise should have been discovered in 2009. The equitable and consistent administration of the test was not actually impacted by this compromise. This finding has a crosscutting aspect in the area of resources associated with ensuring that procedures are accurately translated from industry standards, such that the 50 percent maximum overlap criteria was not exceeded.

Inspection Report# : 2011004 *(pdf)*

Significance: G Sep 17, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure All License Conditions Are Met for Licensed Operators
The inspectors identified a noncited violation of 10 CFR 55.53, "Conditions of License," for the failure of the licensee to ensure that licensed operators met all the conditions of their licenses in order to be considered an active watch stander. Specifically, the licensee failed to ensure that three licensed operators met the complete plant tour requirement specified in 10 CFR 55.53(f) prior to license reactivation and subsequent performance of licensed operator duties. The licensee entered the finding into the corrective action program as Condition Report CR-2011-004990.

The failure of the licensee to ensure that all individuals authorized by a license to operate the controls of the facility met the conditions of their licenses as defined in 10 CFR Part 55.53 was a performance deficiency. This finding was more than minor because it was associated with the human performance attribute of the mitigating system cornerstone and affects the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using NRC Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, and the corresponding Appendix I, "Licensed Operator Requalification Significance Determination Process," the finding was determined to have very low safety significance because more than 20 percent of the license reactivation records reviewed contained these deficiencies. This finding has a crosscutting aspect in the area of resources that support human performance in that the licensee failed to ensure that procedures are complete and accurate to ensure licensed operators maintain all conditions of their licenses in accordance with 10 CFR 55.53.
Inspection Report# : 2011004 *(pdf)*

Significance: SL-IV Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Conclude a Change from the UFSAR Required Prior NRC Review and Approval
The inspectors identified a Severity Level IV Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments," associated with the failure to conclude that a change from the UFSAR required prior NRC review and approval prior to implementation. Specifically, the licensee made changes to the acceptance criteria for allowable diesel generator jacket water leakage in the UFSAR that resulted in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety. The licensee captured this finding in their corrective action program as Condition Report CR 2011-008509.

This finding was more than minor because there was a reasonable likelihood that the change would require a prior NRC approval. Violations of 10 CFR 50.59 are violations that potentially impede or impact the regulatory process and are processed through Traditional Enforcement. As required by Section 6.1 of the Enforcement Policy, the inspectors performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," to determine the significance of the finding. The inspectors determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; and (4) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. Since violations of Title 10 CFR 50.59 may result in conditions evaluated as having very low safety significance by the Significance Determination Process, the inspectors categorized the finding as Severity Level IV in accordance with the Enforcement Manual. The finding was a violation determined to be of very low safety significance, was not repetitive or willful, and was entered into the corrective action program. Therefore, this violation is being treated as a noncited violation consistent with the NRC Enforcement Policy. The inspectors did not identify a crosscutting aspect with this finding since this performance issue occurred in 2004 and is not reflective of current performance.
Inspection Report# : 2011006 *(pdf)*

Significance: G Jul 28, 2011

Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Diesel Generator Jacket Water Instructions
The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to have documented instructions for an activity affecting quality. Specifically, the licensee did not have documented instructions for filling the diesel generator jacket water system when the normal fill method would not be available during a loss of offsite power. Specifically, prior to July 27, 2011, the licensee failed to have adequate instructions for filling the diesel generator jacket water system, an activity affecting quality, during a loss of offsite power. This issue was entered into the licensee's corrective action program as Condition Report CR-2011-008510.

This performance deficiency was determined 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 IMC 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding is determined to be of very low safety significance because the finding did not result in an actual loss safety related equipment for greater than its technical specification allowed outage time and did not represent a loss of equipment designated as risk-significant in the maintenance rule. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.
Inspection Report# : 2011006 *(pdf)*

Significance: G Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Operability Determination Process for a Degraded Condition Related to Emergency Diesel Generator
The inspectors identified a Green noncited violation of Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of the licensee to follow the operability determination Procedure ODA-309, "Operability Determination and Functionality Assessment Program." Specifically, the licensee did not appropriately evaluate a long-standing degraded condition such that the emergency diesel generators would remain operable for their mission time duration as required by ODA-309. As a result, adequate compensatory measures were not established to ensure operability. This issue was entered into the licensee's corrective action program as Condition Report CR 2011-008508.

The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating System cornerstone and affects the cornerstone objective to ensure the availability and reliability of emergency diesel generators that respond to initiating events to prevent undesirable consequences in that the emergency diesel generators supply power to vital and safety related loads. Because Manual Chapter 0609, Attachment 4, "Phase 1-Initial Screening and Characterization of Findings," was not well suited for this finding a Phase 3 Risk Significance Estimation was required. A Region IV senior reactor analyst performed a bounding Phase 3 significance determination and found that the finding was of very low safety significance. The bounding change to core damage frequency was 6.7E-7/year. The simplified plant analysis risk (SPAR) model does not include the contribution of the recently installed alternate power generators, which would considerably lower the risk significance of an emergency diesel generator failure for the station blackout sequences, which comprise most of the risk of this finding. The inspectors determined that there was a crosscutting aspect in the area of human performance decision-making because the licensee failed to use conservative assumptions in decision making in the assessment of operability.
Inspection Report# : 2011006 *(pdf)*

Significance: G Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Repeated Diesel Generator Cam Cover Bolt Failures
The inspectors identified a Green noncited violation of Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," in that the licensee did not correct a condition adverse to quality regarding the safety related emergency diesel generators. Specifically, as of July 12, 2011, the licensee failed to assure that the identified broken cam cover

bolts on the emergency diesel generators were adequately corrected. This issue was entered into the licensee's corrective action program as Condition Report CR 2011-008505.

The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating System cornerstone and affects the cornerstone objective to ensure the availability and reliability of emergency diesel generators that respond to initiating events to prevent undesirable consequences in that the emergency diesel generators supply power to vital and safety related loads. Because Manual Chapter 0609, Attachment 4, "Phase 1-Initial Screening and Characterization of Findings," was not well suited for this finding a Phase 3 Risk Significance Estimation was required. A Region IV senior reactor analyst performed a bounding Phase 3 significance determination and found that the finding was of very low safety significance. The bounding change to core damage frequency was 6.7E-7/year. The simplified plant analysis risk (SPAR) model does not include the contribution of the recently installed alternate power generators, which would considerably lower the risk significance of emergency diesel generator failure for the station blackout sequences, which comprise most of the risk of this finding. The inspectors determined that there was a crosscutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary.
Inspection Report# : 2011006 *(pdf)*

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: FIN Finding
Inadequate Alternate Power Generator Procedure
The inspectors identified a finding for the failure of the licensee to provide adequate procedure instructions for refueling the alternate power generators. As a result, during a station blackout event, the alternate power generators could have ran out of fuel since the fuel tank was sized for approximately 2.6 hours of operation at full load and instructions for obtaining additional fuel did not exist. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR 2011 005399.

The licensee's failure to provide adequate instructions for replenishing the alternate power generators fuel tank 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, in that, the inadequate instructions did not ensure the availability, reliability, and capability of the alternate power generators to electrical power to the units during a station blackout event. 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 finding did not result in an actual loss safety related equipment for greater than its technical specification allowed outage time and did not represent a loss of equipment designated as risk-significant in the maintenance rule. The finding has a human performance crosscutting aspect associated with resources, in that, the licensee failed to ensure that adequate procedures and equipment were available.

Inspection Report# : 2011003 *(pdf)*

Significance: G May 03, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Effective Corrective Actions for a Condition Adverse to Fire Protection
The team identified a noncited violation of License Condition 2.G for the failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the team identified two examples where the licensee failed to implement effective corrective actions to ensure that time-critical manual actions would be accomplished within analyzed times for alternative shutdown scenarios. The first example involved the failure to close a spuriously opened pressurizer power-operated relief valve within the time allowed by the postfire safe shutdown analysis. The second example involved the failure to restore station service water cooling before damage could occur to the credited emergency diesel generator in the event of a control room fire with a loss of offsite power. The licensee entered this issue into their corrective action program as Condition Reports CR-2011-001647, CR-2011-001742 and CR-2011-001836. In response to this issue, the licensee re-ordered the procedure steps to isolate the power-operated

relief valves and ensure the standby service water pump was running sooner. The licensee planned to perform a validation of the revised procedures.

Failure to implement effective corrective actions to ensure that time-critical manual actions would be accomplished within analyzed times for alternative shutdown scenarios is a performance deficiency. This performance deficiency was more than minor because it was associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The significance of this finding could not be evaluated using Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because the performance deficiency involved a control room fire that led to control room abandonment. A senior reactor analyst performed a Phase 3 evaluation bounding analysis that concluded this finding had very low safety significance (Green) because the number of electrical cabinets in the control room and cable spreading room that contained circuits that could have a fire that could affect the power-operated relief valves or station service water system was a small fraction of the total. This performance deficiency had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with their safety significance.
Inspection Report# : 2011007 *(pdf)*

Significance: G May 03, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and Mitigate or Correct Potential Single Spurious Fire Damage Scenario
The team identified a noncited violation of License Condition 2.G for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the licensee failed to recognize that electrical cables for the pressurizer power-operated relief valves and associated block valves were installed in many of the same cable trays, leaving the plant susceptible to fire damage that could spuriously open the power-operated relief valve and prevent the ability to shut the block valve. This scenario could challenge operators by creating a loss of coolant during a plant fire. The licensee entered this issue into their corrective action program as Condition Reports CR-011-001319, CR-2011-001807, CR-2011-001808 and CR-2011-002430. As a compensatory measure, the licensee revised attachment 17 to Procedure ABN-901, "Fire Protection System Alarms or Malfunctions," Revision 9, to close the affected pressurizer block valves in the event of a fire in the Auxiliary or Safeguards buildings in order to mitigate potential circuit interactions that could spuriously open a power-operated relief valve.

Failure to identify and mitigate or correct an existing plant configuration that was susceptible to single spurious failures while performing expert panel reviews of fire damage scenarios that could prevent safely shutting down the plant in the event of a fire is a performance deficiency. This performance deficiency was more than minor because it is associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team used Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because the performance deficiency affected fire protection defense-in-depth strategies involving post-fire safe shutdown. Because the Phase 1 screening criteria were not met, the analysis continued to Phase 2. Because the finding did not screen as Green during the Phase 2 analysis, a senior reactor analyst performed a Phase 3 analysis. Using information from the Phase 2 worksheets and discussions with the licensee PRA staff, the senior reactor analyst's Phase 3 analysis calculated the total change in core damage frequency to be 3.2E-7/yr (Green), based on the proximity of fire sources available to damage these circuits. This finding had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee did not identify the issues completely, accurately, and in a timely manner commensurate with their safety significance while conducting expert panel reviews of this and other scenarios in 2009. After review of the additional information provided by licensee, the inspectors determined that no cross-cutting aspect applied. The NRC documented this in letter dated July 8, 2011 (ADAMS Accession No. ML11192A046).
Inspection Report# : 2011007 *(pdf)*

Significance: G May 03, 2011
Identified By: NRC

Item Type: NCV NonCited Violation
Failure to Ensure Emergency Lights in Safe Shutdown Areas had an 8-Hour Capacity
The team identified a noncited violation of License Condition 2.G for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the licensee failed to establish a maintenance and/or test program that demonstrated that emergency lighting had an 8-hour capacity in areas required for safe shutdown. When inspectors questioned the licensee's practice of replacing the emergency light batteries without ever testing to confirm that the replacement interval was appropriate to ensure an 8-hour capacity, the licensee conducted tests that showed that 22 percent of the batteries on a 3-year replacement interval failed in less than 8 hours. The licensee entered this issue into their corrective action program as Condition Report CR-2011-001821. The licensee created action items to CR-2011-001821 for additional testing on a broader sample of emergency lights to aid in determining the correct replacement interval to ensure operability, and shortened the 3-year replacement interval for lights which failed to meet operability requirements as a result of testing to a more conservative 2-year replacement interval which had no demonstrated testing failures.

The failure to establish a maintenance and/or test program that demonstrated operability for 8-hour emergency lighting required for operator manual actions at safe shutdown equipment is a performance deficiency. The performance deficiency was more than minor because it is associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure of the emergency lights to last 8 hours could adversely affect the ability of operators to perform the manual actions required to support safe shutdown in the event of a fire. The significance of this finding was evaluated using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because the performance deficiency affected fire protection defense-in-depth strategies involving post-fire safe shutdown systems. Using Appendix F, Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements," the finding was assigned a low degradation rating because the finding minimally impacted the performance and reliability of the fire protection program element. The team also noted that operators were required to obtain and carry flashlights. Therefore, the finding screened as having very low safety significance (Green). This finding did not have a crosscutting aspect because it was not indicative of current licensee performance, in that the replacement program had been used for longer than 3 years.

Inspection Report# : 2011007 *(pdf)*

Significance:  Mar 19, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Fire Drill Evaluation
The inspectors identified a noncited violation of Technical Specification 5.4.1.d for the failure of the licensee to identify a critical item failure during an unannounced fire drill. As a result, the licensee evaluated the control room operators' performance during a fire drill as being successful when the actual performance resulted in a drill failure. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001803.

The finding was more than minor because the failure of the licensee to identify fire drill performance deficiencies, if left uncorrected, would have the potential to lead to a more significant safety concern. Findings associated with operator performance during dire drills are not evaluated using NRC Manual Chapter 0609, Attachment F, "Fire Protection Significance Determination Process," and require NRC management review using Appendix M, "Significance Determination Process Using Qualitative Criteria." Regional management concluded that the finding was of very low safety significance because it reflected personnel performance during a training drill rather that during an actual fire. The finding has a human performance crosscutting aspect associated with resources because the licensee failed to ensure that the procedure, drill package F11-01, was complete to adequately assure nuclear safety.

Inspection Report# : 2011002 *(pdf)*

Barrier Integrity

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Develop Adequate Guidance for Extreme Damage Mitigation Procedures
The inspectors identified a noncited violation of 10 CFR 50.54(hh)(2) for the licensee's failure to develop adequate guidance to restore core and spent fuel cooling capabilities for a postulated loss of large areas of the plant. Specifically, the licensee failed to ensure suction hose size derived from an engineering report was translated into procedures, failed to provide adequate procedure guidance for use of a fire truck to draw water from the reservoir, and failed to stage hoses in the location specified by procedure. The licensee entered the finding into the corrective action program as Condition Report CR 2011 005830.

The licensee's failure to develop adequate guidance to restore core and spent fuel cooling capabilities for a postulated loss of large areas of the plant was a performance deficiency. The finding was more than minor because it was associated with the procedure quality attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding and containment) protect the public from radionuclide releases caused by accidents or events. Using NRC Manual Chapter 0609, Appendix L, "B.5.b Significance Determination Process," the finding was determined to be of very low safety significance because the finding did not affect both the recoverability and availability of an individual mitigating strategy. The finding has a human performance crosscutting aspect associated with resources, in that, the licensee failed to ensure adequate facilities, equipment, and trained personnel were available to ensure nuclear safety is maintained.

Inspection Report# : 2011003 *(pdf)*

Emergency Preparedness

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: FIN Finding
Failure to Update Severe Accident Management Guidelines
The inspectors identified a finding for the licensee's failure to follow procedure guidance and update the severe accident management guidelines. As a result, as of May 16, 2011, the severe accident management guidelines did not incorporate the latest owners' group guidance, plant hardware changes, and incorporation of extreme damage mitigation guideline actions. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR 2011-005982.

The licensee's failure to follow procedure guidance and update the severe accident management guidelines was a performance deficiency. The finding was more than minor because if left uncorrected, the finding would have a potential to lead to a more significant safety concern. Using NRC Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," the finding was determined to be of very low safety significance because the finding was not associated with an emergency preparedness planning standard. The finding has a human performance crosscutting aspect associated with resources, in that, personnel failed to follow expectations regarding procedural compliance and closed a condition report without addressing the deficiencies identified in the condition report.

Inspection Report# : 2011003 *(pdf)*

Occupational Radiation Safety

Public Radiation Safety

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.

Miscellaneous

Last modified : March 02, 2012

Comanche Peak 1
1Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Sep 17, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Supervision Causes Inadvertent Engineered Safety Features Actuation
The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.4.1.a for the failure of the unit supervisor to adequately maintain responsibility for the operation of Unit 1 and the supervision of operations personnel during preparations for a reactor startup. As a result, when an operator performed a trip of the main feedwater pump, the motor driven auxiliary feedwater pumps received an engineered safety features actuation and initiated full auxiliary feedwater flow to the steam generators. Operators throttled feedwater flow to prevent overfill of the steam generators and excessive cool down of the reactor coolant system. The licensee entered the finding into the corrective action program as Condition Report CR-2011-008052.

The failure of the unit supervisor to maintain responsibility for the operation of Unit 1 and the supervision of operations personnel during preparations for a reactor startup was a performance deficiency and resulted in an unplanned engineered safety features actuation of the auxiliary feedwater pumps. The finding was more than minor because it was associated with the configuration control attribute of the initiating events cornerstone and affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. This finding has a human performance crosscutting aspect associated with decision making, in that, the unit supervisor failed to communicate the decision to install the auxiliary feedwater pump auto start fuses to all control room personnel.
Inspection Report# : 2011004 *(pdf)*

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate External Flooding Instructions
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control” for the failure to have adequate external flooding instructions. The licensee’s technical requirements manual included circulating water system stop gates as a flood protection measure. This statement was not accurate for a reservoir level greater than 778 feet. As a result, the licensee failed to provide specific instructions for flood protection during circulating water system maintenance with wood barriers in place. In addition, during service water travelling screen replacement, the licensee failed to provide adequate guidance to mitigate debris from entering the service water pump suctions if water level were to increase above 778 feet. As a result, the service water system was susceptible to fouling during a flooding event. The licensee entered the finding into the corrective action program as Condition Report CR-2011-004062.

The licensee’s failure to have adequate external flooding instructions that resulted in safety related equipment being vulnerable to external flooding was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external factors attribute of the initiating events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using NRC Manual Chapter 0609, Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to involve equipment designed to mitigate an external flood and could result in a plant trip or affect more than one train of safety equipment and required a Phase 3 analysis. A senior reactor analyst determined that the finding was of very low safety significance because the calculated bounding delta core damage frequency was 1.9E-8. The finding has a human

performance crosscutting aspect associated with decision-making because the licensee failed to demonstrate that nuclear safety is an overriding priority when faced with unexpected plant conditions.
Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 18, 2011
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Properly Install Insulation Results in Frozen Feedwater Flow Sensing Lines
The inspectors reviewed a self-revealing finding for the failure of the licensee to provide adequate instructions to maintenance personnel when installing insulation on feedwater flow sensing lines. As a result, three sensing lines froze and caused a feedwater perturbation that required operators to take control of the system to stabilize the plant. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001224.

The licensee's failure to provide adequate instructions for the installation of insulation on feedwater flow sensing lines was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : 2011003 *(pdf)*

Significance: G Jun 18, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Correct a Degraded Charging System Valve
The inspectors reviewed a self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the licensee's failure to correct a deficiency with a charging header vent valve. As a result, the valve failed open after an operator attempted to close the valve resulting in a 40 gpm charging system leak. The licensee entered the finding into the corrective action program as Condition Report CR-2011-001876.

The licensee's failure to correct a leaking vent valve was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the initiating events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : 2011003 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Remove Materials and Debris from Containment
The inspectors identified a non-cited violation of Technical Specification 5.4.1.a for the failure to follow procedure

and remove items from containment. As a result, maintenance personnel failed to remove materials that could be transported to the containment emergency core cooling sumps during an accident. The inspectors informed the licensee of the debris inside containment and the licensee corrected the condition. The licensee entered the finding into the corrective action program as Condition Report CR 2011 013343.

The failure of the maintenance personnel to follow procedure and remove materials from containment was a performance deficiency which resulted in debris remaining in containment. The finding 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, reliability, and capability of the emergency core cooling sumps. Using NRC Manual Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, Checklist 2, the finding was determined to be of very low safety significance because the licensee maintained adequate mitigation capability for the current plant state and the finding was not characterized as a loss of control event. The finding has a human performance crosscutting aspect associated with resources because the licensee failed to ensure that personnel performing the maintenance activity were adequately trained on the procedure requirement to remove the materials when leaving containment.

Inspection Report# : 2011005 *(pdf)*

Significance:  Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correctly Reassemble a Motor Operated Valve
The inspectors identified a non-cited violation of Technical Specification 5.4.1.a for the failure to follow procedure and correctly restore motor operated valves. As a result, the licensee inverted the Unit 1 power operated relief valve block valves' limit switch covers and placed the drain on the top. The licensee entered the finding into the corrective action program as Condition Report CR 2011 011871.

The failure to follow procedure and correctly restore motor operated valves, which resulted in inverted limit switch covers with the drain on the top, was a performance deficiency. The finding was more than minor because if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern in that other valves may have been incorrectly restored. The inspectors determined that the finding was associated with the mitigating systems cornerstone and affected the unit during a refueling outage. Using NRC Manual Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, Checklist 2, the finding was determined to be of very low safety significance because the licensee maintained adequate mitigation capability for the current plant state and the finding was not characterized as a loss of control event. The finding has a human performance crosscutting aspect associated with work practices because the licensee failed to use appropriate self and peer checking.

Inspection Report# : 2011005 *(pdf)*

Significance:  Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Inadequate Auxiliary Feedwater Pump Bearing Oil Levels
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure of the licensee to promptly identify and correct adverse auxiliary feedwater pump oil levels. As a result, the inspectors identified seven instances where the oil level was outside of the prescribed sight glass indication. The licensee entered the finding into the corrective action program as Condition Report CR-2011- 12430.

The licensee's failure to promptly identify and correct the improper auxiliary feedwater pump bearing oil level was a performance deficiency. The finding was more than minor because if was associated with the equipment performance attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of the auxiliary feedwater pumps. 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 finding did not result in an actual loss of safety function of an auxiliary feedwater

pump. The finding has a problem identification and resolution crosscutting aspect associated with corrective action program, in that, licensee personnel failed to trend and assess the abnormal oil level condition reports in the aggregate to identify common cause problems.

Inspection Report# : 2011005 *(pdf)*

Significance: G Sep 17, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain Operator Licensing Examination Integrity
The inspectors identified a noncited violation of 10 CFR Part 55.49, "Integrity of Examinations and Tests," for the failure of the licensee to ensure the integrity of annual operating exams. During the 2009 annual operating exam, 17 licensed operators received three of five job performance measures, and 17 additional licensed operators received four of five job performance measures for their operating tests that had been administered to other licensed operators in previous weeks. In addition, five licensed operators received two of three crew simulator scenarios as part of their operating test that had been administered to other licensed operators in previous weeks. Allowing more than 50 percent of an operating test section to be comprised of exam material previously administered on any other test in the same examination cycle is considered an exam integrity compromise. However, evaluation of the 2009 exam results for the affected population showed that the compromise did not have an actual effect on the equitable and consistent administration of the examination. The licensee entered the finding into the corrective action program as Condition Report
CR-2010-010851.

The failure of the licensee's training staff to maintain the integrity of examinations administered to licensed operations personnel was a performance deficiency. The finding was more than minor because it adversely impacted the human performance attribute of the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Additionally, if left uncorrected, the performance deficiency could have become more significant in that allowing licensed operators to return to the control room without valid demonstration of appropriate knowledge on the annual operating examinations could be a precursor to a more significant event. Using NRC Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, and the corresponding Appendix I, "Licensed Operator Requalification Significance Determination Process," the finding was determined to have very low safety significance because, although the 2009 finding resulted in a compromise of the integrity of operating test job performance measures and simulator scenarios with no compensatory actions immediately taken when the compromise should have been discovered in 2009. The equitable and consistent administration of the test was not actually impacted by this compromise. This finding has a crosscutting aspect in the area of resources associated with ensuring that procedures are accurately translated from industry standards, such that the 50 percent maximum overlap criteria was not exceeded.
Inspection Report# : 2011004 *(pdf)*

Significance: G Sep 17, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure All License Conditions Are Met for Licensed Operators
The inspectors identified a noncited violation of 10 CFR 55.53, "Conditions of License," for the failure of the licensee to ensure that licensed operators met all the conditions of their licenses in order to be considered an active watch stander. Specifically, the licensee failed to ensure that three licensed operators met the complete plant tour requirement specified in 10 CFR 55.53(f) prior to license reactivation and subsequent performance of licensed operator duties. The licensee entered the finding into the corrective action program as Condition Report CR-2011-004990.

The failure of the licensee to ensure that all individuals authorized by a license to operate the controls of the facility met the conditions of their licenses as defined in 10 CFR Part 55.53 was a performance deficiency. This finding was more than minor because it was associated with the human performance attribute of the mitigating system cornerstone and affects the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond

to initiating events to prevent undesirable consequences. Using NRC Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, and the corresponding Appendix I, "Licensed Operator Requalification Significance Determination Process," the finding was determined to have very low safety significance because more than 20 percent of the license reactivation records reviewed contained these deficiencies. This finding has a crosscutting aspect in the area of resources that support human performance in that the licensee failed to ensure that procedures are complete and accurate to ensure licensed operators maintain all conditions of their licenses in accordance with 10 CFR 55.53.
Inspection Report# : 2011004 *(pdf)*

Significance: SL-IV Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Conclude a Change from the UFSAR Required Prior NRC Review and Approval
The inspectors identified a Severity Level IV Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments," associated with the failure to conclude that a change from the UFSAR required prior NRC review and approval prior to implementation. Specifically, the licensee made changes to the acceptance criteria for allowable diesel generator jacket water leakage in the UFSAR that resulted in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety. The licensee captured this finding in their corrective action program as Condition Report CR 2011-008509.

This finding was more than minor because there was a reasonable likelihood that the change would require a prior NRC approval. Violations of 10 CFR 50.59 are violations that potentially impede or impact the regulatory process and are processed through Traditional Enforcement. As required by Section 6.1 of the Enforcement Policy, the inspectors performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," to determine the significance of the finding. The inspectors determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; and (4) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. Since violations of Title 10 CFR 50.59 may result in conditions evaluated as having very low safety significance by the Significance Determination Process, the inspectors categorized the finding as Severity Level IV in accordance with the Enforcement Manual. The finding was a violation determined to be of very low safety significance, was not repetitive or willful, and was entered into the corrective action program. Therefore, this violation is being treated as a noncited violation consistent with the NRC Enforcement Policy. The inspectors did not identify a crosscutting aspect with this finding since this performance issue occurred in 2004 and is not reflective of current performance.
Inspection Report# : 2011006 *(pdf)*

Significance:  Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Diesel Generator Jacket Water Instructions
The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to have documented instructions for an activity affecting quality. Specifically, the licensee did not have documented instructions for filling the diesel generator jacket water system when the normal fill method would not be available during a loss of offsite power. Specifically, prior to July 27, 2011, the licensee failed to have adequate instructions for filling the diesel generator jacket water system, an activity affecting quality, during a loss of offsite power. This issue was entered into the licensee's corrective action program as Condition Report CR-2011-008510.

This performance deficiency was determined 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 IMC 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding is determined to be of very low safety significance because the finding did not result in an actual loss safety related equipment for greater than its technical specification allowed outage time and did not represent a loss of equipment designated as risk-significant in the maintenance rule. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.

Inspection Report# : 2011006 *(pdf)*

Significance: G Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Operability Determination Process for a Degraded Condition Related to Emergency Diesel Generator
The inspectors identified a Green noncited violation of Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of the licensee to follow the operability determination Procedure ODA-309, "Operability Determination and Functionality Assessment Program." Specifically, the licensee did not appropriately evaluate a long-standing degraded condition such that the emergency diesel generators would remain operable for their mission time duration as required by ODA-309. As a result, adequate compensatory measures were not established to ensure operability. This issue was entered into the licensee's corrective action program as Condition Report CR 2011-008508.

The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating System cornerstone and affects the cornerstone objective to ensure the availability and reliability of emergency diesel generators that respond to initiating events to prevent undesirable consequences in that the emergency diesel generators supply power to vital and safety related loads. Because Manual Chapter 0609, Attachment 4, "Phase 1-Initial Screening and Characterization of Findings," was not well suited for this finding a Phase 3 Risk Significance Estimation was required. A Region IV senior reactor analyst performed a bounding Phase 3 significance determination and found that the finding was of very low safety significance. The bounding change to core damage frequency was 6.7E-7/year. The simplified plant analysis risk (SPAR) model does not include the contribution of the recently installed alternate power generators, which would considerably lower the risk significance of an emergency diesel generator failure for the station blackout sequences, which comprise most of the risk of this finding. The inspectors determined that there was a crosscutting aspect in the area of human performance decision-making because the licensee failed to use conservative assumptions in decision making in the assessment of operability.
Inspection Report# : 2011006 *(pdf)*

Significance: G Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Repeated Diesel Generator Cam Cover Bolt Failures
The inspectors identified a Green noncited violation of Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," in that the licensee did not correct a condition adverse to quality regarding the safety related emergency diesel generators. Specifically, as of July 12, 2011, the licensee failed to assure that the identified broken cam cover bolts on the emergency diesel generators were adequately corrected. This issue was entered into the licensee's corrective action program as Condition Report CR 2011-008505.

The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating System cornerstone and affects the cornerstone objective to ensure the availability and reliability of emergency diesel generators that respond to initiating events to prevent undesirable consequences in that the emergency diesel generators supply power to vital and safety related loads. Because Manual Chapter 0609, Attachment 4, "Phase 1-Initial Screening and Characterization of Findings," was not well suited for this finding a Phase 3 Risk Significance Estimation was required. A Region IV senior reactor analyst performed a bounding Phase 3 significance determination and found that the finding was of very low safety significance. The bounding change to core damage frequency was 6.7E-7/year. The simplified plant analysis risk (SPAR) model does not include the contribution of the recently installed alternate power generators, which would considerably lower the risk significance of emergency diesel generator failure for the station blackout sequences, which comprise most of the risk of this finding. The inspectors determined that there was a crosscutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary.
Inspection Report# : 2011006 *(pdf)*

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: FIN Finding
Inadequate Alternate Power Generator Procedure
The inspectors identified a finding for the failure of the licensee to provide adequate procedure instructions for refueling the alternate power generators. As a result, during a station blackout event, the alternate power generators could have ran out of fuel since the fuel tank was sized for approximately 2.6 hours of operation at full load and instructions for obtaining additional fuel did not exist. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR 2011 005399.

The licensee's failure to provide adequate instructions for replenishing the alternate power generators fuel tank 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, in that, the inadequate instructions did not ensure the availability, reliability, and capability of the alternate power generators to electrical power to the units during a station blackout event. 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 finding did not result in an actual loss safety related equipment for greater than its technical specification allowed outage time and did not represent a loss of equipment designated as risk-significant in the maintenance rule. The finding has a human performance crosscutting aspect associated with resources, in that, the licensee failed to ensure that adequate procedures and equipment were available.

Inspection Report# : 2011003 *(pdf)*

Significance: G May 03, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Effective Corrective Actions for a Condition Adverse to Fire Protection
The team identified a noncited violation of License Condition 2.G for the failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the team identified two examples where the licensee failed to implement effective corrective actions to ensure that time-critical manual actions would be accomplished within analyzed times for alternative shutdown scenarios. The first example involved the failure to close a spuriously opened pressurizer power-operated relief valve within the time allowed by the postfire safe shutdown analysis. The second example involved the failure to restore station service water cooling before damage could occur to the credited emergency diesel generator in the event of a control room fire with a loss of offsite power. The licensee entered this issue into their corrective action program as Condition Reports CR-2011-001647, CR-2011-001742 and CR-2011-001836. In response to this issue, the licensee re-ordered the procedure steps to isolate the power-operated relief valves and ensure the standby service water pump was running sooner. The licensee planned to perform a validation of the revised procedures.

Failure to implement effective corrective actions to ensure that time-critical manual actions would be accomplished within analyzed times for alternative shutdown scenarios is a performance deficiency. This performance deficiency was more than minor because it was associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The significance of this finding could not be evaluated using Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because the performance deficiency involved a control room fire that led to control room abandonment. A senior reactor analyst performed a Phase 3 evaluation bounding analysis that concluded this finding had very low safety significance (Green) because the number of electrical cabinets in the control room and cable spreading room that contained circuits that could have a fire that could affect the power-operated relief valves or station service water system was a small fraction of the total. This performance deficiency had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because the licensee did not take appropriate corrective actions to address safety issues in a timely manner, commensurate with their safety significance.
Inspection Report# : 2011007 *(pdf)*

Significance: G May 03, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and Mitigate or Correct Potential Single Spurious Fire Damage Scenario
The team identified a noncited violation of License Condition 2.G for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the licensee failed to recognize that electrical cables for the pressurizer power-operated relief valves and associated block valves were installed in many of the same cable trays, leaving the plant susceptible to fire damage that could spuriously open the power-operated relief valve and prevent the ability to shut the block valve. This scenario could challenge operators by creating a loss of coolant during a plant fire. The licensee entered this issue into their corrective action program as Condition Reports CR-011-001319, CR-2011-001807, CR-2011-001808 and CR-2011-002430. As a compensatory measure, the licensee revised attachment 17 to Procedure ABN-901, "Fire Protection System Alarms or Malfunctions," Revision 9, to close the affected pressurizer block valves in the event of a fire in the Auxiliary or Safeguards buildings in order to mitigate potential circuit interactions that could spuriously open a power-operated relief valve.

Failure to identify and mitigate or correct an existing plant configuration that was susceptible to single spurious failures while performing expert panel reviews of fire damage scenarios that could prevent safely shutting down the plant in the event of a fire is a performance deficiency. This performance deficiency was more than minor because it is associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The team used Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because the performance deficiency affected fire protection defense-in-depth strategies involving post-fire safe shutdown. Because the Phase 1 screening criteria were not met, the analysis continued to Phase 2. Because the finding did not screen as Green during the Phase 2 analysis, a senior reactor analyst performed a Phase 3 analysis. Using information from the Phase 2 worksheets and discussions with the licensee PRA staff, the senior reactor analyst's Phase 3 analysis calculated the total change in core damage frequency to be 3.2E-7/yr (Green), based on the proximity of fire sources available to damage these circuits. This finding had a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee did not identify the issues completely, accurately, and in a timely manner commensurate with their safety significance while conducting expert panel reviews of this and other scenarios in 2009. After review of the additional information provided by licensee, the inspectors determined that no cross-cutting aspect applied. The NRC documented this in letter dated July 8, 2011 (ADAMS Accession No. ML11192A046).
Inspection Report# : 2011007 *(pdf)*

Significance: G May 03, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure Emergency Lights in Safe Shutdown Areas had an 8-Hour Capacity
The team identified a noncited violation of License Condition 2.G for failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the licensee failed to establish a maintenance and/or test program that demonstrated that emergency lighting had an 8-hour capacity in areas required for safe shutdown. When inspectors questioned the licensee's practice of replacing the emergency light batteries without ever testing to confirm that the replacement interval was appropriate to ensure an 8-hour capacity, the licensee conducted tests that showed that 22 percent of the batteries on a 3-year replacement interval failed in less than 8 hours. The licensee entered this issue into their corrective action program as Condition Report CR-2011-001821. The licensee created action items to CR-2011-001821 for additional testing on a broader sample of emergency lights to aid in determining the correct replacement interval to ensure operability, and shortened the 3-year replacement interval for lights which failed to meet operability requirements as a result of testing to a more conservative 2-year replacement interval which had no demonstrated testing failures.

The failure to establish a maintenance and/or test program that demonstrated operability for 8-hour emergency lighting required for operator manual actions at safe shutdown equipment is a performance deficiency. The performance deficiency was more than minor because it is associated with the protection against external events (fire) attribute of the Mitigating Systems cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable

consequences. Specifically, the failure of the emergency lights to last 8 hours could adversely affect the ability of operators to perform the manual actions required to support safe shutdown in the event of a fire. The significance of this finding was evaluated using Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” because the performance deficiency affected fire protection defense-in-depth strategies involving post-fire safe shutdown systems. Using Appendix F, Attachment 2, “Degradation Rating Guidance Specific to Various Fire Protection Program Elements,” the finding was assigned a low degradation rating because the finding minimally impacted the performance and reliability of the fire protection program element. The team also noted that operators were required to obtain and carry flashlights. Therefore, the finding screened as having very low safety significance (Green). This finding did not have a crosscutting aspect because it was not indicative of current licensee performance, in that the replacement program had been used for longer than 3 years.

Inspection Report# : 2011007 *(pdf)*

Barrier Integrity

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Develop Adequate Guidance for Extreme Damage Mitigation Procedures
The inspectors identified a noncited violation of 10 CFR 50.54(hh)(2) for the licensee’s failure to develop adequate guidance to restore core and spent fuel cooling capabilities for a postulated loss of large areas of the plant. Specifically, the licensee failed to ensure suction hose size derived from an engineering report was translated into procedures, failed to provide adequate procedure guidance for use of a fire truck to draw water from the reservoir, and failed to stage hoses in the location specified by procedure. The licensee entered the finding into the corrective action program as Condition Report CR 2011 005830.

The licensee’s failure to develop adequate guidance to restore core and spent fuel cooling capabilities for a postulated loss of large areas of the plant was a performance deficiency. The finding was more than minor because it was associated with the procedure quality attribute of the barrier integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (fuel cladding and containment) protect the public from radionuclide releases caused by accidents or events. Using NRC Manual Chapter 0609, Appendix L, “B.5.b Significance Determination Process,” the finding was determined to be of very low safety significance because the finding did not affect both the recoverability and availability of an individual mitigating strategy. The finding has a human performance crosscutting aspect associated with resources, in that, the licensee failed to ensure adequate facilities, equipment, and trained personnel were available to ensure nuclear safety is maintained.

Inspection Report# : 2011003 *(pdf)*

Emergency Preparedness

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Guidelines for Protective Action Recommendations Outside the Emergency Planning Zone
The inspectors identified a non-cited violation of 10 CFR 50.47(b)(10) for failure of the licensee to have guidelines developed and in place for the choice of protective actions during an emergency. Specifically, Procedure EPP 304, “Protective Action Recommendations,” Revision 20, did not provide direction for the development of protective action recommendations outside the emergency planning zone. The licensee entered the finding into the corrective action program as Condition Report CR-2011 009218.

The failure to develop and implement guidelines for the choice of protective actions during an emergency is a performance deficiency. This finding is more than minor because it has the potential to affect safety, and affects the emergency preparedness cornerstone attributes of emergency response organization performance and procedure quality. The finding is of very low safety significance because it was a failure to comply with NRC requirements, was associated with a risk-significant planning standard, and was not a functional failure of the planning standard or degraded planning standard function. The finding has a problem identification and resolution crosscutting aspect associated operating experience because the licensee did not use operating experience to maintain and update the protective action procedure.

Inspection Report# : 2011005 *(pdf)*

Significance: G Jun 18, 2011
Identified By: NRC
Item Type: FIN Finding
Failure to Update Severe Accident Management Guidelines
The inspectors identified a finding for the licensee's failure to follow procedure guidance and update the severe accident management guidelines. As a result, as of May 16, 2011, the severe accident management guidelines did not incorporate the latest owners' group guidance, plant hardware changes, and incorporation of extreme damage mitigation guideline actions. This finding does not involve enforcement action because no regulatory requirement violation was identified. The licensee entered the finding into the corrective action program as Condition Report CR 2011-005982.

The licensee's failure to follow procedure guidance and update the severe accident management guidelines was a performance deficiency. The finding was more than minor because if left uncorrected, the finding would have a potential to lead to a more significant safety concern. Using NRC Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," the finding was determined to be of very low safety significance because the finding was not associated with an emergency preparedness planning standard. The finding has a human performance crosscutting aspect associated with resources, in that, personnel failed to follow expectations regarding procedural compliance and closed a condition report without addressing the deficiencies identified in the condition report.

Inspection Report# : 2011003 *(pdf)*

Occupational Radiation Safety

Significance: G Dec 31, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Perform Adequate Radiation Surveys
The inspectors reviewed a self-revealing non-cited violation of 10 CFR 20.1501(a) because radiation protection staff failed to perform an adequate survey to evaluate and determine the radiological hazards in the floor drain tank room. The licensee entered the finding into the corrective action program as Condition Report CR 2011 010174 and immediately posted the room as a locked high radiation area.

The failure to perform a radiation survey to determine radiological hazards was a performance deficiency. The finding was greater than minor because it was associated with the occupational radiation safety cornerstone attribute of program and process and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation during routine operations. Using NRC Manual Chapter 0609, "Significance Determination Process," Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance because: (1) it was not associated with as low as is reasonably achievable (ALARA) planning (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance

crosscutting aspect associated with work control because the licensee failed to ensure interdepartmental communication and coordination prior to commencing work activities and assuring accurate radiation safety information was provided to workers.
Inspection Report# : 2011005 *(pdf)*

Significance: G Dec 31, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Follow Radiological Work Permit Requirements
The inspectors reviewed a self-revealing non-cited violation of Technical Specification 5.4.1.a for the failure of a worker to follow radiological work permit requirements. Specifically, a chemistry technician received a dose rate alarm greater than 120 millirem per hour and failed to immediately exit the area and contact radiation protection. The licensee entered the finding into the corrective action program as Condition Report CR 2011- 010774.

The failure to follow the instructions on a radiation work permit by not immediately contacting radiation protection when a dose rate alarm was received was a performance deficiency. The finding was greater than minor because it was associated with the occupational radiation safety cornerstone attribute of program and process and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation during routine operations. Using NRC Manual Chapter 0609, “Significance Determination Process,” Appendix C, “Occupational Radiation Safety Significance Determination Process,” the finding was determined to be of very low safety significance because: (1) it was not associated with as low as is reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work practices because the licensee failed to effectively communicate expectations regarding procedural compliance to the worker.

Inspection Report# : 2011005 *(pdf)*

Public Radiation Safety

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.

Miscellaneous

Last modified : May 29, 2012

Comanche Peak 1
2Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Sep 17, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Supervision Causes Inadvertent Engineered Safety Features Actuation
The inspectors reviewed a self-revealing noncited violation of Technical Specification 5.4.1.a for the failure of the unit supervisor to adequately maintain responsibility for the operation of Unit 1 and the supervision of operations personnel during preparations for a reactor startup. As a result, when an operator performed a trip of the main feedwater pump, the motor driven auxiliary feedwater pumps received an engineered safety features actuation and initiated full auxiliary feedwater flow to the steam generators. Operators throttled feedwater flow to prevent overfill of the steam generators and excessive cool down of the reactor coolant system. The licensee entered the finding into the corrective action program as Condition Report CR-2011-008052.

The failure of the unit supervisor to maintain responsibility for the operation of Unit 1 and the supervision of operations personnel during preparations for a reactor startup was a performance deficiency and resulted in an unplanned engineered safety features actuation of the auxiliary feedwater pumps. The finding was more than minor because it was associated with the configuration control attribute of the initiating events cornerstone and affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability. 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 finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating equipment would not be available. This finding has a human performance crosscutting aspect associated with decision making, in that, the unit supervisor failed to communicate the decision to install the auxiliary feedwater pump auto start fuses to all control room personnel.
Inspection Report# : 2011004 *(pdf)*

Mitigating Systems

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Analyze Tornado Missile Strike on Turbine Driven Auxiliary Feedwater Exhaust Pipe
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure to translate tornado missile protection design requirements to a pipe stress analysis procedure. This resulted in the licensee’s failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps’ steam exhaust piping. The licensee preliminarily determined that the auxiliary feedwater system would be able to perform its safety function given a tornado missile strike. The licensee entered the finding into the corrective action program as Condition Report CR 2012 006134.

The licensee’s failure to translate design requirements into the pipe stress analysis procedure resulted in the failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pump steam exhaust pipes. 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to ensure the reliability of the auxiliary feedwater system in response to a tornado missile hazard.

Using NRC Manual Chapter 0609, “Significance Determination Process,” Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to be of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Revise Turbine Driven Auxiliary Feedwater Pump Acceptance Criteria
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, for the failure to incorporate acceptance limits from applicable design documents into test procedures. Specifically, the licensee revised the Unit 1 and Unit 2 requirement for the turbine driven auxiliary feedwater pump discharge pressure for a power uprate, but failed to incorporate the change into the pump surveillance procedures. As a result, the acceptance criteria were incorrect and nonconservative. The pumps were able to meet the revised acceptance criteria and perform their safety function. The licensee entered the finding into the corrective action program as Condition Report CR 2012-006135.

The licensee’s failure to update the turbine driven auxiliary feedwater surveillance procedure acceptance criteria following an accident analysis revision was a performance deficiency which resulted in the failure to ensure the pump was meeting its discharge pressure requirements. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in that, if the turbine driven auxiliary feedwater pump performance degraded below the accident analysis assumptions, the surveillance would not detect the inoperability and corrective actions would not be taken. Using NRC Manual Chapter 0609, “Significance Determination Process,” Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to be of very low safety significance in the mitigating systems cornerstone because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.
Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Evaluate Fish Intrusion Operating Experience and Initiate Corrective Action
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure of the licensee to identify and correct a condition adverse to quality. Specifically, the licensee failed to adequately evaluate industry operating experience related to fish intrusion into cooling water systems, which resulted in the failure to take appropriate corrective actions. Subsequently, shad from the safe shutdown impoundment entered the service water system and lowered cooling water flow to safety-related components when the fish were caught in the component strainers. The licensee entered the finding into the corrective action program as Condition Report CR-2012-006133.

The licensee’s failure to identify a condition adverse through an inadequate evaluation of industry operating experience related to fish intrusion into cooling water systems was a performance deficiency and resulted in the failure to take appropriate corrective actions that could have prevented a similar fish intrusion event at the station. 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fish intrusion resulted in the clogging of strainers and the lowering of service water flow to safety-related pumps. Using NRC Manual Chapter 0609, “Significance Determination Process,” Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to be of very low safety significance because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of

a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Corrective Actions for Safety Chiller Trips
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedure and develop corrective actions for a low tier cause analysis. Specifically, the licensee performed a low tier cause analysis on two safety chiller 2-06 trips, but failed to develop corrective actions or provide any justification for not taking corrective actions. The licensee entered the finding into the corrective action program as Condition Report CR 2012-006136.

The licensee's failure to follow procedure for a low tier cause analysis was a performance deficiency and resulted in not taking corrective actions for two safety chiller trips. The finding 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 of systems that respond to initiating events to prevent undesirable consequences. Specifically, the safety chillers are unavailable while they are tripped. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a problem identification and resolution cross-cutting aspect associated with the corrective action program because the licensee failed to thoroughly evaluate the problem such that the resolution addresses the cause.

Inspection Report# : 2012003 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Initiate Condition Report for Emergency Core Cooling System Pump Leaks
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedure and initiate a condition report for degradation of safety-related equipment. Specifically, the licensee failed to initiate a condition report for multiple small oil leaks on emergency core cooling system pumps and motors. As a result, the licensee failed to characterize the operability of the equipment and identify potential corrective actions. The licensee entered the finding into the corrective action program as Condition Report CR-2012-003390.

The licensee's failure to follow procedure and initiate a condition report for emergency core cooling system pump and motor oil leaks was a performance deficiency and resulted in the failure to characterize the operability of the equipment and the failure to initiate appropriate corrective actions. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in that, the leaks could worsen before establishing corrective actions and cause inoperable safety-related equipment. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance in the mitigating systems cornerstone because the equipment was able to perform its safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a problem identification and resolution cross-cutting aspect associated with the corrective action program because the licensee did not use a low threshold for identifying issues [P.1a].
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Past Operability Determination for the Diesel Generators
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedure and perform an adequate past operability evaluation to determine if a condition would have made a system inoperable in the past. Specifically, the licensee failed to determine that when a diesel generator was paralleled to the grid with a high bus voltage condition, the diesel generator was inoperable. As a result of the inadequate past operability evaluation, the licensee incorrectly classified the significance of the condition report. The licensee entered the finding into the corrective action program as Condition Report CR-2011-006113.

The failure to follow procedure and perform an adequate past operability evaluation of the diesel generators was a performance deficiency which resulted in the licensee incorrectly classifying the significance of the condition report. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in that, the licensee could fail to correct a condition commensurate with its safety significance. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance in the mitigating systems cornerstone because it did not result in the equipment being unable to perform its safety function for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a human performance cross-cutting aspect associated with work practices because the licensee failed to use error prevention techniques, such as pre-job briefings, that were commensurate with the risk of the assigned task and support human performance error prevention [H.4a].
Inspection Report# : 2012002 *(pdf)*

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Remove Materials and Debris from Containment
The inspectors identified a non-cited violation of Technical Specification 5.4.1.a for the failure to follow procedure and remove items from containment. As a result, maintenance personnel failed to remove materials that could be transported to the containment emergency core cooling sumps during an accident. The inspectors informed the licensee of the debris inside containment and the licensee corrected the condition. The licensee entered the finding into the corrective action program as Condition Report CR 2011 013343.

The failure of the maintenance personnel to follow procedure and remove materials from containment was a performance deficiency which resulted in debris remaining in containment. The finding 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, reliability, and capability of the emergency core cooling sumps. Using NRC Manual Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, Checklist 2, the finding was determined to be of very low safety significance because the licensee maintained adequate mitigation capability for the current plant state and the finding was not characterized as a loss of control event. The finding has a human performance crosscutting aspect associated with resources because the licensee failed to ensure that personnel performing the maintenance activity were adequately trained on the procedure requirement to remove the materials when leaving containment.

Inspection Report# : 2011005 *(pdf)*

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correctly Reassemble a Motor Operated Valve
The inspectors identified a non-cited violation of Technical Specification 5.4.1.a for the failure to follow procedure and correctly restore motor operated valves. As a result, the licensee inverted the Unit 1 power operated relief valve

block valves' limit switch covers and placed the drain on the top. The licensee entered the finding into the corrective action program as Condition Report CR 2011 011871.

The failure to follow procedure and correctly restore motor operated valves, which resulted in inverted limit switch covers with the drain on the top, was a performance deficiency. The finding was more than minor because if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern in that other valves may have been incorrectly restored. The inspectors determined that the finding was associated with the mitigating systems cornerstone and affected the unit during a refueling outage. Using NRC Manual Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, Checklist 2, the finding was determined to be of very low safety significance because the licensee maintained adequate mitigation capability for the current plant state and the finding was not characterized as a loss of control event. The finding has a human performance crosscutting aspect associated with work practices because the licensee failed to use appropriate self and peer checking.

Inspection Report# : 2011005 *(pdf)*

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Inadequate Auxiliary Feedwater Pump Bearing Oil Levels
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure of the licensee to promptly identify and correct adverse auxiliary feedwater pump oil levels. As a result, the inspectors identified seven instances where the oil level was outside of the prescribed sight glass indication. The licensee entered the finding into the corrective action program as Condition Report CR-2011- 12430.

The licensee's failure to promptly identify and correct the improper auxiliary feedwater pump bearing oil level was a performance deficiency. The finding was more than minor because if was associated with the equipment performance attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of the auxiliary feedwater pumps. 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 finding did not result in an actual loss of safety function of an auxiliary feedwater pump. The finding has a problem identification and resolution crosscutting aspect associated with corrective action program, in that, licensee personnel failed to trend and assess the abnormal oil level condition reports in the aggregate to identify common cause problems.

Inspection Report# : 2011005 *(pdf)*

Significance: G Sep 17, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Maintain Operator Licensing Examination Integrity
The inspectors identified a noncited violation of 10 CFR Part 55.49, "Integrity of Examinations and Tests," for the failure of the licensee to ensure the integrity of annual operating exams. During the 2009 annual operating exam, 17 licensed operators received three of five job performance measures, and 17 additional licensed operators received four of five job performance measures for their operating tests that had been administered to other licensed operators in previous weeks. In addition, five licensed operators received two of three crew simulator scenarios as part of their operating test that had been administered to other licensed operators in previous weeks. Allowing more than 50 percent of an operating test section to be comprised of exam material previously administered on any other test in the same examination cycle is considered an exam integrity compromise. However, evaluation of the 2009 exam results for the affected population showed that the compromise did not have an actual effect on the equitable and consistent administration of the examination. The licensee entered the finding into the corrective action program as Condition Report
CR-2010-010851.

The failure of the licensee's training staff to maintain the integrity of examinations administered to licensed operations personnel was a performance deficiency. The finding was more than minor because it adversely impacted the human performance attribute of the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Additionally, if left uncorrected, the performance deficiency could have become more significant in that allowing licensed operators to return to the control room without valid demonstration of appropriate knowledge on the annual operating examinations could be a precursor to a more significant event. Using NRC Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, and the corresponding Appendix I, "Licensed Operator Requalification Significance Determination Process," the finding was determined to have very low safety significance because, although the 2009 finding resulted in a compromise of the integrity of operating test job performance measures and simulator scenarios with no compensatory actions immediately taken when the compromise should have been discovered in 2009. The equitable and consistent administration of the test was not actually impacted by this compromise. This finding has a crosscutting aspect in the area of resources associated with ensuring that procedures are accurately translated from industry standards, such that the 50 percent maximum overlap criteria was not exceeded.
Inspection Report# : 2011004 *(pdf)*

Significance: G Sep 17, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure All License Conditions Are Met for Licensed Operators
The inspectors identified a noncited violation of 10 CFR 55.53, "Conditions of License," for the failure of the licensee to ensure that licensed operators met all the conditions of their licenses in order to be considered an active watch stander. Specifically, the licensee failed to ensure that three licensed operators met the complete plant tour requirement specified in 10 CFR 55.53(f) prior to license reactivation and subsequent performance of licensed operator duties. The licensee entered the finding into the corrective action program as Condition Report CR-2011-004990.

The failure of the licensee to ensure that all individuals authorized by a license to operate the controls of the facility met the conditions of their licenses as defined in 10 CFR Part 55.53 was a performance deficiency. This finding was more than minor because it was associated with the human performance attribute of the mitigating system cornerstone and affects the cornerstone's objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using NRC Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheets, and the corresponding Appendix I, "Licensed Operator Requalification Significance Determination Process," the finding was determined to have very low safety significance because more than 20 percent of the license reactivation records reviewed contained these deficiencies. This finding has a crosscutting aspect in the area of resources that support human performance in that the licensee failed to ensure that procedures are complete and accurate to ensure licensed operators maintain all conditions of their licenses in accordance with 10 CFR 55.53.
Inspection Report# : 2011004 *(pdf)*

Significance: SL-IV Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Conclude a Change from the UFSAR Required Prior NRC Review and Approval
The inspectors identified a Severity Level IV Non-Cited Violation of 10 CFR 50.59, "Changes, Tests, and Experiments," associated with the failure to conclude that a change from the UFSAR required prior NRC review and approval prior to implementation. Specifically, the licensee made changes to the acceptance criteria for allowable diesel generator jacket water leakage in the UFSAR that resulted in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component important to safety. The licensee captured this finding in their corrective action program as Condition Report CR 2011-008509.

This finding was more than minor because there was a reasonable likelihood that the change would require a prior NRC approval. Violations of 10 CFR 50.59 are violations that potentially impede or impact the regulatory process and are processed through Traditional Enforcement. As required by Section 6.1 of the Enforcement Policy, the inspectors

performed a Phase 1 screening in accordance with Manual Chapter 0609, Attachment 4, “Phase 1 – Initial Screening and Characterization of Findings,” to determine the significance of the finding. The inspectors determined that the finding is of very low safety significance (Green) because the finding: (1) was not a design or qualification issue confirmed not to result in a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of nontechnical specification equipment; and (4) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. Since violations of Title 10 CFR 50.59 may result in conditions evaluated as having very low safety significance by the Significance Determination Process, the inspectors categorized the finding as Severity Level IV in accordance with the Enforcement Manual. The finding was a violation determined to be of very low safety significance, was not repetitive or willful, and was entered into the corrective action program. Therefore, this violation is being treated as a noncited violation consistent with the NRC Enforcement Policy. The inspectors did not identify a crosscutting aspect with this finding since this performance issue occurred in 2004 and is not reflective of current performance.
Inspection Report# : 2011006 *(pdf)*

Significance: G Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Diesel Generator Jacket Water Instructions
The inspectors identified a Green noncited violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee’s failure to have documented instructions for an activity affecting quality. Specifically, the licensee did not have documented instructions for filling the diesel generator jacket water system when the normal fill method would not be available during a loss of offsite power. Specifically, prior to July 27, 2011, the licensee failed to have adequate instructions for filling the diesel generator jacket water system, an activity affecting quality, during a loss of offsite power. This issue was entered into the licensee’s corrective action program as Condition Report CR-2011-008510.

This performance deficiency was determined 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 IMC 0609, Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding is determined to be of very low safety significance because the finding did not result in an actual loss safety related equipment for greater than its technical specification allowed outage time and did not represent a loss of equipment designated as risk-significant in the maintenance rule. The finding did not have a crosscutting aspect because it was not representative of current licensee performance.
Inspection Report# : 2011006 *(pdf)*

Significance: G Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Operability Determination Process for a Degraded Condition Related to Emergency Diesel Generator
The inspectors identified a Green noncited violation of Title 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure of the licensee to follow the operability determination Procedure ODA-309, “Operability Determination and Functionality Assessment Program.” Specifically, the licensee did not appropriately evaluate a long-standing degraded condition such that the emergency diesel generators would remain operable for their mission time duration as required by ODA-309. As a result, adequate compensatory measures were not established to ensure operability. This issue was entered into the licensee’s corrective action program as Condition Report CR 2011-008508.

The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating System cornerstone and affects the cornerstone objective to ensure the availability and reliability of emergency diesel generators that respond to initiating events to prevent undesirable consequences in that the emergency diesel generators supply power to vital and safety related loads. Because Manual Chapter 0609, Attachment 4, “Phase 1-Initial Screening and Characterization of Findings,” was not well suited for this finding a Phase 3 Risk Significance Estimation was required. A Region IV senior reactor analyst performed a

bounding Phase 3 significance determination and found that the finding was of very low safety significance. The bounding change to core damage frequency was 6.7E-7/year. The simplified plant analysis risk (SPAR) model does not include the contribution of the recently installed alternate power generators, which would considerably lower the risk significance of an emergency diesel generator failure for the station blackout sequences, which comprise most of the risk of this finding. The inspectors determined that there was a crosscutting aspect in the area of human performance decision-making because the licensee failed to use conservative assumptions in decision making in the assessment of operability.
Inspection Report# : 2011006 *(pdf)*

Significance: G Jul 28, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Repeated Diesel Generator Cam Cover Bolt Failures
The inspectors identified a Green noncited violation of Title 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," in that the licensee did not correct a condition adverse to quality regarding the safety related emergency diesel generators. Specifically, as of July 12, 2011, the licensee failed to assure that the identified broken cam cover bolts on the emergency diesel generators were adequately corrected. This issue was entered into the licensee's corrective action program as Condition Report CR 2011-008505.

The performance deficiency was determined to be more than minor because it was associated with the equipment performance attribute of the Mitigating System cornerstone and affects the cornerstone objective to ensure the availability and reliability of emergency diesel generators that respond to initiating events to prevent undesirable consequences in that the emergency diesel generators supply power to vital and safety related loads. Because Manual Chapter 0609, Attachment 4, "Phase 1-Initial Screening and Characterization of Findings," was not well suited for this finding a Phase 3 Risk Significance Estimation was required. A Region IV senior reactor analyst performed a bounding Phase 3 significance determination and found that the finding was of very low safety significance. The bounding change to core damage frequency was 6.7E-7/year. The simplified plant analysis risk (SPAR) model does not include the contribution of the recently installed alternate power generators, which would considerably lower the risk significance of emergency diesel generator failure for the station blackout sequences, which comprise most of the risk of this finding. The inspectors determined that there was a crosscutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of conditions, as necessary.
Inspection Report# : 2011006 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Guidelines for Protective Action Recommendations Outside the Emergency Planning Zone
The inspectors identified a non-cited violation of 10 CFR 50.47(b)(10) for failure of the licensee to have guidelines developed and in place for the choice of protective actions during an emergency. Specifically, Procedure EPP 304, "Protective Action Recommendations," Revision 20, did not provide direction for the development of protective action recommendations outside the emergency planning zone. The licensee entered the finding into the corrective action program as Condition Report CR-2011 009218.

The failure to develop and implement guidelines for the choice of protective actions during an emergency is a

performance deficiency. This finding is more than minor because it has the potential to affect safety, and affects the emergency preparedness cornerstone attributes of emergency response organization performance and procedure quality. The finding is of very low safety significance because it was a failure to comply with NRC requirements, was associated with a risk-significant planning standard, and was not a functional failure of the planning standard or degraded planning standard function. The finding has a problem identification and resolution crosscutting aspect associated operating experience because the licensee did not use operating experience to maintain and update the protective action procedure.

Inspection Report# : 2011005 *(pdf)*

Occupational Radiation Safety

Significance: G Dec 31, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Perform Adequate Radiation Surveys
The inspectors reviewed a self-revealing non-cited violation of 10 CFR 20.1501(a) because radiation protection staff failed to perform an adequate survey to evaluate and determine the radiological hazards in the floor drain tank room. The licensee entered the finding into the corrective action program as Condition Report CR 2011 010174 and immediately posted the room as a locked high radiation area.

The failure to perform a radiation survey to determine radiological hazards was a performance deficiency. The finding was greater than minor because it was associated with the occupational radiation safety cornerstone attribute of program and process and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation during routine operations. Using NRC Manual Chapter 0609, “Significance Determination Process,” Appendix C, “Occupational Radiation Safety Significance Determination Process,” the finding was determined to be of very low safety significance because: (1) it was not associated with as low as is reasonably achievable (ALARA) planning (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work control because the licensee failed to ensure interdepartmental communication and coordination prior to commencing work activities and assuring accurate radiation safety information was provided to workers.
Inspection Report# : 2011005 *(pdf)*

Significance: G Dec 31, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Follow Radiological Work Permit Requirements
The inspectors reviewed a self-revealing non-cited violation of Technical Specification 5.4.1.a for the failure of a worker to follow radiological work permit requirements. Specifically, a chemistry technician received a dose rate alarm greater than 120 millirem per hour and failed to immediately exit the area and contact radiation protection. The licensee entered the finding into the corrective action program as Condition Report CR 2011- 010774.

The failure to follow the instructions on a radiation work permit by not immediately contacting radiation protection when a dose rate alarm was received was a performance deficiency. The finding was greater than minor because it was associated with the occupational radiation safety cornerstone attribute of program and process and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation during routine operations. Using NRC Manual Chapter 0609, “Significance Determination Process,” Appendix C, “Occupational Radiation Safety Significance Determination Process,” the finding was determined to be of very low safety significance because: (1) it was not associated with as low as is reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with

work practices because the licensee failed to effectively communicate expectations regarding procedural compliance to the worker.

Inspection Report# : 2011005 *(pdf)*

Public Radiation Safety

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

Last modified : September 12, 2012

Comanche Peak 1
3Q/2012 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Analyze Tornado Missile Strike on Turbine Driven Auxiliary Feedwater Exhaust Pipe
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure to translate tornado missile protection design requirements to a pipe stress analysis procedure. This resulted in the licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping. The licensee preliminarily determined that the auxiliary feedwater system would be able to perform its safety function given a tornado missile strike. The licensee entered the finding into the corrective action program as Condition Report CR 2012 006134.

The licensee's failure to translate design requirements into the pipe stress analysis procedure resulted in the failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pump steam exhaust pipes. 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to ensure the reliability of the auxiliary feedwater system in response to a tornado missile hazard. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Revise Turbine Driven Auxiliary Feedwater Pump Acceptance Criteria
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, for the failure to incorporate acceptance limits from applicable design documents into test procedures. Specifically, the licensee revised the Unit 1 and Unit 2 requirement for the turbine driven auxiliary feedwater pump discharge pressure for a power uprate, but failed to incorporate the change into the pump surveillance procedures. As a result, the acceptance criteria were incorrect and nonconservative. The pumps were able to meet the revised acceptance criteria and perform their safety function. The licensee entered the finding into the corrective action program as Condition Report CR 2012-006135.

The licensee's failure to update the turbine driven auxiliary feedwater surveillance procedure acceptance criteria following an accident analysis revision was a performance deficiency which resulted in the failure to ensure the pump was meeting its discharge pressure requirements. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in that, if the turbine driven auxiliary feedwater pump performance degraded below the accident analysis assumptions, the surveillance would not detect the inoperability and corrective actions would not be taken. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance in the mitigating systems cornerstone because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.
Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Evaluate Fish Intrusion Operating Experience and Initiate Corrective Action
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure of the licensee to identify and correct a condition adverse to quality. Specifically, the licensee failed to adequately evaluate industry operating experience related to fish intrusion into cooling water systems, which resulted in the failure to take appropriate corrective actions. Subsequently, shad from the safe shutdown impoundment entered the service water system and lowered cooling water flow to safety-related components when the fish were caught in the component strainers. The licensee entered the finding into the corrective action program as Condition Report CR-2012-006133.

The licensee's failure to identify a condition adverse through an inadequate evaluation of industry operating experience related to fish intrusion into cooling water systems was a performance deficiency and resulted in the failure to take appropriate corrective actions that could have prevented a similar fish intrusion event at the station. 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fish intrusion resulted in the clogging of strainers and the lowering of service water flow to safety-related pumps. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Corrective Actions for Safety Chiller Trips
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedure and develop corrective actions for a low tier cause analysis. Specifically, the licensee performed a low tier cause analysis on two safety chiller 2-06 trips, but failed to develop corrective actions or provide any justification for not taking corrective actions. The licensee entered the finding into the corrective action program as Condition Report

CR 2012-006136.

The licensee's failure to follow procedure for a low tier cause analysis was a performance deficiency and resulted in not taking corrective actions for two safety chiller trips. The finding 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 of systems that respond to initiating events to prevent undesirable consequences. Specifically, the safety chillers are unavailable while they are tripped. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a problem identification and resolution cross-cutting aspect associated with the corrective action program because the licensee failed to thoroughly evaluate the problem such that the resolution addresses the cause.

Inspection Report# : 2012003 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Initiate Condition Report for Emergency Core Cooling System Pump Leaks
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedure and initiate a condition report for degradation of safety-related equipment. Specifically, the licensee failed to initiate a condition report for multiple small oil leaks on emergency core cooling system pumps and motors. As a result, the licensee failed to characterize the operability of the equipment and identify potential corrective actions. The licensee entered the finding into the corrective action program as Condition Report CR-2012-003390.

The licensee's failure to follow procedure and initiate a condition report for emergency core cooling system pump and motor oil leaks was a performance deficiency and resulted in the failure to characterize the operability of the equipment and the failure to initiate appropriate corrective actions. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in that, the leaks could worsen before establishing corrective actions and cause inoperable safety-related equipment. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance in the mitigating systems cornerstone because the equipment was able to perform its safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a problem identification and resolution cross-cutting aspect associated with the corrective action program because the licensee did not use a low threshold for identifying issues [P.1a].
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Past Operability Determination for the Diesel Generators
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedure and perform an adequate past operability evaluation to determine if a condition would have made a system inoperable in the past. Specifically, the licensee failed to determine that when a diesel generator was paralleled to the grid with a high bus voltage condition, the diesel generator was inoperable. As a result of the inadequate past operability evaluation, the licensee incorrectly classified the significance of the condition report. The licensee entered

the finding into the corrective action program as Condition Report CR-2011-006113.

The failure to follow procedure and perform an adequate past operability evaluation of the diesel generators was a performance deficiency which resulted in the licensee incorrectly classifying the significance of the condition report. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in that, the licensee could fail to correct a condition commensurate with its safety significance. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance in the mitigating systems cornerstone because it did not result in the equipment being unable to perform its safety function for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a human performance cross-cutting aspect associated with work practices because the licensee failed to use error prevention techniques, such as pre-job briefings, that were commensurate with the risk of the assigned task and support human performance error prevention [H.4a].
Inspection Report# : 2012002 *(pdf)*

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Remove Materials and Debris from Containment
The inspectors identified a non-cited violation of Technical Specification 5.4.1.a for the failure to follow procedure and remove items from containment. As a result, maintenance personnel failed to remove materials that could be transported to the containment emergency core cooling sumps during an accident. The inspectors informed the licensee of the debris inside containment and the licensee corrected the condition. The licensee entered the finding into the corrective action program as Condition Report CR 2011 013343.

The failure of the maintenance personnel to follow procedure and remove materials from containment was a performance deficiency which resulted in debris remaining in containment. The finding 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, reliability, and capability of the emergency core cooling sumps. Using NRC Manual Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, Checklist 2, the finding was determined to be of very low safety significance because the licensee maintained adequate mitigation capability for the current plant state and the finding was not characterized as a loss of control event. The finding has a human performance crosscutting aspect associated with resources because the licensee failed to ensure that personnel performing the maintenance activity were adequately trained on the procedure requirement to remove the materials when leaving containment.

Inspection Report# : 2011005 *(pdf)*

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correctly Reassemble a Motor Operated Valve
The inspectors identified a non-cited violation of Technical Specification 5.4.1.a for the failure to follow procedure and correctly restore motor operated valves. As a result, the licensee inverted the Unit 1 power operated relief valve block valves' limit switch covers and placed the drain on the top. The licensee entered the finding into the corrective action program as Condition Report CR 2011 011871.

The failure to follow procedure and correctly restore motor operated valves, which resulted in inverted limit switch covers with the drain on the top, was a performance deficiency. The finding was more than minor because if left

uncorrected, the performance deficiency had the potential to lead to a more significant safety concern in that other valves may have been incorrectly restored. The inspectors determined that the finding was associated with the mitigating systems cornerstone and affected the unit during a refueling outage. Using NRC Manual Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, Checklist 2, the finding was determined to be of very low safety significance because the licensee maintained adequate mitigation capability for the current plant state and the finding was not characterized as a loss of control event. The finding has a human performance crosscutting aspect associated with work practices because the licensee failed to use appropriate self and peer checking.

Inspection Report# : 2011005 *(pdf)*

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Inadequate Auxiliary Feedwater Pump Bearing Oil Levels
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure of the licensee to promptly identify and correct adverse auxiliary feedwater pump oil levels. As a result, the inspectors identified seven instances where the oil level was outside of the prescribed sight glass indication. The licensee entered the finding into the corrective action program as Condition Report CR-2011- 12430.

The licensee's failure to promptly identify and correct the improper auxiliary feedwater pump bearing oil level was a performance deficiency. The finding was more than minor because if was associated with the equipment performance attribute of the mitigating systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of the auxiliary feedwater pumps. 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 finding did not result in an actual loss of safety function of an auxiliary feedwater pump. The finding has a problem identification and resolution crosscutting aspect associated with corrective action program, in that, licensee personnel failed to trend and assess the abnormal oil level condition reports in the aggregate to identify common cause problems.

Inspection Report# : 2011005 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Guidelines for Protective Action Recommendations Outside the Emergency Planning Zone
The inspectors identified a non-cited violation of 10 CFR 50.47(b)(10) for failure of the licensee to have guidelines developed and in place for the choice of protective actions during an emergency. Specifically, Procedure EPP 304, "Protective Action Recommendations," Revision 20, did not provide direction for the development of protective action recommendations outside the emergency planning zone. The licensee entered the finding into the corrective

action program as Condition Report CR-2011 009218.

The failure to develop and implement guidelines for the choice of protective actions during an emergency is a performance deficiency. This finding is more than minor because it has the potential to affect safety, and affects the emergency preparedness cornerstone attributes of emergency response organization performance and procedure quality. The finding is of very low safety significance because it was a failure to comply with NRC requirements, was associated with a risk-significant planning standard, and was not a functional failure of the planning standard or degraded planning standard function. The finding has a problem identification and resolution crosscutting aspect associated operating experience because the licensee did not use operating experience to maintain and update the protective action procedure.

Inspection Report# : 2011005 *(pdf)*

Occupational Radiation Safety

Significance: G Dec 31, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Perform Adequate Radiation Surveys
The inspectors reviewed a self-revealing non-cited violation of 10 CFR 20.1501(a) because radiation protection staff failed to perform an adequate survey to evaluate and determine the radiological hazards in the floor drain tank room. The licensee entered the finding into the corrective action program as Condition Report CR 2011 010174 and immediately posted the room as a locked high radiation area.

The failure to perform a radiation survey to determine radiological hazards was a performance deficiency. The finding was greater than minor because it was associated with the occupational radiation safety cornerstone attribute of program and process and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation during routine operations. Using NRC Manual Chapter 0609, “Significance Determination Process,” Appendix C, “Occupational Radiation Safety Significance Determination Process,” the finding was determined to be of very low safety significance because: (1) it was not associated with as low as is reasonably achievable (ALARA) planning (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work control because the licensee failed to ensure interdepartmental communication and coordination prior to commencing work activities and assuring accurate radiation safety information was provided to workers.
Inspection Report# : 2011005 *(pdf)*

Significance: G Dec 31, 2011
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Follow Radiological Work Permit Requirements
The inspectors reviewed a self-revealing non-cited violation of Technical Specification 5.4.1.a for the failure of a worker to follow radiological work permit requirements. Specifically, a chemistry technician received a dose rate alarm greater than 120 millirem per hour and failed to immediately exit the area and contact radiation protection. The licensee entered the finding into the corrective action program as Condition Report CR 2011- 010774.

The failure to follow the instructions on a radiation work permit by not immediately contacting radiation protection when a dose rate alarm was received was a performance deficiency. The finding was greater than minor because it was associated with the occupational radiation safety cornerstone attribute of program and process and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation during routine operations. Using NRC Manual Chapter 0609, “Significance Determination Process,” Appendix C, “Occupational Radiation Safety Significance Determination Process,” the finding was determined to be of very low safety significance because: (1) it was not associated with as low as is reasonably achievable (ALARA) planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance crosscutting aspect associated with work practices because the licensee failed to effectively communicate expectations regarding procedural compliance to the worker.

Inspection Report# : 2011005 *(pdf)*

Public Radiation Safety

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

Last modified : November 30, 2012

Comanche Peak 1
4Q/2012 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Sep 25, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Compensatory Measures for Inoperable Hose Stations
The inspectors identified a non-cited violation of Technical Specification 5.4.1.d for the failure of the licensee to place signs at inoperable fire hose stations and at the compensatory fire hoses identifying the purpose and location of the compensatory measures. The inspectors determined that the licensee's compensatory actions were complex, undocumented, and not communicated to the fire brigade leader. As a result, the compensatory actions for inoperable hose stations were inadequate. The licensee entered the finding into the corrective action program as Condition Report CR-2012-006524.

The licensee's failure to place signs at the inoperable fire hose stations and at the compensatory fire hoses identifying the purpose and location of the compensatory measures was a performance deficiency. 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 cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fire protection compensatory actions for inoperable hose stations were inadequate. Using NRC Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 4, Appendix A, Exhibit 2, d.3.c, the finding was referred to NRC Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." A senior reactor analyst evaluated the finding and determined qualitatively that the resultant increase in risk would be of very low safety significance. The finding has a human performance cross-cutting aspect associated with decision-making because the licensee failed to communicate decisions to personnel who have a need to know the information in order to perform work safely [H.1c].
Inspection Report# : 2012004 *(pdf)*

Significance: G Sep 25, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Gasket Installation Causes Diesel Jacket Water Leak
The inspectors reviewed a self-revealing non-cited violation of Technical Specification 5.4.1.a for the failure of the licensee to adequately install a gasket in accordance with procedure. As a result, the diesel generator jacket water connection leaked above the Final Safety Analysis Report allowable value for a seven day technical specification mission time for the diesel generator. The licensee replaced the leaking gasket and entered the finding into the corrective action program as Condition Report CR-2012-006536.

The licensee's failure to adequately install a gasket in accordance with procedure was a performance deficiency which resulted in a diesel generator jacket water leak. The finding 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 reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the jacket water leakage rate exceeded the Final Safety Analysis Report allowable value for a seven day diesel generator technical specification mission time. Using NRC Inspection Manual Chapter 0609, Appendix A, "The Significance

Determination Process (SDP) for Findings At-Power," the finding screened to a detailed risk evaluation because it represented an actual loss of function of a single train for greater than its technical specification allowed outage time. A senior reactor analyst determined that the risk significance was of very low safety significance because the diesel generator was always capable of functioning for greater than the probabilistic risk assessment mission time of 24 hours. The finding has a human performance cross-cutting aspect associated with resources because the licensee failed to maintain design margins and minimize long-standing equipment issues [H.2a].
Inspection Report# : 2012004 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Analyze Tornado Missile Strike on Turbine Driven Auxiliary Feedwater Exhaust Pipe
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure to translate tornado missile protection design requirements to a pipe stress analysis procedure. This resulted in the licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping. The licensee preliminarily determined that the auxiliary feedwater system would be able to perform its safety function given a tornado missile strike. The licensee entered the finding into the corrective action program as Condition Report CR 2012 006134.

The licensee's failure to translate design requirements into the pipe stress analysis procedure resulted in the failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pump steam exhaust pipes. 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to ensure the reliability of the auxiliary feedwater system in response to a tornado missile hazard. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Revise Turbine Driven Auxiliary Feedwater Pump Acceptance Criteria
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, for the failure to incorporate acceptance limits from applicable design documents into test procedures. Specifically, the licensee revised the Unit 1 and Unit 2 requirement for the turbine driven auxiliary feedwater pump discharge pressure for a power uprate, but failed to incorporate the change into the pump surveillance procedures. As a result, the acceptance criteria were incorrect and nonconservative. The pumps were able to meet the revised acceptance criteria and perform their safety function. The licensee entered the finding into the corrective action program as Condition Report CR 2012-006135.

The licensee's failure to update the turbine driven auxiliary feedwater surveillance procedure acceptance criteria following an accident analysis revision was a performance deficiency which resulted in the failure to ensure the pump was meeting its discharge pressure requirements. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in that, if the turbine driven auxiliary feedwater pump performance degraded below the accident analysis assumptions, the surveillance would not detect the inoperability and corrective actions would not be taken. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance in the mitigating systems cornerstone because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant

due to a seismic, flooding, or severe weather initiating event. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.
Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Evaluate Fish Intrusion Operating Experience and Initiate Corrective Action
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure of the licensee to identify and correct a condition adverse to quality. Specifically, the licensee failed to adequately evaluate industry operating experience related to fish intrusion into cooling water systems, which resulted in the failure to take appropriate corrective actions. Subsequently, shad from the safe shutdown impoundment entered the service water system and lowered cooling water flow to safety-related components when the fish were caught in the component strainers. The licensee entered the finding into the corrective action program as Condition Report CR-2012-006133.

The licensee's failure to identify a condition adverse through an inadequate evaluation of industry operating experience related to fish intrusion into cooling water systems was a performance deficiency and resulted in the failure to take appropriate corrective actions that could have prevented a similar fish intrusion event at the station. 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fish intrusion resulted in the clogging of strainers and the lowering of service water flow to safety-related pumps. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.

Inspection Report# : 2012003 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Initiate Condition Report for Emergency Core Cooling System Pump Leaks
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedure and initiate a condition report for degradation of safety-related equipment. Specifically, the licensee failed to initiate a condition report for multiple small oil leaks on emergency core cooling system pumps and motors. As a result, the licensee failed to characterize the operability of the equipment and identify potential corrective actions. The licensee entered the finding into the corrective action program as Condition Report CR-2012-003390.

The licensee's failure to follow procedure and initiate a condition report for emergency core cooling system pump and motor oil leaks was a performance deficiency and resulted in the failure to characterize the operability of the equipment and the failure to initiate appropriate corrective actions. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in that, the leaks could worsen before establishing corrective actions and cause inoperable safety-related equipment. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance in the mitigating systems cornerstone because the equipment was able to perform its safety function and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a problem identification and resolution cross-cutting aspect associated with the corrective action program because the licensee did not use a low threshold for identifying issues [P.1a].
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 27, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Past Operability Determination for the Diesel Generators
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedure and perform an adequate past operability evaluation to determine if a condition would have made a system inoperable in the past. Specifically, the licensee failed to determine that when a diesel generator was paralleled to the grid with a high bus voltage condition, the diesel generator was inoperable. As a result of the inadequate past operability evaluation, the licensee incorrectly classified the significance of the condition report. The licensee entered the finding into the corrective action program as Condition Report CR-2011-006113.

The failure to follow procedure and perform an adequate past operability evaluation of the diesel generators was a performance deficiency which resulted in the licensee incorrectly classifying the significance of the condition report. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in that, the licensee could fail to correct a condition commensurate with its safety significance. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance in the mitigating systems cornerstone because it did not result in the equipment being unable to perform its safety function for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a human performance cross-cutting aspect associated with work practices because the licensee failed to use error prevention techniques, such as pre-job briefings, that were commensurate with the risk of the assigned task and support human performance error prevention [H.4a].
Inspection Report# : 2012002 *(pdf)*

Barrier Integrity

Significance: G Sep 25, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Promptly Correct a Nonconservative Technical Specification
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for failure to promptly correct a nonconservative technical specification, a condition adverse to quality. Specifically, in December 2010, the licensee implemented the administrative controls of NRC Administrative Letter 98-10, "Dispositioning of Technical Specifications that are Insufficient to Ensure Plant Safety," to permit storage of uprated fuel assemblies in Region II of the spent fuel pools. The licensee determined Technical Specification 3.7.17, "Spent Fuel Assembly Storage," was nonconservative for this condition, and did not submit a license amendment request in a timely manner to correct the technical specification. The licensee entered the finding into the corrective action program as Condition Report CR-2012-010304.

The licensee's failure to promptly correct a condition adverse to quality was a performance deficiency. This performance deficiency was more than minor because it was associated with the spent fuel pool controls attribute of the barrier integrity cornerstone. Because the significance determination process does not directly address spent fuel pool criticality, a senior reactor analyst evaluated this issue using NRC Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on calculations provided by the licensee, the analyst determined that even with all uncertainties included in the calculations, the spent fuel pools would remain subcritical under all conditions, including a complete dilution of the borated water. The analyst qualitatively considered a completed dilution of the spent fuel pools to be a very low probability event. Therefore, the analyst concluded that this issue was of very low safety significance. This finding has a human performance cross-cutting aspect associated with work practices because licensee management did not provide adequate oversite to support nuclear safety by ensuring a timely submittal of a technical specification amendment following implementation of administrative controls [H.4c].
Inspection Report# : 2012004 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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

Last modified : February 28, 2013

Comanche Peak 1
1Q/2013 Plant Inspection Findings

Initiating Events

Significance: G Mar 27, 2013
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Initiate a Condition Report for a Degraded Reactor Coolant Pump Motor Lower Oil Reservoir
The inspectors reviewed a self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedures that require initiating a condition report for degradation of equipment. During a maintenance activity, the licensee discovered that the reactor coolant pump motor lower oil reservoir level was low and failed to enter the condition into the corrective action program. As a result, the cause of the degraded condition was not evaluated. The licensee entered the finding in the corrective action program as Condition Report CR-2012-011607.

The licensee's failure to initiate a condition report for a degraded reactor coolant pump motor lower oil reservoir was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective. It increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Using NRC Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance because the finding did not contribute to both the cause of a reactor trip and affect mitigation equipment. The finding had a problem identification and resolution cross-cutting aspect associated with the corrective action program, in that, the licensee did not ensure issues potentially impacting nuclear safety are fully evaluated. Specifically, the licensee did not trend and assess the issues associated with the leaking reactor coolant pump motor oil reservoir [P.1b].

Inspection Report# : 2013002 *(pdf)*

Mitigating Systems

Significance: G Mar 27, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Have Instructions When Performing Activities
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to accomplish an activity affecting quality as prescribed by documented instructions. Specifically, radiation protection personnel installed cameras inside containment and did not have a work order to accomplish the activity because the work order had not been completed and approved. The licensee entered the finding in the corrective action program as Condition Report CR-2013-001723.

The licensee's failure to have documented instructions for installing cameras inside containment was a performance deficiency. The finding was more than minor because if left uncorrected it would have the potential to lead to a more

significant safety concern, in that, not using instructions could cause a more significant event and cause the inoperability of safety-related equipment. Using NRC Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The finding had a human performance cross-cutting aspect associated with work practices, in that, the licensee did not effectively communicate the expectations regarding the use of the work order when installing cameras inside containment [H.4b].

Inspection Report# : 2013002 *(pdf)*

Significance: G Sep 25, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Compensatory Measures for Inoperable Hose Stations
The inspectors identified a non-cited violation of Technical Specification 5.4.1.d for the failure of the licensee to place signs at inoperable fire hose stations and at the compensatory fire hoses identifying the purpose and location of the compensatory measures. The inspectors determined that the licensee's compensatory actions were complex, undocumented, and not communicated to the fire brigade leader. As a result, the compensatory actions for inoperable hose stations were inadequate. The licensee entered the finding into the corrective action program as Condition Report CR-2012-006524.

The licensee's failure to place signs at the inoperable fire hose stations and at the compensatory fire hoses identifying the purpose and location of the compensatory measures was a performance deficiency. 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 cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fire protection compensatory actions for inoperable hose stations were inadequate. Using NRC Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 4, Appendix A, Exhibit 2, d.3.c, the finding was referred to NRC Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." A senior reactor analyst evaluated the finding and determined qualitatively that the resultant increase in risk would be of very low safety significance. The finding has a human performance cross-cutting aspect associated with decision-making because the licensee failed to communicate decisions to personnel who have a need to know the information in order to perform work safely [H.1c].
Inspection Report# : 2012004 *(pdf)*

Significance: G Sep 25, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Gasket Installation Causes Diesel Jacket Water Leak
The inspectors reviewed a self-revealing non-cited violation of Technical Specification 5.4.1.a for the failure of the licensee to adequately install a gasket in accordance with procedure. As a result, the diesel generator jacket water connection leaked above the Final Safety Analysis Report allowable value for a seven day technical specification mission time for the diesel generator. The licensee replaced the leaking gasket and entered the finding into the corrective action program as Condition Report CR-2012-006536.

The licensee's failure to adequately install a gasket in accordance with procedure was a performance deficiency which resulted in a diesel generator jacket water leak. The finding 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 reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the jacket water leakage rate exceeded the Final Safety Analysis Report allowable value for a seven day diesel generator technical specification mission time. Using NRC Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," the finding screened to a detailed risk evaluation because it represented an actual loss of function of a single train for greater than its technical specification allowed outage time. A senior reactor analyst determined that the risk significance was of very low safety significance because the diesel generator was always capable of functioning for greater than the probabilistic risk assessment mission time of 24 hours. The finding has a human performance cross-cutting aspect associated with resources because the licensee failed to maintain design margins and minimize long-standing equipment issues [H.2a].
Inspection Report# : 2012004 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Analyze Tornado Missile Strike on Turbine Driven Auxiliary Feedwater Exhaust Pipe
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure to translate tornado missile protection design requirements to a pipe stress analysis procedure. This resulted in the licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping. The licensee preliminarily determined that the auxiliary feedwater system would be able to perform its safety function given a tornado missile strike. The licensee entered the finding into the corrective action program as Condition Report CR 2012 006134.

The licensee's failure to translate design requirements into the pipe stress analysis procedure resulted in the failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pump steam exhaust pipes. 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to ensure the reliability of the auxiliary feedwater system in response to a tornado missile hazard. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was a qualification deficiency confirmed not to result in loss of operability or functionality. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Revise Turbine Driven Auxiliary Feedwater Pump Acceptance Criteria
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, for the failure to incorporate acceptance limits from applicable design documents into test procedures. Specifically, the licensee revised the Unit 1 and Unit 2 requirement for the turbine driven auxiliary feedwater pump discharge pressure for a power uprate, but failed to incorporate the change into the pump surveillance procedures. As a result, the acceptance criteria were incorrect and nonconservative. The pumps were able to meet the revised acceptance criteria and perform their safety function. The licensee entered the finding into the corrective action program as Condition Report CR 2012-006135.

The licensee's failure to update the turbine driven auxiliary feedwater surveillance procedure acceptance criteria following an accident analysis revision was a performance deficiency which resulted in the failure to ensure the pump

was meeting its discharge pressure requirements. The finding was more than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern, in that, if the turbine driven auxiliary feedwater pump performance degraded below the accident analysis assumptions, the surveillance would not detect the inoperability and corrective actions would not be taken. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance in the mitigating systems cornerstone because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.
Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 26, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Evaluate Fish Intrusion Operating Experience and Initiate Corrective Action
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for the failure of the licensee to identify and correct a condition adverse to quality. Specifically, the licensee failed to adequately evaluate industry operating experience related to fish intrusion into cooling water systems, which resulted in the failure to take appropriate corrective actions. Subsequently, shad from the safe shutdown impoundment entered the service water system and lowered cooling water flow to safety-related components when the fish were caught in the component strainers. The licensee entered the finding into the corrective action program as Condition Report CR-2012-006133.

The licensee's failure to identify a condition adverse through an inadequate evaluation of industry operating experience related to fish intrusion into cooling water systems was a performance deficiency and resulted in the failure to take appropriate corrective actions that could have prevented a similar fish intrusion event at the station. 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 to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fish intrusion resulted in the clogging of strainers and the lowering of service water flow to safety-related pumps. Using NRC Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to be of very low safety significance because it was not a design or qualification deficiency, was not a loss of system safety function, was not an actual loss of safety function of a single train for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding did not have a cross-cutting aspect because the performance deficiency was not representative of current plant performance.

Inspection Report# : 2012003 *(pdf)*

Barrier Integrity

Significance: G Sep 25, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Promptly Correct a Nonconservative Technical Specification
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for failure to promptly

correct a nonconservative technical specification, a condition adverse to quality. Specifically, in December 2010, the licensee implemented the administrative controls of NRC Administrative Letter 98-10, “Dispositioning of Technical Specifications that are Insufficient to Ensure Plant Safety,” to permit storage of uprated fuel assemblies in Region II of the spent fuel pools. The licensee determined Technical Specification 3.7.17, “Spent Fuel Assembly Storage,” was nonconservative for this condition, and did not submit a license amendment request in a timely manner to correct the technical specification. The licensee entered the finding into the corrective action program as Condition Report CR-2012-010304.

The licensee’s failure to promptly correct a condition adverse to quality was a performance deficiency. This performance deficiency was more than minor because it was associated with the spent fuel pool controls attribute of the barrier integrity cornerstone. Because the significance determination process does not directly address spent fuel pool criticality, a senior reactor analyst evaluated this issue using NRC Inspection Manual Chapter 0609, Appendix M, “Significance Determination Process Using Qualitative Criteria.” Based on calculations provided by the licensee, the analyst determined that even with all uncertainties included in the calculations, the spent fuel pools would remain subcritical under all conditions, including a complete dilution of the borated water. The analyst qualitatively considered a completed dilution of the spent fuel pools to be a very low probability event. Therefore, the analyst concluded that this issue was of very low safety significance. This finding has a human performance cross-cutting aspect associated with work practices because licensee management did not provide adequate oversite to support nuclear safety by ensuring a timely submittal of a technical specification amendment following implementation of administrative controls [H.4c].
Inspection Report# : 2012004 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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

Last modified : June 04, 2013

Comanche Peak 1
2Q/2013 Plant Inspection Findings

Initiating Events

Significance: G Jun 26, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Procedure Results in Water Hammer
The inspectors identified a non-cited violation of Technical Specification 5.4.1.a for the failure to follow an auxiliary feedwater system operating procedure. As a result, a water hammer occurred on the condensate storage tank makeup reject line. The licensee entered the finding into the corrective action program as Condition Report CR-2012-012539.

The finding was more than minor because it was associated with the human performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, it resulted in a system water hammer. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance because the finding did not cause a reactor trip and the loss of mitigation equipment. The finding had a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that personnel were adequately trained to perform the activity. [H.2(b)]
Inspection Report# : 2013003 *(pdf)*

Significance: G Mar 27, 2013
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Initiate a Condition Report for a Degraded Reactor Coolant Pump Motor Lower Oil Reservoir
The inspectors reviewed a self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedures that require initiating a condition report for degradation of equipment. During a maintenance activity, the licensee discovered that the reactor coolant pump motor lower oil reservoir level was low and failed to enter the condition into the corrective action program. As a result, the cause of the degraded condition was not evaluated. The licensee entered the finding in the corrective action program as Condition Report CR-2012-011607.

The licensee's failure to initiate a condition report for a degraded reactor coolant pump motor lower oil reservoir was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective. It increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Using NRC Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance because the finding did not contribute to both the cause of a reactor trip and affect mitigation equipment. The finding had a problem identification and resolution cross-cutting aspect associated with the corrective action program, in that, the licensee did not ensure issues potentially impacting nuclear safety are fully evaluated. Specifically, the licensee did not trend and assess the issues associated with the leaking reactor coolant pump motor oil reservoir [P.1b].

Inspection Report# : 2013002 *(pdf)*

Mitigating Systems

Significance: G Jun 26, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure for Testing Main Steam Safety Valves
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of the licensee to have documented instructions of a type appropriate to the circumstances for testing the main steam safety valves. Specifically, the procedure for testing the main steam safety valves did not provide direction to declare the valves inoperable when applying pressure to the lifting device. As a result, the licensee failed to declare the main steam safety valves inoperable during testing. The licensee entered the finding in the corrective action program as Condition Report CR-2013-002947.

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 capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure did not provide guidance to declare a main steam safety valve inoperable with the test rig installed. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The inspectors determined that the finding was not representative of current licensee performance and no cross-cutting aspect was assigned.
Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Calculations and Procedures for Offsite Power Availability
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that states, in part, "applicable regulatory requirements and design basis are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to June 5, 2013, the licensee did not establish that the minimum switchyard voltages established in station procedures were adequate to prevent undesired actuation of the undervoltage protection scheme. This condition resulted from an inadequate analysis of undervoltage relay setpoints in design calculations, and the failure to provide acceptance criteria for undervoltage relay reset setpoints in relay calibration procedures. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006176.

The inspectors determined that the failure to properly analyze minimum switchyard voltage requirements, and control relay setpoints necessary to maintain the availability of offsite power was a performance deficiency. The performance deficiency is more-than-minor because it was associated with Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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, at the minimum switchyard voltages established in station procedures, actuation of the undervoltage protection scheme could have occurred and removed the reliable offsite power sources during an accident. Using Inspection Manual

Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. The finding had a cross-cutting aspect in the Area of Problem Identification and Resolution, associated with the Operating Experience Component, since the issues noted in this finding were discussed in Regulatory Issue Summary (RIS) 2011-12, “Adequacy of Station Electric Distribution System Voltages,” and RIS 2011-12 was reviewed by the licensee as part of the self assessment conducted in February 2013. [P.2(b)]

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Voltage Caculations for the 125 VDC and 120 VAC Buses
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” that states, in part, “applicable regulatory requirements and design basis are correctly translated into specifications, drawings, procedures, and instructions.” Specifically, prior to June 20, 2013, the 125 VDC calculation did not take into account the maximum inrush currents and actual accident loading, and the 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. The finding was entered into the licensee’s corrective action program as Condition Report CR-2013-006273 and CR-2013- 006396.

The inspectors determined that the failure to perform accurate voltage calculations for the 125 VDC system and 120 VAC bus was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 125 VDC calculation did not take into account the maximum inrush currents and actual accident loading, and the 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure To Establish 10 CFR 50.65(a)(1) Performance Goals for the APDG'S
The inspectors identified a Green, non-cited violation of 10 CFR 50.65(a)(1), “Requirements for monitoring the effectiveness of maintenance at nuclear power plants,” that states, in part, that the licensee “shall monitor the performance or condition of structures, systems, or components, against licensee established goals, in a manner sufficient to provide reasonable assurance that these structures, systems, and components are capable of fulfilling their intended functions.” Specifically, on July 26, 2012, the licensee failed to establish goals and monitor the performance of the alternate power diesel generator system to ensure the system is capable of providing the necessary electric power onto the emergency buses. The finding was entered into the licensee’s corrective action program as Condition Report CR-2013-006521.

The inspectors determined that the failure to follow procedure to establish performance goals while performing Maintenance Rule (a)(1) monitoring to ensure the APDG system is capable and tested to meet the design basis requirements, was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Equipment Performance attribute and adversely affected the cornerstone objective to ensuring the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure directs the licensee to establish performance goals on activities that address conditions which were determined to be classified as (a)(1). In accordance with Inspection Manual Chapter (IMC) 0609, Attachment 4, "Initial Characterization of Findings," the inspectors determined that the finding affected the Mitigating System Cornerstone. Using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding had a cross-cutting aspect in the area of human performance associated with the resources component because the licensee failed to ensure that emergency equipment is adequate and available to assure nuclear safety. [H.2(d)]

Inspection Report# : 2013007 *(pdf)*

Significance:  Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Analyze Effect of System Harmonics on Degraded Voltage Relays
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that states, in part, "measures provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program." Specifically, prior to May 20, 2013, the licensee failed to assess the adverse effects of 6.9kV and 480V system harmonics on the degraded voltage relays. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006230.

The inspectors determined that the failure to analyze the effect of electrical system harmonics on the degraded voltage relays was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to analyze the effect of electrical system harmonics on the degraded voltage relays could cause the relays to fail to actuate at the setpoint specified in Technical Specifications. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was a deficiency affecting the design or qualification that did not result in the safety-related equipment losing operability or functionality. This finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance:  Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform Adequate Operability Assessments
The inspectors identified a Green, non-cited violation, with three examples, of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," that states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings and shall be accomplished in accordance with these instructions,

procedures, or drawings." Specifically, for example 1 on February 28, 2013, for example 2 on June 5, 2013 and for example 3 on June 8, 2013, the licensee failed to follow procedure STI 442.01, "Operability Determination and Functionality Assessment Program," Revision 1, Attachment 8.B page 3 of 5 which states, in part, "Identify the topics that are applicable to the quick technical evaluation and include information for applicable topics within the evaluation such as: for example 1, The effect or potential effect of the degraded or nonconforming condition on the affected SSC's ability to perform its specified safety function, or for example 2, Compensatory Measures are recommended, or for example 3, Whether there is reasonable expectation of operability, including the basis for the determination." The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006599.

The inspectors determined that the failure to perform adequate operability assessments was a performance deficiency. The performance deficiency is more-than-minor because:

Example 1: It was associated with the Reactor Safety, Barrier Integrity Cornerstone, Configuration Control attribute and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (containment) protect the public from radionuclide releases caused by accidents or events. Specifically, shutting off of the containment spray pumps during a large break LOCA inside containment would allow containment pressure to increase. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 3, the inspectors determined the finding was of very low (Green) safety significance because it did not represent an actual open pathway in the physical integrity of reactor containment (valves, airlocks, etc.), containment isolation system (logic and instrumentation), and heat removal components or actual reduction in function of hydrogen igniters in the reactor containment.

Example 2: It was associated with the Reactor Safety, Mitigating Systems Cornerstone, Equipment Performance attribute 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 compensatory measures established in the first operability assessment did not ensure that offsite power would be maintained at minimum grid voltage.

Example 3: It was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 operability assessment initially credited the use of the battery chargers after the emergency diesel generators restored power to the bus, without evaluating design basis for the battery chargers.

For examples 2 and 3, the inspectors used Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because these examples were a deficiency affecting the design or qualification that did not result in losing operability or functionality.

This finding had a cross-cutting aspect in the area of human performance associated with the decision making component because the licensee failed in all three examples to conduct an effectiveness review of a safety-significant decision to verify the validity of the underlying assumptions to identify possible unintended consequences during the original operability assessments. [H.1(b)]

Inspection Report# : 2013007 *(pdf)*

Significance: N/A Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Update the FSAR for the APDG's in Accordance with Regulatory Guide 1.70-1995

The inspectors identified a Severity level IV, non-cited violation of 10 CFR 50.71(e)(4), requires the UFSAR be updated, at intervals not exceeding 24 months, and states in part, “the revisions must reflect all changes made in the facility or procedures described in the UFSAR.” Specifically, prior to June 20, 2013, the inspectors identified the alternate power diesel generator system was not described in sufficient detail in the FSAR as required. This finding was entered into the licensee’s corrective action program as Condition Report CR-2013-006256.

The inspectors determined that the failure to update the Final Safety Analysis Report to include the description of the APDG system in section 8.3.1 “AC Power Systems” was a performance deficiency. The issue is a performance deficiency because it was a failure to meet requirement, 10 CFR 50.71(e)(4), and it was within the licensee’s ability to correct the problem. Using Inspection Manual Chapter 0612, Appendix B, the performance deficiency was assessed through both the Reactor Oversight Process and traditional enforcement because the finding had the potential for impacting the NRC’s ability to perform its regulatory function. The finding resulted in a minor performance deficiency. For traditional enforcement, the inspectors used the Enforcement Policy, in accordance with Section 6.1.d.3, and determined the violation to be a Severity Level IV, non cited violation, because the licensee failed to update the UFSAR as required by 10 CFR 50.71(e)(4), but the lack of up to date information had not resulted in any unacceptable change to the facility or procedures. This violation did not have a cross-cutting aspect.
Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Appropriate Acceptance Criteria and Testing Procedure Instructions
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," that states, in part, “A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.” Specifically, since 2001, the licensee failed to provide appropriate acceptance criteria and testing procedure instructions during modified performance tests involving Class 1E batteries for the 1-minute critical period testing data which incorporated the requirements of IEEE Standard 450-1995 to ensure the battery would meet the required design voltage for the duty cycle. The finding was entered into the licensee’s corrective action program as Condition Report CR-2013-005673.

The inspectors determined that the failure to provide appropriate acceptance criteria and testing procedure instructions involving Class 1E batteries for the 1-minute critical period testing data during modified performance tests was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Procedure Quality attribute 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, Procedure MSE-S0-5715 does not direct the technicians to record and evaluate the voltage at the end of the 1-minute critical period to ensure it does not drop below the designed minimum voltage, which would indicate the battery would not be capable of meeting the required design function. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because Calculation EE-CA-0000-5121 was implemented in 2001 and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC

Item Type: NCV NonCited Violation
Failure to Provide Appropriate Acceptance Criteria for the Safety Chill Water Pumps
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," that states, in part, “A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.” Specifically, since 1994, the licensee failed to recognize that if the safety-related chilled water pumps were degraded to 90 percent of their reference value, as permitted by IST Procedures OPT 209A/B, the system may not be able to achieve the required design flowrates as stated in Calculation 1-EB-311-8. This finding was entered into the licensee’s corrective action program as Condition Report CR-2013-006252.

The inspectors determined that the failure to ensure appropriate acceptance criteria were incorporated into test procedures for the safety chill water pumps was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 recognize that if the safety-related chilled water pumps were degraded to 90 percent of their reference value, as permitted by IST Procedures OPT-209A/B, the system may not be able to achieve the required design flowrates as stated in Calculation 1-EB-311-8. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because Calculation 1-EB-311-8 was updated in 1994 to incorporate the uninterruptible power system fan coil units and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Fouling on the Emergency Dieesel Generator Building Exhaust Ventilation Screens
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” that states, in part, “ measures shall be established to assure that conditions adverse to quality are promptly identified and corrected.” Specifically, prior to June 17, 2013, the licensee failed to establish an activity to identify fouling of the Unit 1 emergency diesel generator building exhaust ventilation screens. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006540.

The inspectors determined that the failure to identify fouling on the Unit 1 emergency diesel generator building exhaust ventilation screens was a performance deficiency. The performance deficiency is more-than-minor because it had the potential to lead to a more significant safety concern. Specifically, the Unit 1 emergency diesel generator rooms could have insufficient exhaust flow to meet design basis temperature requirements if left uncorrected. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the emergency diesel generators losing operability or functionality. This finding did not have a crosscutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013

Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Incorporate the Refueling Water Storage Tank Vortexing Design Calculation Into the Emergency Operating Procedures for Containment Spray Pump Operation
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," states, in part, "measures shall be establish to assure that the design basis for systems, structures, and components are correctly translated into specifications, drawings, procedures and instructions." Specifically, since 2006 and 2007, the licensee failed to appropriately incorporate the RWST vortexing design calculation's 6 percent indicated level into the emergency operating procedures for switching containment spray pump suction from the RWST to the containment sump to prevent damage to the pumps. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-005739.

The inspectors determined that the failure to appropriately incorporate the RWST vortexing design calculation's 6 percent indicated level into the emergency operating procedures for switching containment spray pump suction from the RWST to the containment sump to prevent damage to the pumps was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Procedure Quality attribute 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, Emergency Operating Procedure EOS 1.3A/B allowed the operators the ability to delay transfer of containment spray pump suction source which could have caused damage to the pumps due to vortexing. Using Inspection Manual Chapter 0609 Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because the change to the procedure due to the addition of the sump strainers occurred in 2006 and 2007, and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance:  Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correct Design Calculations to Incorporate Technical Specification Allowed Frequency Range for the Emergency Diesel Generator in a Timely Manner
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, "measures shall be established to assure that conditions adverse to quality are promptly identified and corrected." Specifically, since May 2010, the licensee failed to correct a condition adverse to quality in a timely manner that involved updating design basis calculations for safety-related equipment to include the allowed technical specification frequency range of ± 2 percent for the emergency diesel generators. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006604.

The inspectors determined that the failure to correct a condition adverse to quality in a timely manner that involved updating design basis calculations for safety-related equipment to include the allowed technical specification frequency range of ± 2 percent for the emergency diesel generators was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute and adversely affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the calculations to support safety-related equipment did not include allowed technical specification frequency range for the emergency diesel generators to ensure the equipment would be capable of performing their safety-related functions. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance

because the finding was a deficiency affecting the design or qualification that did not result in the safety-related equipment losing operability or functionality. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to take appropriate corrective actions to address updating design basis calculations to include technical specification allowed emergency diesel generator frequency range in a timely manner, commensurate with their safety significance. [P.1(d)]
Inspection Report# : 2013007 *(pdf)*

Significance: G Mar 27, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Have Instructions When Performing Activities
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to accomplish an activity affecting quality as prescribed by documented instructions. Specifically, radiation protection personnel installed cameras inside containment and did not have a work order to accomplish the activity because the work order had not been completed and approved. The licensee entered the finding in the corrective action program as Condition Report CR-2013-001723.

The licensee's failure to have documented instructions for installing cameras inside containment was a performance deficiency. The finding was more than minor because if left uncorrected it would have the potential to lead to a more significant safety concern, in that, not using instructions could cause a more significant event and cause the inoperability of safety-related equipment. Using NRC Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The finding had a human performance cross-cutting aspect associated with work practices, in that, the licensee did not effectively communicate the expectations regarding the use of the work order when installing cameras inside containment [H.4b].

Inspection Report# : 2013002 *(pdf)*

Significance: G Sep 25, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Compensatory Measures for Inoperable Hose Stations
The inspectors identified a non-cited violation of Technical Specification 5.4.1.d for the failure of the licensee to place signs at inoperable fire hose stations and at the compensatory fire hoses identifying the purpose and location of the compensatory measures. The inspectors determined that the licensee's compensatory actions were complex, undocumented, and not communicated to the fire brigade leader. As a result, the compensatory actions for inoperable hose stations were inadequate. The licensee entered the finding into the corrective action program as Condition Report CR-2012-006524.

The licensee's failure to place signs at the inoperable fire hose stations and at the compensatory fire hoses identifying the purpose and location of the compensatory measures was a performance deficiency. 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 cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the fire protection compensatory actions for inoperable hose stations were inadequate. Using NRC Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 4, Appendix A, Exhibit 2, d.3.c, the finding was referred to NRC Inspection Manual Chapter

0609, Appendix M, “Significance Determination Process Using Qualitative Criteria.” A senior reactor analyst evaluated the finding and determined qualitatively that the resultant increase in risk would be of very low safety significance. The finding has a human performance cross-cutting aspect associated with decision-making because the licensee failed to communicate decisions to personnel who have a need to know the information in order to perform work safely [H.1c].
Inspection Report# : 2012004 *(pdf)*

Significance: G Sep 25, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadequate Gasket Installation Causes Diesel Jacket Water Leak
The inspectors reviewed a self-revealing non-cited violation of Technical Specification 5.4.1.a for the failure of the licensee to adequately install a gasket in accordance with procedure. As a result, the diesel generator jacket water connection leaked above the Final Safety Analysis Report allowable value for a seven day technical specification mission time for the diesel generator. The licensee replaced the leaking gasket and entered the finding into the corrective action program as Condition Report CR-2012-006536.

The licensee’s failure to adequately install a gasket in accordance with procedure was a performance deficiency which resulted in a diesel generator jacket water leak. The finding 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 reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the jacket water leakage rate exceeded the Final Safety Analysis Report allowable value for a seven day diesel generator technical specification mission time. Using NRC Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” the finding screened to a detailed risk evaluation because it represented an actual loss of function of a single train for greater than its technical specification allowed outage time. A senior reactor analyst determined that the risk significance was of very low safety significance because the diesel generator was always capable of functioning for greater than the probabilistic risk assessment mission time of 24 hours. The finding has a human performance cross-cutting aspect associated with resources because the licensee failed to maintain design margins and minimize long-standing equipment issues [H.2a].
Inspection Report# : 2012004 *(pdf)*

Barrier Integrity

Significance: G Sep 25, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Promptly Correct a Nonconservative Technical Specification
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, for failure to promptly correct a nonconservative technical specification, a condition adverse to quality. Specifically, in December 2010, the licensee implemented the administrative controls of NRC Administrative Letter 98-10, “Dispositioning of Technical Specifications that are Insufficient to Ensure Plant Safety,” to permit storage of uprated fuel assemblies in Region II of the spent fuel pools. The licensee determined Technical Specification 3.7.17, “Spent Fuel Assembly Storage,” was nonconservative for this condition, and did not submit a license amendment request in a timely manner to correct the technical specification. The licensee entered the finding into the corrective action program as Condition Report CR-2012-010304.

The licensee's failure to promptly correct a condition adverse to quality was a performance deficiency. This performance deficiency was more than minor because it was associated with the spent fuel pool controls attribute of the barrier integrity cornerstone. Because the significance determination process does not directly address spent fuel pool criticality, a senior reactor analyst evaluated this issue using NRC Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on calculations provided by the licensee, the analyst determined that even with all uncertainties included in the calculations, the spent fuel pools would remain subcritical under all conditions, including a complete dilution of the borated water. The analyst qualitatively considered a completed dilution of the spent fuel pools to be a very low probability event. Therefore, the analyst concluded that this issue was of very low safety significance. This finding has a human performance cross-cutting aspect associated with work practices because licensee management did not provide adequate oversite to support nuclear safety by ensuring a timely submittal of a technical specification amendment following implementation of administrative controls [H.4c].
Inspection Report# : 2012004 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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

Last modified : September 03, 2013

Comanche Peak 1
3Q/2013 Plant Inspection Findings

Initiating Events

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: FIN Finding
Improper Pipe Cap Installation Results in a Unit Shutdown
The inspectors reviewed a self-revealing finding for operation's personnel failure to follow instructions for the removal of the dissimilar metal elbow when installing a pipe cap. As a result, the elbow eventually leaked, reactor coolant system leakage increased, and a Unit 1 shutdown was needed to correct the issue. The licensee entered the finding into the corrective action program as Condition Report CR-2013-006795.
The finding was more than minor because it was associated with the human performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance (Green) because the finding could not result in exceeding the reactor coolant system leak rate for a small loss of coolant accident and the finding would not have affected other systems used to mitigate a loss of coolant accident resulting in a total loss of their function. The finding had a human performance cross-cutting aspect associated with resources because the environmental conditions impacted the ability of the operators to correctly install the pipe cap [H.3(a)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Jun 26, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Procedure Results in Water Hammer
The inspectors identified a non-cited violation of Technical Specification 5.4.1.a for the failure to follow an auxiliary feedwater system operating procedure. As a result, a water hammer occurred on the condensate storage tank makeup reject line. The licensee entered the finding into the corrective action program as Condition Report CR-2012-012539.

The finding was more than minor because it was associated with the human performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, it resulted in a system water hammer. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance because the finding did not cause a reactor trip and the loss of mitigation equipment. The finding had a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that personnel were adequately trained to perform the activity. [H.2(b)]
Inspection Report# : 2013003 *(pdf)*

Significance: G Mar 27, 2013
Identified By: Self-Revealing

Item Type: NCV NonCited Violation
Failure to Initiate a Condition Report for a Degraded Reactor Coolant Pump Motor Lower Oil Reservoir
The inspectors reviewed a self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedures that require initiating a condition report for degradation of equipment. During a maintenance activity, the licensee discovered that the reactor coolant pump motor lower oil reservoir level was low and failed to enter the condition into the corrective action program. As a result, the cause of the degraded condition was not evaluated. The licensee entered the finding in the corrective action program as Condition Report CR-2012-011607.

The licensee's failure to initiate a condition report for a degraded reactor coolant pump motor lower oil reservoir was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective. It increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Using NRC Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance because the finding did not contribute to both the cause of a reactor trip and affect mitigation equipment. The finding had a problem identification and resolution cross-cutting aspect associated with the corrective action program, in that, the licensee did not ensure issues potentially impacting nuclear safety are fully evaluated. Specifically, the licensee did not trend and assess the issues associated with the leaking reactor coolant pump motor oil reservoir [P.1b].

Inspection Report# : 2013002 *(pdf)*

Mitigating Systems

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Remove Cable Material from Inside Containment
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow instructions and remove cables from containment as part of a modification. As a result, portions of 12 cables totaling approximately 100 feet in length wrapped with tape on the ends remained in containment and could have been transported to the emergency sumps during an accident. The licensee entered the finding into the corrective action program as Condition Report CR-2013-009443. The finding 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, reliability, and capability of the emergency sumps. Using NRC Manual Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, Checklist 2, the finding was determined to be of very low safety significance because the licensee maintained adequate mitigation capability for the current plant state and the finding was not characterized as a loss of control event. The finding has a human performance cross-cutting aspect associated with work practices in that the maintenance personnel did not involve supervision when they had questions concerning the removal of the cables and proceeded in the face of uncertainty [H.4(a)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to Establish Goals and Monitor the Performance of the Auxiliary Feedwater System
The inspectors identified a non-cited violation of 10 CFR 50.65(a)(1) for the licensee's failure to establish performance goals and perform monitoring to ensure the Unit 1 auxiliary feedwater system was capable of performing its intended function. The licensee entered the finding into the corrective action program as Condition Report CR-2013-010024. This finding 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, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not represent an actual loss of a technical specification train for greater than its allowed outage time. The finding had a human performance cross-cutting aspect associated with decision-making, in that, the licensee failed to demonstrate that nuclear safety is the overriding priority by not obtaining adequate interdisciplinary input when determining the auxiliary feedwater maintenance rule status [H.1(a)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Initiate a Condition Report for a Degraded Under Frequency Relay
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow procedures that require initiating a condition report for degradation to safety-related equipment. During a surveillance activity, maintenance personnel discovered that a reactor coolant pump under frequency relay was outside the as-found setpoint tolerance for pick-up frequency and failed to enter the condition into the corrective action program. As a result, the cause and effect of the degraded condition was not evaluated and the relay again drifted outside the setpoint tolerance. The licensee entered the finding into the corrective action program as Condition Report CR-2013-010078.
The finding was more than minor because if the licensee continues to fail to document degraded safety-related equipment in the corrective action database, there is a potential that this could lead to a more significant safety concern, in that the cause of the degradation will not be evaluated and corrected. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; 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 resources in that the licensee failed to provide adequate training to personnel performing maintenance [H.2(b)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Jun 26, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure for Testing Main Steam Safety Valves
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of the licensee to have documented instructions of a type appropriate to the circumstances for testing the main steam safety valves. Specifically, the procedure for testing the main steam safety valves did not provide direction to declare the valves inoperable when applying pressure to the lifting device. As a result, the licensee failed to declare the main steam safety valves inoperable during testing. The licensee entered the finding in the corrective action program as Condition Report CR-2013-002947.

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 capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure did not provide guidance to declare a main steam safety valve inoperable with the test rig installed. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The inspectors determined that the finding was not representative of current licensee performance and no cross-cutting aspect was assigned.
Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Calculations and Procedures for Offsite Power Availability
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that states, in part, "applicable regulatory requirements and design basis are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to June 5, 2013, the licensee did not establish that the minimum switchyard voltages established in station procedures were adequate to prevent undesired actuation of the undervoltage protection scheme. This condition resulted from an inadequate analysis of undervoltage relay setpoints in design calculations, and the failure to provide acceptance criteria for undervoltage relay reset setpoints in relay calibration procedures. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006176.

The inspectors determined that the failure to properly analyze minimum switchyard voltage requirements, and control relay setpoints necessary to maintain the availability of offsite power was a performance deficiency. The performance deficiency is more-than-minor because it was associated with Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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, at the minimum switchyard voltages established in station procedures, actuation of the undervoltage protection scheme could have occurred and removed the reliable offsite power sources during an accident. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. The finding had a cross-cutting aspect in the Area of Problem Identification and Resolution, associated with the Operating Experience Component, since the issues noted in this finding were discussed in Regulatory Issue Summary (RIS) 2011-12, "Adequacy of Station Electric Distribution System Voltages," and RIS 2011-12 was reviewed by the licensee as part of the self assessment conducted in February 2013. [P.2(b)]

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Voltage Caculations for the 125 VDC and 120 VAC Buses
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that states, in part, "applicable regulatory requirements and design basis are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to June 20, 2013, the 125 VDC calculation did not take

into account the maximum inrush currents and actual accident loading, and the 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006273 and CR-2013- 006396.

The inspectors determined that the failure to perform accurate voltage calculations for the 125 VDC system and 120 VAC bus was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 125 VDC calculation did not take into account the maximum inrush currents and actual accident loading, and the 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure To Establish 10 CFR 50.65(a)(1) Performance Goals for the APDG'S
The inspectors identified a Green, non-cited violation of 10 CFR 50.65(a)(1), "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," that states, in part, that the licensee "shall monitor the performance or condition of structures, systems, or components, against licensee established goals, in a manner sufficient to provide reasonable assurance that these structures, systems, and components are capable of fulfilling their intended functions." Specifically, on July 26, 2012, the licensee failed to establish goals and monitor the performance of the alternate power diesel generator system to ensure the system is capable of providing the necessary electric power onto the emergency buses. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006521.

The inspectors determined that the failure to follow procedure to establish performance goals while performing Maintenance Rule (a)(1) monitoring to ensure the APDG system is capable and tested to meet the design basis requirements, was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Equipment Performance attribute and adversely affected the cornerstone objective to ensuring the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure directs the licensee to establish performance goals on activities that address conditions which were determined to be classified as (a)(1). In accordance with Inspection Manual Chapter (IMC) 0609, Attachment 4, "Initial Characterization of Findings," the inspectors determined that the finding affected the Mitigating System Cornerstone. Using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding had a cross-cutting aspect in the area of human performance associated with the resources component because the licensee failed to ensure that emergency equipment is adequate and available to assure nuclear safety. [H.2(d)]

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013

Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Analyze Effect of System Harmonics on Degraded Voltage Relays
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that states, in part, "measures provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program." Specifically, prior to May 20, 2013, the licensee failed to assess the adverse effects of 6.9kV and 480V system harmonics on the degraded voltage relays. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006230.

The inspectors determined that the failure to analyze the effect of electrical system harmonics on the degraded voltage relays was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to analyze the effect of electrical system harmonics on the degraded voltage relays could cause the relays to fail to actuate at the setpoint specified in Technical Specifications. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was a deficiency affecting the design or qualification that did not result in the safety-related equipment losing operability or functionality. This finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform Adequate Operability Assessments
The inspectors identified a Green, non-cited violation, with three examples, of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," that states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings and shall be accomplished in accordance with these instructions, procedures, or drawings." Specifically, for example 1 on February 28, 2013, for example 2 on June 5, 2013 and for example 3 on June 8, 2013, the licensee failed to follow procedure STI 442.01, "Operability Determination and Functionality Assessment Program," Revision 1, Attachment 8.B page 3 of 5 which states, in part, "Identify the topics that are applicable to the quick technical evaluation and include information for applicable topics within the evaluation such as: for example 1, The effect or potential effect of the degraded or nonconforming condition on the affected SSC's ability to perform its specified safety function, or for example 2, Compensatory Measures are recommended, or for example 3, Whether there is reasonable expectation of operability, including the basis for the determination." The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006599.

The inspectors determined that the failure to perform adequate operability assessments was a performance deficiency. The performance deficiency is more-than-minor because:

Example 1: It was associated with the Reactor Safety, Barrier Integrity Cornerstone, Configuration Control attribute and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (containment) protect the public from radionuclide releases caused by accidents or events. Specifically, shutting off of the containment spray pumps during a large break LOCA inside containment would allow containment pressure to increase. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 3, the inspectors determined the finding was of very low (Green) safety significance

because it did not represent an actual open pathway in the physical integrity of reactor containment (valves, airlocks, etc.), containment isolation system (logic and instrumentation), and heat removal components or actual reduction in function of hydrogen igniters in the reactor containment.

Example 2: It was associated with the Reactor Safety, Mitigating Systems Cornerstone, Equipment Performance attribute 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 compensatory measures established in the first operability assessment did not ensure that offsite power would be maintained at minimum grid voltage.

Example 3: It was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 operability assessment initially credited the use of the battery chargers after the emergency diesel generators restored power to the bus, without evaluating design basis for the battery chargers.

For examples 2 and 3, the inspectors used Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because these examples were a deficiency affecting the design or qualification that did not result in losing operability or functionality.

This finding had a cross-cutting aspect in the area of human performance associated with the decision making component because the licensee failed in all three examples to conduct an effectiveness review of a safety-significant decision to verify the validity of the underlying assumptions to identify possible unintended consequences during the original operability assessments. [H.1(b)]

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Appropriate Acceptance Criteria and Testing Procedure Instructions
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," that states, in part, “A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.” Specifically, since 2001, the licensee failed to provide appropriate acceptance criteria and testing procedure instructions during modified performance tests involving Class 1E batteries for the 1-minute critical period testing data which incorporated the requirements of IEEE Standard 450-1995 to ensure the battery would meet the required design voltage for the duty cycle. The finding was entered into the licensee’s corrective action program as Condition Report CR-2013-005673.

The inspectors determined that the failure to provide appropriate acceptance criteria and testing procedure instructions involving Class 1E batteries for the 1-minute critical period testing data during modified performance tests was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Procedure Quality attribute 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, Procedure MSE-S0-5715 does not direct the technicians to record and evaluate the voltage at the end of the 1-minute critical period to ensure it does not drop below the designed minimum voltage, which would indicate the battery would not be capable of meeting the required design function. Using Inspection Manual

Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because Calculation EE-CA-0000-5121 was implemented in 2001 and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Appropriate Acceptance Criteria for the Safety Chill Water Pumps
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," that states, in part, “A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.” Specifically, since 1994, the licensee failed to recognize that if the safety-related chilled water pumps were degraded to 90 percent of their reference value, as permitted by IST Procedures OPT 209A/B, the system may not be able to achieve the required design flowrates as stated in Calculation 1-EB-311-8. This finding was entered into the licensee’s corrective action program as Condition Report CR-2013-006252.

The inspectors determined that the failure to ensure appropriate acceptance criteria were incorporated into test procedures for the safety chill water pumps was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 recognize that if the safety-related chilled water pumps were degraded to 90 percent of their reference value, as permitted by IST Procedures OPT-209A/B, the system may not be able to achieve the required design flowrates as stated in Calculation 1-EB-311-8. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because Calculation 1-EB-311-8 was updated in 1994 to incorporate the uninterruptible power system fan coil units and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Fouling on the Emergency Dieesel Generator Building Exhaust Ventilation Screens
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” that states, in part, “ measures shall be established to assure that conditions adverse to quality are promptly identified and corrected.” Specifically, prior to June 17, 2013, the licensee failed to establish an activity to identify fouling of the Unit 1 emergency diesel generator building exhaust ventilation screens. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006540.

The inspectors determined that the failure to identify fouling on the Unit 1 emergency diesel generator building exhaust ventilation screens was a performance deficiency. The performance deficiency is more-than-minor because it had the potential to lead to a more significant safety concern. Specifically, the Unit 1 emergency diesel generator rooms could have insufficient exhaust flow to meet design basis temperature requirements if left uncorrected. Using

Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the emergency diesel generators losing operability or functionality. This finding did not have a crosscutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Incorporate the Refueling Water Storage Tank Vortexing Design Calculation Into the Emergency Operating Procedures for Containment Spray Pump Operation
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” states, in part, “measures shall be establish to assure that the design basis for systems, structures, and components are correctly translated into specifications, drawings, procedures and instructions.” Specifically, since 2006 and 2007, the licensee failed to appropriately incorporate the RWST vortexing design calculation’s 6 percent indicated level into the emergency operating procedures for switching containment spray pump suction from the RWST to the containment sump to prevent damage to the pumps. The finding was entered into the licensee’s corrective action program as Condition Report CR-2013-005739.

The inspectors determined that the failure to appropriately incorporate the RWST vortexing design calculation’s 6 percent indicated level into the emergency operating procedures for switching containment spray pump suction from the RWST to the containment sump to prevent damage to the pumps was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Procedure Quality attribute 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, Emergency Operating Procedure EOS 1.3A/B allowed the operators the ability to delay transfer of containment spray pump suction source which could have caused damage to the pumps due to vortexing. Using Inspection Manual Chapter 0609 Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because the change to the procedure due to the addition of the sump strainers occurred in 2006 and 2007, and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correct Design Calculations to Incorporate Technical Specification Allowed Frequency Range for the Emergency Diesel Generator in a Timely Manner
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” states, in part, “measures shall be established to assure that conditions adverse to quality are promptly identified and corrected.” Specifically, since May 2010, the licensee failed to correct a condition adverse to quality in a timely manner that involved updating design basis calculations for safety-related equipment to include the allowed technical specification frequency range of ± 2 percent for the emergency diesel generators. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006604.

The inspectors determined that the failure to correct a condition adverse to quality in a timely manner that involved updating design basis calculations for safety-related equipment to include the allowed technical specification frequency range of ± 2 percent for the emergency diesel generators was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute and adversely affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the calculations to support safety-related equipment did not include allowed technical specification frequency range for the emergency diesel generators to ensure the equipment would be capable of performing their safety-related functions. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was a deficiency affecting the design or qualification that did not result in the safety-related equipment losing operability or functionality. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to take appropriate corrective actions to address updating design basis calculations to include technical specification allowed emergency diesel generator frequency range in a timely manner, commensurate with their safety significance. [P.1(d)]
Inspection Report# : 2013007 *(pdf)*

Significance: G Mar 27, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Have Instructions When Performing Activities
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to accomplish an activity affecting quality as prescribed by documented instructions. Specifically, radiation protection personnel installed cameras inside containment and did not have a work order to accomplish the activity because the work order had not been completed and approved. The licensee entered the finding in the corrective action program as Condition Report CR-2013-001723.

The licensee's failure to have documented instructions for installing cameras inside containment was a performance deficiency. The finding was more than minor because if left uncorrected it would have the potential to lead to a more significant safety concern, in that, not using instructions could cause a more significant event and cause the inoperability of safety-related equipment. Using NRC Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The finding had a human performance cross-cutting aspect associated with work practices, in that, the licensee did not effectively communicate the expectations regarding the use of the work order when installing cameras inside containment [H.4b].

Inspection Report# : 2013002 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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

Last modified : December 03, 2013

Comanche Peak 1
4Q/2013 Plant Inspection Findings

Initiating Events

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: FIN Finding
Improper Pipe Cap Installation Results in a Unit Shutdown
The inspectors reviewed a self-revealing finding for operation's personnel failure to follow instructions for the removal of the dissimilar metal elbow when installing a pipe cap. As a result, the elbow eventually leaked, reactor coolant system leakage increased, and a Unit 1 shutdown was needed to correct the issue. The licensee entered the finding into the corrective action program as Condition Report CR-2013-006795.
The finding was more than minor because it was associated with the human performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance (Green) because the finding could not result in exceeding the reactor coolant system leak rate for a small loss of coolant accident and the finding would not have affected other systems used to mitigate a loss of coolant accident resulting in a total loss of their function. The finding had a human performance cross-cutting aspect associated with resources because the environmental conditions impacted the ability of the operators to correctly install the pipe cap [H.3(a)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Jun 26, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Procedure Results in Water Hammer
The inspectors identified a non-cited violation of Technical Specification 5.4.1.a for the failure to follow an auxiliary feedwater system operating procedure. As a result, a water hammer occurred on the condensate storage tank makeup reject line. The licensee entered the finding into the corrective action program as Condition Report CR-2012-012539.

The finding was more than minor because it was associated with the human performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, it resulted in a system water hammer. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance because the finding did not cause a reactor trip and the loss of mitigation equipment. The finding had a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that personnel were adequately trained to perform the activity. [H.2(b)]
Inspection Report# : 2013003 *(pdf)*

Significance: G Mar 27, 2013
Identified By: Self-Revealing

Item Type: NCV NonCited Violation
Failure to Initiate a Condition Report for a Degraded Reactor Coolant Pump Motor Lower Oil Reservoir
The inspectors reviewed a self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to follow procedures that require initiating a condition report for degradation of equipment. During a maintenance activity, the licensee discovered that the reactor coolant pump motor lower oil reservoir level was low and failed to enter the condition into the corrective action program. As a result, the cause of the degraded condition was not evaluated. The licensee entered the finding in the corrective action program as Condition Report CR-2012-011607.

The licensee's failure to initiate a condition report for a degraded reactor coolant pump motor lower oil reservoir was a performance deficiency. The finding was more than minor because it was associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective. It increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Using NRC Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance because the finding did not contribute to both the cause of a reactor trip and affect mitigation equipment. The finding had a problem identification and resolution cross-cutting aspect associated with the corrective action program, in that, the licensee did not ensure issues potentially impacting nuclear safety are fully evaluated. Specifically, the licensee did not trend and assess the issues associated with the leaking reactor coolant pump motor oil reservoir [P.1b].

Inspection Report# : 2013002 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Instructions for Containment Sump Inspection Results in Debris Left in the Sump
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow instructions and maintain appropriate housekeeping and cleanliness controls when performing an inspection on the containment emergency sump. As a result, the four sections of tape that were attached to the wheels of the robot, used to perform the inspection, fell off and remained in the sump for an operating cycle. The licensee entered the finding into the corrective action program as Condition Report CR-2013 -005097.

The finding 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 capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee did not follow documented instructions and ensure no foreign material remained in the sump after the inspection. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non technical specification trains of equipment. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure an adequate work instruction for the inspection activity [H.2(c)].
Inspection Report# : 2013005 *(pdf)*

Significance: G Dec 31, 2013
Identified By: NRC
Item Type: FIN Finding
Cutting Incorrect Cable Results in an Inoperable Offsite Power Source
The inspectors reviewed a self-revealing finding for the failure of maintenance personnel to follow work instructions. Specifically, maintenance personnel failed to follow instructions and cut the wrong cable during a transformer modification. As a result, one offsite power source to both units was unavailable during the repair of the damaged cable. The licensee entered the finding into the corrective action program as Condition Report CR-2013-011124.

The finding 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 capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The finding has a human performance cross-cutting aspect associated with work practices in that the licensee personnel failed to use human performance error prevention techniques such as self and peer checking when cutting cables [H.4(a)].

Inspection Report# : 2013005 *(pdf)*

Significance: G Nov 20, 2013
Identified By: NRC
Item Type: FIN Finding
Failure to Perform Cause Evaluations for Maintenance Preventable Functional Failures
The team identified a Green finding for a failure to follow procedures that required the licensee to perform cause evaluations for maintenance preventable functional failures (MPFFs). Two MPFFs were not evaluated for their causes because a condition report was not generated to perform the evaluation. After identification of this performance deficiency, the licensee generated condition reports to evaluate the two MPFFs for causes.

The licensee's failure to ensure that cause evaluations were performed for MPFFs as required by procedure was a performance deficiency. This constituted a programmatic weakness in the licensee's maintenance rule program and corrective action program and resulted in MPFFs not being prioritized and evaluated appropriately for corrective action, which could result in recurring failures. The affected systems crossed the Initiating Events, Mitigating Systems, and Emergency Preparedness cornerstones, but because the performance deficiency was associated with a programmatic weakness of the maintenance rule program, the inspectors determined that the Mitigating Systems cornerstone was the most affected. The finding was more than minor because it adversely affected the equipment performance attribute of the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a deficiency affecting the design or qualification of a mitigating SSC, and did not represent a loss of system or function. The finding has a human performance cross-cutting aspect associated with work practices in that licensee supervision failed to define expectations regarding compliance with the maintenance rule and corrective action program procedures (H.4(b)).

Inspection Report# : 2013008 *(pdf)*

Significance: G Nov 20, 2013

Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Adequate Acceptance Criteria
• The team identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the licensee’s failure to provide adequate acceptance criteria for bearing oil level in its residual heat removal pump motors. The team identified two examples of this violation, one of which resulted in pump bearing oil being low-out-of-specification. After identification of this performance deficiency, operations management issued an Operations Shift Order to ensure equipment operators appropriately verified bearing oil levels.

The failure to provide adequate acceptance criteria for an activity affecting quality was a performance deficiency. The performance deficiency was more than minor because it adversely affected the human performance attribute of the mitigating systems cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance because it did not result in the loss of operability or functionality of a safety-related system or train. The finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee had failed to implement a corrective action program with a low threshold for identifying issues to ensure that an issue potentially affecting nuclear safety was promptly identified and fully evaluated (P.1(a)).

Inspection Report# : 2013008 *(pdf)*

Significance: G Nov 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Components of Indeterminate Quality Installed in Safety-Related Applications
The team identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion III, “Design Control,” for the licensee’s failure to control deviations from quality standards. After identifying that maintenance personnel had failed to ensure that subcomponents of 480-volt switchgear were properly identified and controlled during refurbishment, the licensee failed to document or evaluate where subcomponents of an indeterminate pedigree had been installed in safety-related applications. The licensee took immediate action to confirm the operability of the installed trip units and to determine the scope of the problem.

The failure to control deviations from quality standards as required by 10 CFR 50, Appendix B, Criterion III was a performance deficiency. This performance deficiency was more than minor because it affected the design control attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of components that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance because it did not result in the loss of operability or functionality of a safety-related system or train. The finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee had failed to implement a corrective action program with a low threshold for identifying issues to ensure that an issue potentially affecting nuclear safety was promptly identified and fully evaluated (P.1(a)).

Inspection Report# : 2013008 *(pdf)*

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Remove Cable Material from Inside Containment
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures,

and Drawings," for the failure to follow instructions and remove cables from containment as part of a modification. As a result, portions of 12 cables totaling approximately 100 feet in length wrapped with tape on the ends remained in containment and could have been transported to the emergency sumps during an accident. The licensee entered the finding into the corrective action program as Condition Report CR-2013-009443. The finding 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, reliability, and capability of the emergency sumps. Using NRC Manual Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, Checklist 2, the finding was determined to be of very low safety significance because the licensee maintained adequate mitigation capability for the current plant state and the finding was not characterized as a loss of control event. The finding has a human performance cross-cutting aspect associated with work practices in that the maintenance personnel did not involve supervision when they had questions concerning the removal of the cables and proceeded in the face of uncertainty [H.4(a)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Establish Goals and Monitor the Performance of the Auxiliary Feedwater System
The inspectors identified a non-cited violation of 10 CFR 50.65(a)(1) for the licensee's failure to establish performance goals and perform monitoring to ensure the Unit 1 auxiliary feedwater system was capable of performing its intended function. The licensee entered the finding into the corrective action program as Condition Report CR-2013-010024. This finding 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, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not represent an actual loss of a technical specification train for greater than its allowed outage time. The finding had a human performance cross-cutting aspect associated with decision-making, in that, the licensee failed to demonstrate that nuclear safety is the overriding priority by not obtaining adequate interdisciplinary input when determining the auxiliary feedwater maintenance rule status [H.1(a)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Initiate a Condition Report for a Degraded Under Frequency Relay
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow procedures that require initiating a condition report for degradation to safety-related equipment. During a surveillance activity, maintenance personnel discovered that a reactor coolant pump under frequency relay was outside the as-found setpoint tolerance for pick-up frequency and failed to enter the condition into the corrective action program. As a result, the cause and effect of the degraded condition was not evaluated and the relay again drifted outside the setpoint tolerance. The licensee entered the finding into the corrective action program as Condition Report CR-2013-010078.
The finding was more than minor because if the licensee continues to fail to document degraded safety-related equipment in the corrective action database, there is a potential that this could lead to a more significant safety concern, in that the cause of the degradation will not be evaluated and corrected. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not

represent an actual loss of safety function of a system or train; 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 resources in that the licensee failed to provide adequate training to personnel performing maintenance [H.2(b)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Jun 26, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure for Testing Main Steam Safety Valves
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of the licensee to have documented instructions of a type appropriate to the circumstances for testing the main steam safety valves. Specifically, the procedure for testing the main steam safety valves did not provide direction to declare the valves inoperable when applying pressure to the lifting device. As a result, the licensee failed to declare the main steam safety valves inoperable during testing. The licensee entered the finding in the corrective action program as Condition Report CR-2013-002947.

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 capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure did not provide guidance to declare a main steam safety valve inoperable with the test rig installed. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The inspectors determined that the finding was not representative of current licensee performance and no cross-cutting aspect was assigned.
Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Calculations and Procedures for Offsite Power Availability
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that states, in part, "applicable regulatory requirements and design basis are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to June 5, 2013, the licensee did not establish that the minimum switchyard voltages established in station procedures were adequate to prevent undesired actuation of the undervoltage protection scheme. This condition resulted from an inadequate analysis of undervoltage relay setpoints in design calculations, and the failure to provide acceptance criteria for undervoltage relay reset setpoints in relay calibration procedures. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006176.

The inspectors determined that the failure to properly analyze minimum switchyard voltage requirements, and control relay setpoints necessary to maintain the availability of offsite power was a performance deficiency. The performance deficiency is more-than-minor because it was associated with Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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, at the minimum switchyard voltages established in station procedures, actuation of the undervoltage protection scheme could have occurred and removed the reliable offsite power sources during an accident. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the

inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. The finding had a cross-cutting aspect in the Area of Problem Identification and Resolution, associated with the Operating Experience Component, since the issues noted in this finding were discussed in Regulatory Issue Summary (RIS) 2011-12, “Adequacy of Station Electric Distribution System Voltages,” and RIS 2011-12 was reviewed by the licensee as part of the self assessment conducted in February 2013. [P.2(b)]

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Voltage Caculations for the 125 VDC and 120 VAC Buses
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” that states, in part, “applicable regulatory requirements and design basis are correctly translated into specifications, drawings, procedures, and instructions.” Specifically, prior to June 20, 2013, the 125 VDC calculation did not take into account the maximum inrush currents and actual accident loading, and the 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. The finding was entered into the licensee’s corrective action program as Condition Report CR-2013-006273 and CR-2013- 006396.

The inspectors determined that the failure to perform accurate voltage calculations for the 125 VDC system and 120 VAC bus was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 125 VDC calculation did not take into account the maximum inrush currents and actual accident loading, and the 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure To Establish 10 CFR 50.65(a)(1) Performance Goals for the APDG'S
The inspectors identified a Green, non-cited violation of 10 CFR 50.65(a)(1), “Requirements for monitoring the effectiveness of maintenance at nuclear power plants,” that states, in part, that the licensee “shall monitor the performance or condition of structures, systems, or components, against licensee established goals, in a manner sufficient to provide reasonable assurance that these structures, systems, and components are capable of fulfilling their intended functions.” Specifically, on July 26, 2012, the licensee failed to establish goals and monitor the performance of the alternate power diesel generator system to ensure the system is capable of providing the necessary electric power onto the emergency buses. The finding was entered into the licensee’s corrective action program as Condition Report CR-2013-006521.

The inspectors determined that the failure to follow procedure to establish performance goals while performing

Maintenance Rule (a)(1) monitoring to ensure the APDG system is capable and tested to meet the design basis requirements, was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Equipment Performance attribute and adversely affected the cornerstone objective to ensuring the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure directs the licensee to establish performance goals on activities that address conditions which were determined to be classified as (a)(1). In accordance with Inspection Manual Chapter (IMC) 0609, Attachment 4, "Initial Characterization of Findings," the inspectors determined that the finding affected the Mitigating System Cornerstone. Using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding had a cross-cutting aspect in the area of human performance associated with the resources component because the licensee failed to ensure that emergency equipment is adequate and available to assure nuclear safety. [H.2(d)]

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Analyze Effect of System Harmonics on Degraded Voltage Relays
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that states, in part, "measures provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program." Specifically, prior to May 20, 2013, the licensee failed to assess the adverse effects of 6.9kV and 480V system harmonics on the degraded voltage relays. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006230.

The inspectors determined that the failure to analyze the effect of electrical system harmonics on the degraded voltage relays was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to analyze the effect of electrical system harmonics on the degraded voltage relays could cause the relays to fail to actuate at the setpoint specified in Technical Specifications. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was a deficiency affecting the design or qualification that did not result in the safety-related equipment losing operability or functionality. This finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform Adequate Operability Assessments
The inspectors identified a Green, non-cited violation, with three examples, of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," that states, in part, "Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings and shall be accomplished in accordance with these instructions, procedures, or drawings." Specifically, for example 1 on February 28, 2013, for example 2 on June 5, 2013 and for

example 3 on June 8, 2013, the licensee failed to follow procedure STI 442.01, “Operability Determination and Functionality Assessment Program,” Revision 1, Attachment 8.B page 3 of 5 which states, in part, “Identify the topics that are applicable to the quick technical evaluation and include information for applicable topics within the evaluation such as: for example 1, The effect or potential effect of the degraded or nonconforming condition on the affected SSC’s ability to perform its specified safety function, or for example 2, Compensatory Measures are recommended, or for example 3, Whether there is reasonable expectation of operability, including the basis for the determination.” The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006599.

The inspectors determined that the failure to perform adequate operability assessments was a performance deficiency. The performance deficiency is more-than-minor because:

Example 1: It was associated with the Reactor Safety, Barrier Integrity Cornerstone, Configuration Control attribute and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (containment) protect the public from radionuclide releases caused by accidents or events. Specifically, shutting off of the containment spray pumps during a large break LOCA inside containment would allow containment pressure to increase. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 3, the inspectors determined the finding was of very low (Green) safety significance because it did not represent an actual open pathway in the physical integrity of reactor containment (valves, airlocks, etc.), containment isolation system (logic and instrumentation), and heat removal components or actual reduction in function of hydrogen igniters in the reactor containment.

Example 2: It was associated with the Reactor Safety, Mitigating Systems Cornerstone, Equipment Performance attribute 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 compensatory measures established in the first operability assessment did not ensure that offsite power would be maintained at minimum grid voltage.

Example 3: It was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 operability assessment initially credited the use of the battery chargers after the emergency diesel generators restored power to the bus, without evaluating design basis for the battery chargers.

For examples 2 and 3, the inspectors used Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because these examples were a deficiency affecting the design or qualification that did not result in losing operability or functionality.

This finding had a cross-cutting aspect in the area of human performance associated with the decision making component because the licensee failed in all three examples to conduct an effectiveness review of a safety-significant decision to verify the validity of the underlying assumptions to identify possible unintended consequences during the original operability assessments. [H.1(b)]

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Appropriate Acceptance Criteria and Testing Procedure Instructions

The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," that states, in part, “A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.” Specifically, since 2001, the licensee failed to provide appropriate acceptance criteria and testing procedure instructions during modified performance tests involving Class 1E batteries for the 1-minute critical period testing data which incorporated the requirements of IEEE Standard 450-1995 to ensure the battery would meet the required design voltage for the duty cycle. The finding was entered into the licensee’s corrective action program as Condition Report CR-2013-005673.

The inspectors determined that the failure to provide appropriate acceptance criteria and testing procedure instructions involving Class 1E batteries for the 1-minute critical period testing data during modified performance tests was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Procedure Quality attribute 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, Procedure MSE-S0-5715 does not direct the technicians to record and evaluate the voltage at the end of the 1-minute critical period to ensure it does not drop below the designed minimum voltage, which would indicate the battery would not be capable of meeting the required design function. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because Calculation EE-CA-0000-5121 was implemented in 2001 and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance:  Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Appropriate Acceptance Criteria for the Safety Chill Water Pumps
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," that states, in part, “A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.” Specifically, since 1994, the licensee failed to recognize that if the safety-related chilled water pumps were degraded to 90 percent of their reference value, as permitted by IST Procedures OPT 209A/B, the system may not be able to achieve the required design flowrates as stated in Calculation 1-EB-311-8. This finding was entered into the licensee’s corrective action program as Condition Report CR-2013-006252.

The inspectors determined that the failure to ensure appropriate acceptance criteria were incorporated into test procedures for the safety chill water pumps was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 recognize that if the safety-related chilled water pumps were degraded to 90 percent of their reference value, as permitted by IST Procedures OPT-209A/B, the system may not be able to achieve the required design flowrates as stated in Calculation 1-EB-311-8. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because Calculation 1-EB-311-8 was updated in 1994 to incorporate the uninterruptible power system fan coil units and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Fouling on the Emergency Dieesel Generator Building Exhaust Ventilation Screens
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," that states, in part, " measures shall be established to assure that conditions adverse to quality are promptly identified and corrected." Specifically, prior to June 17, 2013, the licensee failed to establish an activity to identify fouling of the Unit 1 emergency diesel generator building exhaust ventilation screens. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006540.

The inspectors determined that the failure to identify fouling on the Unit 1 emergency diesel generator building exhaust ventilation screens was a performance deficiency. The performance deficiency is more-than-minor because it had the potential to lead to a more significant safety concern. Specifically, the Unit 1 emergency diesel generator rooms could have insufficient exhaust flow to meet design basis temperature requirements if left uncorrected. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the emergency diesel generators losing operability or functionality. This finding did not have a crosscutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Incorporate the Refueling Water Storage Tank Vortexing Design Calculation Into the Emergency Operating Procedures for Containment Spray Pump Operation
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," states, in part, "measures shall be establish to assure that the design basis for systems, structures, and components are correctly translated into specifications, drawings, procedures and instructions." Specifically, since 2006 and 2007, the licensee failed to appropriately incorporate the RWST vortexing design calculation's 6 percent indicated level into the emergency operating procedures for switching containment spray pump suction from the RWST to the containment sump to prevent damage to the pumps. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-005739.

The inspectors determined that the failure to appropriately incorporate the RWST vortexing design calculation's 6 percent indicated level into the emergency operating procedures for switching containment spray pump suction from the RWST to the containment sump to prevent damage to the pumps was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Procedure Quality attribute 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, Emergency Operating Procedure EOS 1.3A/B allowed the operators the ability to delay transfer of containment spray pump suction source which could have caused damage to the pumps due to vortexing. Using Inspection Manual Chapter 0609 Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because

the change to the procedure due to the addition of the sump strainers occurred in 2006 and 2007, and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correct Design Calculations to Incorporate Technical Specification Allowed Frequency Range for the Emergency Diesel Generator in a Timely Manner
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, "measures shall be established to assure that conditions adverse to quality are promptly identified and corrected." Specifically, since May 2010, the licensee failed to correct a condition adverse to quality in a timely manner that involved updating design basis calculations for safety-related equipment to include the allowed technical specification frequency range of ± 2 percent for the emergency diesel generators. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006604.

The inspectors determined that the failure to correct a condition adverse to quality in a timely manner that involved updating design basis calculations for safety-related equipment to include the allowed technical specification frequency range of ± 2 percent for the emergency diesel generators was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute and adversely affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the calculations to support safety-related equipment did not include allowed technical specification frequency range for the emergency diesel generators to ensure the equipment would be capable of performing their safety-related functions. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was a deficiency affecting the design or qualification that did not result in the safety-related equipment losing operability or functionality. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to take appropriate corrective actions to address updating design basis calculations to include technical specification allowed emergency diesel generator frequency range in a timely manner, commensurate with their safety significance. [P.1(d)]
Inspection Report# : 2013007 *(pdf)*

Significance: G Mar 27, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Have Instructions When Performing Activities
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, for the failure to accomplish an activity affecting quality as prescribed by documented instructions. Specifically, radiation protection personnel installed cameras inside containment and did not have a work order to accomplish the activity because the work order had not been completed and approved. The licensee entered the finding in the corrective action program as Condition Report CR-2013-001723.

The licensee's failure to have documented instructions for installing cameras inside containment was a performance deficiency. The finding was more than minor because if left uncorrected it would have the potential to lead to a more significant safety concern, in that, not using instructions could cause a more significant event and cause the inoperability of safety-related equipment. Using NRC Manual Chapter 0609, Appendix A, "The Significance

Determination Process for Findings At Power," the finding was determined to be of very low safety significance because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The finding had a human performance cross-cutting aspect associated with work practices, in that, the licensee did not effectively communicate the expectations regarding the use of the work order when installing cameras inside containment [H.4b].

Inspection Report# : 2013002 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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

Last modified : February 24, 2014

Comanche Peak 1
1Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Jun 26, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Procedure Results in Water Hammer
The inspectors identified a non-cited violation of Technical Specification 5.4.1.a for the failure to follow an auxiliary feedwater system operating procedure. As a result, a water hammer occurred on the condensate storage tank makeup reject line. The licensee entered the finding into the corrective action program as Condition Report CR-2012-012539.

The finding was more than minor because it was associated with the human performance attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective, in that, it increased the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Specifically, it resulted in a system water hammer. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance because the finding did not cause a reactor trip and the loss of mitigation equipment. The finding had a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that personnel were adequately trained to perform the activity. [H.2(b)]
Inspection Report# : 2013003 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Instructions for Containment Sump Inspection Results in Debris Left in the Sump
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow instructions and maintain appropriate housekeeping and cleanliness controls when performing an inspection on the containment emergency sump. As a result, the four sections of tape that were attached to the wheels of the robot, used to perform the inspection, fell off and remained in the sump for an operating cycle. The licensee entered the finding into the corrective action program as Condition Report CR-2013 -005097.

The finding 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 capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee did not follow documented instructions and ensure no foreign material remained in the sump after the inspection. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non technical specification trains of equipment. The finding has a human performance cross-cutting

aspect associated with resources, in that, the licensee failed to ensure an adequate work instruction for the inspection activity [H.2(c)].
Inspection Report# : 2013005 *(pdf)*

Significance: G Dec 31, 2013
Identified By: NRC
Item Type: FIN Finding
Cutting Incorrect Cable Results in an Inoperable Offsite Power Source
The inspectors reviewed a self-revealing finding for the failure of maintenance personnel to follow work instructions. Specifically, maintenance personnel failed to follow instructions and cut the wrong cable during a transformer modification. As a result, one offsite power source to both units was unavailable during the repair of the damaged cable. The licensee entered the finding into the corrective action program as Condition Report CR-2013-011124.

The finding 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 capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The finding has a human performance cross-cutting aspect associated with work practices in that the licensee personnel failed to use human performance error prevention techniques such as self and peer checking when cutting cables [H.4(a)].

Inspection Report# : 2013005 *(pdf)*

Significance: G Nov 20, 2013
Identified By: NRC
Item Type: FIN Finding
Failure to Perform Cause Evaluations for Maintenance Preventable Functional Failures
The team identified a Green finding for a failure to follow procedures that required the licensee to perform cause evaluations for maintenance preventable functional failures (MPFFs). Two MPFFs were not evaluated for their causes because a condition report was not generated to perform the evaluation. After identification of this performance deficiency, the licensee generated condition reports to evaluate the two MPFFs for causes.

The licensee's failure to ensure that cause evaluations were performed for MPFFs as required by procedure was a performance deficiency. This constituted a programmatic weakness in the licensee's maintenance rule program and corrective action program and resulted in MPFFs not being prioritized and evaluated appropriately for corrective action, which could result in recurring failures. The affected systems crossed the Initiating Events, Mitigating Systems, and Emergency Preparedness cornerstones, but because the performance deficiency was associated with a programmatic weakness of the maintenance rule program, the inspectors determined that the Mitigating Systems cornerstone was the most affected. The finding was more than minor because it adversely affected the equipment performance attribute of the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a deficiency affecting the design or qualification of a mitigating SSC, and did not represent a loss of system or function. The finding has a human performance cross-cutting aspect associated with work practices in that licensee supervision failed to define expectations regarding compliance with the maintenance rule and corrective action program procedures (H.4(b)).

Inspection Report# : 2013008 *(pdf)*

Significance: G Nov 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Adequate Acceptance Criteria
• The team identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to provide adequate acceptance criteria for bearing oil level in its residual heat removal pump motors. The team identified two examples of this violation, one of which resulted in pump bearing oil being low-out-of-specification. After identification of this performance deficiency, operations management issued an Operations Shift Order to ensure equipment operators appropriately verified bearing oil levels.

The failure to provide adequate acceptance criteria for an activity affecting quality was a performance deficiency. The performance deficiency was more than minor because it adversely affected the human performance attribute of the mitigating systems cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance because it did not result in the loss of operability or functionality of a safety-related system or train. The finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee had failed to implement a corrective action program with a low threshold for identifying issues to ensure that an issue potentially affecting nuclear safety was promptly identified and fully evaluated (P.1(a)).

Inspection Report# : 2013008 *(pdf)*

Significance: G Nov 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Components of Indeterminate Quality Installed in Safety-Related Applications
The team identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to control deviations from quality standards. After identifying that maintenance personnel had failed to ensure that subcomponents of 480-volt switchgear were properly identified and controlled during refurbishment, the licensee failed to document or evaluate where subcomponents of an indeterminate pedigree had been installed in safety-related applications. The licensee took immediate action to confirm the operability of the installed trip units and to determine the scope of the problem.

The failure to control deviations from quality standards as required by 10 CFR 50, Appendix B, Criterion III was a performance deficiency. This performance deficiency was more than minor because it affected the design control attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of components that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance because it did not result in the loss of operability or functionality of a safety-related system or train. The finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee had failed to implement a corrective action program with a low threshold for identifying issues to ensure that an issue potentially affecting nuclear safety was promptly identified and fully evaluated (P.1(a)).

Inspection Report# : 2013008 *(pdf)*

Significance: G Sep 25, 2013

Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Remove Cable Material from Inside Containment
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure to follow instructions and remove cables from containment as part of a modification. As a result, portions of 12 cables totaling approximately 100 feet in length wrapped with tape on the ends remained in containment and could have been transported to the emergency sumps during an accident. The licensee entered the finding into the corrective action program as Condition Report CR-2013-009443. The finding 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, reliability, and capability of the emergency sumps. Using NRC Manual Chapter 0609, “Significance Determination Process,” Appendix G, “Shutdown Operations Significance Determination Process,” Attachment 1, Checklist 2, the finding was determined to be of very low safety significance because the licensee maintained adequate mitigation capability for the current plant state and the finding was not characterized as a loss of control event. The finding has a human performance cross-cutting aspect associated with work practices in that the maintenance personnel did not involve supervision when they had questions concerning the removal of the cables and proceeded in the face of uncertainty [H.4(a)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Establish Goals and Monitor the Performance of the Auxiliary Feedwater System
The inspectors identified a non-cited violation of 10 CFR 50.65(a)(1) for the licensee’s failure to establish performance goals and perform monitoring to ensure the Unit 1 auxiliary feedwater system was capable of performing its intended function. The licensee entered the finding into the corrective action program as Condition Report CR-2013-010024. This finding 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, Appendix A, “The Significance Determination Process for Findings At-Power,” the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not represent an actual loss of a technical specification train for greater than its allowed outage time. The finding had a human performance cross-cutting aspect associated with decision-making, in that, the licensee failed to demonstrate that nuclear safety is the overriding priority by not obtaining adequate interdisciplinary input when determining the auxiliary feedwater maintenance rule status [H.1(a)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Initiate a Condition Report for a Degraded Under Frequency Relay
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure to follow procedures that require initiating a condition report for degradation to safety-related equipment. During a surveillance activity, maintenance personnel discovered that a reactor coolant pump under frequency relay was outside the as-found setpoint tolerance for pick-up frequency and failed to enter the condition into the corrective action program. As a result, the cause and effect of the degraded condition was not evaluated and the relay again drifted outside the setpoint tolerance. The licensee entered the finding into the corrective action program as Condition Report CR-2013-010078.
The finding was more than minor because if the licensee continues to fail to document degraded safety-related

equipment in the corrective action database, there is a potential that this could lead to a more significant safety concern, in that the cause of the degradation will not be evaluated and corrected. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; 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 resources in that the licensee failed to provide adequate training to personnel performing maintenance [H.2(b)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Jun 26, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedure for Testing Main Steam Safety Valves
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of the licensee to have documented instructions of a type appropriate to the circumstances for testing the main steam safety valves. Specifically, the procedure for testing the main steam safety valves did not provide direction to declare the valves inoperable when applying pressure to the lifting device. As a result, the licensee failed to declare the main steam safety valves inoperable during testing. The licensee entered the finding in the corrective action program as Condition Report CR-2013-002947.

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 capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure did not provide guidance to declare a main steam safety valve inoperable with the test rig installed. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The inspectors determined that the finding was not representative of current licensee performance and no cross-cutting aspect was assigned.
Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Calculations and Procedures for Offsite Power Availability
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that states, in part, "applicable regulatory requirements and design basis are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to June 5, 2013, the licensee did not establish that the minimum switchyard voltages established in station procedures were adequate to prevent undesired actuation of the undervoltage protection scheme. This condition resulted from an inadequate analysis of undervoltage relay setpoints in design calculations, and the failure to provide acceptance criteria for undervoltage relay reset setpoints in relay calibration procedures. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006176.

The inspectors determined that the failure to properly analyze minimum switchyard voltage requirements, and control relay setpoints necessary to maintain the availability of offsite power was a performance deficiency. The performance deficiency is more-than-minor because it was associated with Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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, at the minimum switchyard voltages established in station procedures, actuation of the undervoltage protection scheme could have occurred and removed the reliable offsite power sources during an accident. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. The finding had a cross-cutting aspect in the Area of Problem Identification and Resolution, associated with the Operating Experience Component, since the issues noted in this finding were discussed in Regulatory Issue Summary (RIS) 2011-12, "Adequacy of Station Electric Distribution System Voltages," and RIS 2011-12 was reviewed by the licensee as part of the self assessment conducted in February 2013. [P.2(b)]

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Voltage Caculations for the 125 VDC and 120 VAC Buses
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that states, in part, "applicable regulatory requirements and design basis are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to June 20, 2013, the 125 VDC calculation did not take into account the maximum inrush currents and actual accident loading, and the 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006273 and CR-2013- 006396.

The inspectors determined that the failure to perform accurate voltage calculations for the 125 VDC system and 120 VAC bus was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 125 VDC calculation did not take into account the maximum inrush currents and actual accident loading, and the 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure To Establish 10 CFR 50.65(a)(1) Performance Goals for the APDG'S
The inspectors identified a Green, non-cited violation of 10 CFR 50.65(a)(1), "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," that states, in part, that the licensee "shall monitor the performance or condition of structures, systems, or components, against licensee established goals, in a manner sufficient to provide reasonable assurance that these structures, systems, and components are capable of fulfilling their intended functions." Specifically, on July 26, 2012, the licensee failed to establish goals and monitor the performance of the alternate power diesel generator system to ensure the system is capable of providing the necessary electric

power onto the emergency buses. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006521.

The inspectors determined that the failure to follow procedure to establish performance goals while performing Maintenance Rule (a)(1) monitoring to ensure the APDG system is capable and tested to meet the design basis requirements, was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Equipment Performance attribute and adversely affected the cornerstone objective to ensuring the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the procedure directs the licensee to establish performance goals on activities that address conditions which were determined to be classified as (a)(1). In accordance with Inspection Manual Chapter (IMC) 0609, Attachment 4, "Initial Characterization of Findings," the inspectors determined that the finding affected the Mitigating System Cornerstone. Using IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding had a cross-cutting aspect in the area of human performance associated with the resources component because the licensee failed to ensure that emergency equipment is adequate and available to assure nuclear safety. [H.2(d)]

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Analyze Effect of System Harmonics on Degraded Voltage Relays
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," that states, in part, "measures provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program." Specifically, prior to May 20, 2013, the licensee failed to assess the adverse effects of 6.9kV and 480V system harmonics on the degraded voltage relays. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006230.

The inspectors determined that the failure to analyze the effect of electrical system harmonics on the degraded voltage relays was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, failure to analyze the effect of electrical system harmonics on the degraded voltage relays could cause the relays to fail to actuate at the setpoint specified in Technical Specifications. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was a deficiency affecting the design or qualification that did not result in the safety-related equipment losing operability or functionality. This finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform Adequate Operability Assessments

The inspectors identified a Green, non-cited violation, with three examples, of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” that states, in part, “Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings and shall be accomplished in accordance with these instructions, procedures, or drawings.” Specifically, for example 1 on February 28, 2013, for example 2 on June 5, 2013 and for example 3 on June 8, 2013, the licensee failed to follow procedure STI 442.01, “Operability Determination and Functionality Assessment Program,” Revision 1, Attachment 8.B page 3 of 5 which states, in part, “Identify the topics that are applicable to the quick technical evaluation and include information for applicable topics within the evaluation such as: for example 1, The effect or potential effect of the degraded or nonconforming condition on the affected SSC’s ability to perform its specified safety function, or for example 2, Compensatory Measures are recommended, or for example 3, Whether there is reasonable expectation of operability, including the basis for the determination.” The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006599.

The inspectors determined that the failure to perform adequate operability assessments was a performance deficiency. The performance deficiency is more-than-minor because:

Example 1: It was associated with the Reactor Safety, Barrier Integrity Cornerstone, Configuration Control attribute and adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers (containment) protect the public from radionuclide releases caused by accidents or events. Specifically, shutting off of the containment spray pumps during a large break LOCA inside containment would allow containment pressure to increase. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 3, the inspectors determined the finding was of very low (Green) safety significance because it did not represent an actual open pathway in the physical integrity of reactor containment (valves, airlocks, etc.), containment isolation system (logic and instrumentation), and heat removal components or actual reduction in function of hydrogen igniters in the reactor containment.

Example 2: It was associated with the Reactor Safety, Mitigating Systems Cornerstone, Equipment Performance attribute 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 compensatory measures established in the first operability assessment did not ensure that offsite power would be maintained at minimum grid voltage.

Example 3: It was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 operability assessment initially credited the use of the battery chargers after the emergency diesel generators restored power to the bus, without evaluating design basis for the battery chargers.

For examples 2 and 3, the inspectors used Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because these examples were a deficiency affecting the design or qualification that did not result in losing operability or functionality.

This finding had a cross-cutting aspect in the area of human performance associated with the decision making component because the licensee failed in all three examples to conduct an effectiveness review of a safety-significant decision to verify the validity of the underlying assumptions to identify possible unintended consequences during the original operability assessments. [H.1(b)]

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Appropriate Acceptance Criteria and Testing Procedure Instructions
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," that states, in part, “A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.” Specifically, since 2001, the licensee failed to provide appropriate acceptance criteria and testing procedure instructions during modified performance tests involving Class 1E batteries for the 1-minute critical period testing data which incorporated the requirements of IEEE Standard 450-1995 to ensure the battery would meet the required design voltage for the duty cycle. The finding was entered into the licensee’s corrective action program as Condition Report CR-2013-005673.

The inspectors determined that the failure to provide appropriate acceptance criteria and testing procedure instructions involving Class 1E batteries for the 1-minute critical period testing data during modified performance tests was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Procedure Quality attribute 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, Procedure MSE-S0-5715 does not direct the technicians to record and evaluate the voltage at the end of the 1-minute critical period to ensure it does not drop below the designed minimum voltage, which would indicate the battery would not be capable of meeting the required design function. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because Calculation EE-CA-0000-5121 was implemented in 2001 and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Appropriate Acceptance Criteria for the Safety Chill Water Pumps
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," that states, in part, “A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.” Specifically, since 1994, the licensee failed to recognize that if the safety-related chilled water pumps were degraded to 90 percent of their reference value, as permitted by IST Procedures OPT 209A/B, the system may not be able to achieve the required design flowrates as stated in Calculation 1-EB-311-8. This finding was entered into the licensee’s corrective action program as Condition Report CR-2013-006252.

The inspectors determined that the failure to ensure appropriate acceptance criteria were incorporated into test procedures for the safety chill water pumps was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute 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 recognize that if the safety-related chilled water pumps were degraded to 90 percent of their reference value, as permitted by IST Procedures OPT-209A/B, the system may not be able to achieve the required design flowrates as stated in Calculation

1-EB-311-8. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because Calculation 1-EB-311-8 was updated in 1994 to incorporate the uninterruptible power system fan coil units and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Fouling on the Emergency Dieesel Generator Building Exhaust Ventilation Screens
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” that states, in part, “ measures shall be established to assure that conditions adverse to quality are promptly identified and corrected.” Specifically, prior to June 17, 2013, the licensee failed to establish an activity to identify fouling of the Unit 1 emergency diesel generator building exhaust ventilation screens. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006540.

The inspectors determined that the failure to identify fouling on the Unit 1 emergency diesel generator building exhaust ventilation screens was a performance deficiency. The performance deficiency is more-than-minor because it had the potential to lead to a more significant safety concern. Specifically, the Unit 1 emergency diesel generator rooms could have insufficient exhaust flow to meet design basis temperature requirements if left uncorrected. Using Inspection Manual Chapter 0609, Appendix A, “The Significance Determination Process (SDP) for Findings At-Power,” Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the emergency diesel generators losing operability or functionality. This finding did not have a crosscutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Incorporate the Refueling Water Storage Tank Vortexing Design Calculation Into the Emergency Operating Procedures for Containment Spray Pump Operation
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” states, in part, “measures shall be establish to assure that the design basis for systems, structures, and components are correctly translated into specifications, drawings, procedures and instructions.” Specifically, since 2006 and 2007, the licensee failed to appropriately incorporate the RWST vortexing design calculation’s 6 percent indicated level into the emergency operating procedures for switching containment spray pump suction from the RWST to the containment sump to prevent damage to the pumps. The finding was entered into the licensee’s corrective action program as Condition Report CR-2013-005739.

The inspectors determined that the failure to appropriately incorporate the RWST vortexing design calculation’s 6 percent indicated level into the emergency operating procedures for switching containment spray pump suction from the RWST to the containment sump to prevent damage to the pumps was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Procedure Quality attribute 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, Emergency

Operating Procedure EOS 1.3A/B allowed the operators the ability to delay transfer of containment spray pump suction source which could have caused damage to the pumps due to vortexing. Using Inspection Manual Chapter 0609 Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was not a design deficiency and did not result in the loss of operability or functionality. This finding did not have a cross-cutting aspect because the change to the procedure due to the addition of the sump strainers occurred in 2006 and 2007, and did not reflect current licensee performance.

Inspection Report# : 2013007 *(pdf)*

Significance: G Jun 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Correct Design Calculations to Incorporate Technical Specification Allowed Frequency Range for the Emergency Diesel Generator in a Timely Manner
The inspectors identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, "measures shall be established to assure that conditions adverse to quality are promptly identified and corrected." Specifically, since May 2010, the licensee failed to correct a condition adverse to quality in a timely manner that involved updating design basis calculations for safety-related equipment to include the allowed technical specification frequency range of ± 2 percent for the emergency diesel generators. The finding was entered into the licensee's corrective action program as Condition Report CR-2013-006604.

The inspectors determined that the failure to correct a condition adverse to quality in a timely manner that involved updating design basis calculations for safety-related equipment to include the allowed technical specification frequency range of ± 2 percent for the emergency diesel generators was a performance deficiency. The performance deficiency is more-than-minor because it was associated with the Reactor Safety, Mitigating Systems Cornerstone, Design Control attribute and adversely affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the calculations to support safety-related equipment did not include allowed technical specification frequency range for the emergency diesel generators to ensure the equipment would be capable of performing their safety-related functions. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, the inspectors determined the finding was of very low (Green) safety significance because the finding was a deficiency affecting the design or qualification that did not result in the safety-related equipment losing operability or functionality. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to take appropriate corrective actions to address updating design basis calculations to include technical specification allowed emergency diesel generator frequency range in a timely manner, commensurate with their safety significance. [P.1(d)]
Inspection Report# : 2013007 *(pdf)*

Barrier Integrity

Significance: G Mar 27, 2014
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Follow Procedure for Operation of the Containment Emergency Air Lock Doors

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 procedure for performing surveillance testing of the containment emergency air locks. Specifically, licensee personnel failed to fully close the Unit 1 containment emergency airlock exterior door and equalizing valve after performance of a door seal leak surveillance test. As a result, the containment emergency air lock exterior door was inoperable. Upon discovery, the licensee properly closed the containment emergency airlock door. The licensee entered the finding into the corrective action program as Condition Report CR 2013 000264.

The finding was more than minor because it was associated with the human performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that containment physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," the finding was determined to be of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that equipment and procedures were adequate to support nuclear safety [H.1].

Inspection Report# : 2014002 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

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

Last modified : May 30, 2014

Comanche Peak 1
2Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Follow the Site Design Modification Procedures.
The inspectors reviewed a self-revealing finding for the failure to follow the design modification process. The licensee implemented a design modification using incorrect technical information. The personnel who conducted the design modification walkdowns did not fully understand their responsibility and the licensee's work organization did not ensure that anyone actually verified the physical details of the cable route. As a result, the design modification was inadequate and an incorrect cable was cut which caused a loss of all offsite power to the safety related 6.9 kV busses on both units. The licensee suspended the modification activities, repaired the damaged offsite power cable, and restored offsite power to the safety-related 6.9 kV busses. The licensee entered the finding into the corrective action program as Condition Report CR 2013-012287.

The failure to follow the electronic design change process procedure was a performance deficiency. The performance deficiency was more than minor because it was associated with 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 Event Screening Questions," the finding was determined to be of very low safety significance (Green) because although the finding involved the complete loss of a support system that caused an initiating event, it did not involve the loss of affected mitigation equipment. The finding has a human performance cross-cutting aspect associated with field presence because the licensee failed to ensure proper oversight of contractors to ensure deviations from standards and expectations were promptly corrected [H.2].

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Follow Procedure to Provide Adequate Work Instructions.
The inspectors reviewed a self-revealing finding for the failure to properly plan and review work activities to ensure equipment and personnel safety. Specifically, the licensee failed to ensure the work instructions met the requirements of Procedure STA-606, "Control of Maintenance and Work Activities," Revision 32. As a result, during the implementation of a modification, personnel used an inadequate work instruction and cut the incorrect cable which caused a loss of all offsite power to the safety related 6.9 kV busses on both units. The licensee suspended the modification activities, repaired the damaged offsite power cable, and restored offsite power to the safety-related 6.9 kV busses. The licensee entered the finding into the corrective action program as Condition Report CR-2013-012287.

The failure to follow procedure and provide adequate work instructions was a performance deficiency. The performance deficiency was more than minor because it was associated with the procedure quality 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 Event Screening Questions,” the finding was determined to be of very low safety significance (Green) because although the finding involved the complete loss of a support system that caused an initiating event, it did not involve the loss of affected mitigation equipment. The finding has a human performance cross-cutting aspect associated with avoiding complacency because the licensee failed to ensure that work planning personnel planned for the possibility of mistakes and latent issues and did not implement appropriate error reduction tools [H.12].

Inspection Report# : 2014003 *(pdf)*

Mitigating Systems

Significance: G Jun 26, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Procedure for Brazing Copper Tubing
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure to follow procedure for brazing copper joints. Specifically, personnel failed to follow procedure and exercise sufficient care to assure the copper tubing was not overheated during a brazing activity. As a result, personnel overheated copper joints and caused the inoperability of an uninterruptible power supply air conditioning unit when the component developed a leak. The licensee repaired the leak to the uninterruptible power supply air conditioning unit. The licensee entered the finding into the corrective action program as Condition Report CR 2013 002298.

The failure to follow procedure for brazing copper tubing 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 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 at least a single train of equipment for greater than its technical specification allowed outage time. The inspectors determined that the finding was not representative of current license performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 26, 2014
Identified By: NRC
Item Type: VIO Violation
Failure to Correct Fire Protection Violations in a Timely Manner.
The inspectors identified a violation of License Condition 2.G for the failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the inspectors identified two examples where the licensee failed to implement corrective actions and restore compliance in a timely manner for two non-cited violations associated with the fire protection program. The licensee implemented compensatory measures that included: hourly fire watches, changes to the safe shutdown procedures, and administrative changes to the fire protection program. The

licensee entered the finding into the corrective action program as Condition Report 2014-007713.

The failure to implement corrective actions and restore compliance in a timely manner for two violations associated with the fire protection program was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events (fire) attribute of the Mitigating Systems Cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the potential loss of the credited charging pump or spurious opening of a power operated relief valve adversely affected the availability, reliability, and capability of the systems required to achieve and maintain safe shutdown in the event of a fire. The inspectors evaluated the finding using Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because it affected the ability to reach and maintain safe-shutdown conditions in case of a fire. A senior reactor analyst performed a Phase 3 evaluation to determine the risk significance of this finding. The senior reactor analyst determined this finding was of very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with work management because the licensee failed to include the identification and management of risk commensurate to the work performed [H.5].

Inspection Report# : 2014003 *(pdf)*

Significance: G Dec 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Instructions for Containment Sump Inspection Results in Debris Left in the Sump
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow instructions and maintain appropriate housekeeping and cleanliness controls when performing an inspection on the containment emergency sump. As a result, the four sections of tape that were attached to the wheels of the robot, used to perform the inspection, fell off and remained in the sump for an operating cycle. The licensee entered the finding into the corrective action program as Condition Report CR-2013 -005097.

The finding 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 capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee did not follow documented instructions and ensure no foreign material remained in the sump after the inspection. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non technical specification trains of equipment. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure the work instruction was adequate for the inspection activity [H.2(c)].
Inspection Report# : 2013005 *(pdf)*

Significance: G Dec 31, 2013
Identified By: Self-Revealing
Item Type: FIN Finding
Cutting Incorrect Cable Results in an Inoperable Offsite Power Source
The inspectors reviewed a self-revealing finding for the failure of maintenance personnel to follow work instructions. Specifically, maintenance personnel failed to follow instructions and cut the wrong cable during a transformer modification. As a result, one offsite power source to both units was unavailable during the repair of the damaged cable. The licensee entered the finding into the corrective action program as Condition Report CR-2013-011124.

The finding 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 capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The finding has a human performance cross-cutting aspect associated with work practices in that the licensee personnel failed to use human performance error prevention techniques such as self and peer checking when cutting cables [H.4(a)].

Inspection Report# : 2013005 *(pdf)*

Significance: G Nov 20, 2013
Identified By: NRC
Item Type: FIN Finding
Failure to Perform Cause Evaluations for Maintenance Preventable Functional Failures
The team identified a Green finding for a failure to follow procedures that required the licensee to perform cause evaluations for maintenance preventable functional failures (MPFFs). Two MPFFs were not evaluated for their causes because a condition report was not generated to perform the evaluation. After identification of this performance deficiency, the licensee generated condition reports to evaluate the two MPFFs for causes.

The licensee's failure to ensure that cause evaluations were performed for MPFFs as required by procedure was a performance deficiency. This constituted a programmatic weakness in the licensee's maintenance rule program and corrective action program and resulted in MPFFs not being prioritized and evaluated appropriately for corrective action, which could result in recurring failures. The affected systems crossed the Initiating Events, Mitigating Systems, and Emergency Preparedness cornerstones, but because the performance deficiency was associated with a programmatic weakness of the maintenance rule program, the inspectors determined that the Mitigating Systems cornerstone was the most affected. The finding was more than minor because it adversely affected the equipment performance attribute of the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a deficiency affecting the design or qualification of a mitigating SSC, and did not represent a loss of system or function. The finding has a human performance cross-cutting aspect associated with work practices in that licensee supervision failed to define expectations regarding compliance with the maintenance rule and corrective action program procedures (H.4(b)).

Inspection Report# : 2013008 *(pdf)*

Significance: G Nov 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Adequate Acceptance Criteria
• The team identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to provide adequate acceptance criteria for bearing oil level in its residual heat removal pump motors. The team identified two examples of this violation, one of which resulted in pump bearing oil being low-out-of-specification. After identification of this performance deficiency, operations management issued an Operations Shift Order to ensure equipment operators appropriately verified bearing oil levels.

The failure to provide adequate acceptance criteria for an activity affecting quality was a performance deficiency. The

performance deficiency was more than minor because it adversely affected the human performance attribute of the mitigating systems cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance because it did not result in the loss of operability or functionality of a safety-related system or train. The finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee had failed to implement a corrective action program with a low threshold for identifying issues to ensure that an issue potentially affecting nuclear safety was promptly identified and fully evaluated (P.1(a)).

Inspection Report# : 2013008 *(pdf)*

Significance: G Nov 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Components of Indeterminate Quality Installed in Safety-Related Applications
The team identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion III, “Design Control,” for the licensee’s failure to control deviations from quality standards. After identifying that maintenance personnel had failed to ensure that subcomponents of 480-volt switchgear were properly identified and controlled during refurbishment, the licensee failed to document or evaluate where subcomponents of an indeterminate pedigree had been installed in safety-related applications. The licensee took immediate action to confirm the operability of the installed trip units and to determine the scope of the problem.

The failure to control deviations from quality standards as required by 10 CFR 50, Appendix B, Criterion III was a performance deficiency. This performance deficiency was more than minor because it affected the design control attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of components that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance because it did not result in the loss of operability or functionality of a safety-related system or train. The finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee had failed to implement a corrective action program with a low threshold for identifying issues to ensure that an issue potentially affecting nuclear safety was promptly identified and fully evaluated (P.1(a)).

Inspection Report# : 2013008 *(pdf)*

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Remove Cable Material from Inside Containment
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure to follow instructions and remove cables from containment as part of a modification. As a result, portions of 12 cables totaling approximately 100 feet in length wrapped with tape on the ends remained in containment and could have been transported to the emergency sumps during an accident. The licensee entered the finding into the corrective action program as Condition Report CR-2013-009443. The finding 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, reliability, and capability of the emergency sumps. Using NRC Manual Chapter 0609, “Significance Determination Process,” Appendix G, “Shutdown Operations Significance Determination Process,” Attachment 1, Checklist 2, the finding was determined to be of very low safety significance because the licensee maintained adequate mitigation capability for the current plant state and the finding was not characterized as a loss of control event. The finding has a human performance cross-cutting aspect associated

with work practices in that the maintenance personnel did not involve supervision when they had questions concerning the removal of the cables and proceeded in the face of uncertainty [H.4(a)].
Inspection Report# : 2013004 *(pdf)*

Significance: G Sep 25, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Establish Goals and Monitor the Performance of the Auxiliary Feedwater System
The inspectors identified a non-cited violation of 10 CFR 50.65(a)(1) for the licensee's failure to establish performance goals and perform monitoring to ensure the Unit 1 auxiliary feedwater system was capable of performing its intended function. The licensee entered the finding into the corrective action program as Condition Report CR-2013-010024. This finding 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, Appendix A, "The Significance Determination Process for Findings At-Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not represent an actual loss of a technical specification train for greater than its allowed outage time. The finding had a human performance cross-cutting aspect associated with decision-making, in that, the licensee failed to demonstrate that nuclear safety is the overriding priority by not obtaining adequate interdisciplinary input when determining the auxiliary feedwater maintenance rule status [H.1(a)].
Inspection Report# : 2013004 *(pdf)*

Barrier Integrity

Significance: G Jun 26, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow 10 CFR 50.59 for a Change to the Spent Fuel Pool Configuration.
The inspectors identified a non-cited violation of 10 CFR 50.59, "Changes, Tests, and Experiments," for failure to conduct an adequate safety evaluation and submit a license amendment for a change to the facility that required a technical specification amendment. Specifically, the licensee changed Procedure NUC-211, "Surveillance of Region II Storage Limitations," Revision 1, to allow for storage of uprated fuel in Region II (high density racks) of the spent fuel pool using a methodology for fuel burnup penalties that had not been previously approved by the NRC and therefore, required an amendment to Technical Specification 3.7.17 "Spent Fuel Assembly Storage" prior to implementation. Subsequently, the licensee stopped all fuel movement in Region II of the spent fuel pool unless notifying the NRC prior to the movement. The licensee entered the finding into the corrective action program as Condition Report CR-2014-004693.

The failure to perform an adequate 10 CFR 50.59 evaluation and obtain prior NRC approval for a change to the facility that involved a change to the technical specifications was a performance deficiency. The inspectors concluded that this issue involved traditional enforcement because it had the potential for impacting the NRC's ability to perform its regulatory function. This performance deficiency is more than minor because it was associated with the reactivity control attribute of the Barrier Integrity Cornerstone and adversely the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Because the significance determination process does not directly address spent fuel pool criticality, a senior reactor

analyst evaluated this issue using Inspection Manual Chapter 0609, Appendix M, “Significance Determination Process Using Qualitative Criteria.” Based on calculations provided by the licensee, the analyst determined that even with all uncertainties included in the calculations, the spent fuel pools would remain subcritical under all conditions, including a complete dilution of the borated water. The analyst qualitatively considered a completed dilution of the spent fuel pools to be a very low probability event. Therefore, the analyst concluded that this issue was of very low safety significance (Green). Because this issue was considered to be Green, it is treated as a Severity Level IV violation in traditional enforcement. The inspectors determined that the finding was not representative of current license performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014003 *(pdf)*

Significance: G Mar 27, 2014
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Follow Procedure for Operation of the Containment Emergency Air Lock Doors
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 procedure for performing surveillance testing of the containment emergency air locks. Specifically, licensee personnel failed to fully close the Unit 1 containment emergency airlock exterior door and equalizing valve after performance of a door seal leak surveillance test. As a result, the containment emergency air lock exterior door was inoperable. Upon discovery, the licensee properly closed the containment emergency airlock door. The licensee entered the finding into the corrective action program as Condition Report CR 2013 000264.

The finding was more than minor because it was associated with the human performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that containment physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, Attachment 04, “Initial Characterization of Findings,” and Appendix A, Exhibit 3, “Barrier Integrity Screening Questions,” the finding was determined to be of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that equipment and procedures were adequate to support nuclear safety [H.1].

Inspection Report# : 2014002 *(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Adequately Brief Workers on Radiological Conditions Prior to Entry into High Radiation Areas.
The inspectors reviewed a self-revealing, non-cited violation of Technical Specification 5.7.1 resulting from the licensee’s failure to control high radiation areas with radiation levels of 100 millirem per hour or greater on three

separate occasions. In each instance, the licensee failed to adequately inform the worker of current radiological dose rates prior to entry and the worker entered a posted high radiation area without proper knowledge of the radiological conditions (dose rates). Consequently, the workers received unanticipated high dose rate alarms on their electronic alarming dosimeters at 563 millirem per hour, 274 millirem per hour, and at 750 millirem per hour, respectively. As immediate corrective actions, the licensee performed follow-up surveys, coached the involved individuals, and reviewed the radiologically controlled area entry card requirements. The licensee entered the three issues into the corrective action program as Condition Reports CR 2013-004154, CR-2014-003464, and CR-2014-003997.

The failure to provide workers with proper knowledge of high radiation area radiological conditions prior to entry is a performance deficiency. The performance deficiency is more than minor because it impacted the program and process attribute (exposure control) of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, worker entry into high radiation areas without knowledge of the radiological conditions placed them at increased risk for unnecessary radiation exposure. Using Inspection Manual Chapter 0609, Appendix C, “Occupational Radiation Safety Significance Determination Process,” the finding was determined to be of very low safety significance (Green) because: (1) it was not an as low as is reasonably achievable finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance cross-cutting aspect associated with teamwork because the workers failed to demonstrate and execute a strong sense of communication and collaboration in connection with the operational activities involved in the finding to ensure nuclear safety was maintained [H.4].

Inspection Report# : 2014003 *(pdf)*

Public Radiation Safety

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

Last modified : August 29, 2014

Comanche Peak 1
3Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Sep 26, 2014
Identified By: NRC
Item Type: FIN Finding
Failure to Install an Insulated Bushing on a Generator Current Transformer Circuit Results in an Automatic Reactor Trip
The inspectors reviewed a self-revealing finding for the licensee's failure to follow an electrical installation specification and install an insulated bushing on the end of a flexible conduit. As a result, a generator current transformer conductor shorted to ground causing a generator trip and ultimately an automatic reactor trip. The licensee repaired the conductor and returned the unit to service. The licensee entered the finding into the corrective action program as Condition Report CR-2014-000579.

The failure to follow an electrical installation specification and install an insulated bushing on the end of a flexible conduit was a performance deficiency. The performance deficiency was more than minor because it was associated with 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 Event Screening Questions," the finding was determined to be of very low safety significance (Green) because although the finding caused a reactor trip, it did not involve the loss of mitigation equipment. The inspectors determined that the finding was not representative of current licensee performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014004 *(pdf)*

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Follow the Site Design Modification Procedures.
The inspectors reviewed a self-revealing finding for the failure to follow the design modification process. The licensee implemented a design modification using incorrect technical information. The personnel who conducted the design modification walkdowns did not fully understand their responsibility and the licensee's work organization did not ensure that anyone actually verified the physical details of the cable route. As a result, the design modification was inadequate and an incorrect cable was cut which caused a loss of all offsite power to the safety related 6.9 kV busses on both units. The licensee suspended the modification activities, repaired the damaged offsite power cable, and restored offsite power to the safety-related 6.9 kV busses. The licensee entered the finding into the corrective action program as Condition Report CR 2013-012287.

The failure to follow the electronic design change process procedure was a performance deficiency. The performance deficiency was more than minor because it was associated with 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 Event Screening Questions,” the finding was determined to be of very low safety significance (Green) because although the finding involved the complete loss of a support system that caused an initiating event, it did not involve the loss of affected mitigation equipment. The finding has a human performance cross-cutting aspect associated with field presence because the licensee failed to ensure proper oversight of contractors to ensure deviations from standards and expectations were promptly corrected [H.2].

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Follow Procedure to Provide Adequate Work Instructions.
The inspectors reviewed a self-revealing finding for the failure to properly plan and review work activities to ensure equipment and personnel safety. Specifically, the licensee failed to ensure the work instructions met the requirements of Procedure STA-606, “Control of Maintenance and Work Activities,” Revision 32. As a result, during the implementation of a modification, personnel used an inadequate work instruction and cut the incorrect cable which caused a loss of all offsite power to the safety related 6.9 kV busses on both units. The licensee suspended the modification activities, repaired the damaged offsite power cable, and restored offsite power to the safety-related 6.9 kV busses. The licensee entered the finding into the corrective action program as Condition Report CR-2013-012287.

The failure to follow procedure and provide adequate work instructions was a performance deficiency. The performance deficiency was more than minor because it was associated with the procedure quality 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 Event Screening Questions,” the finding was determined to be of very low safety significance (Green) because although the finding involved the complete loss of a support system that caused an initiating event, it did not involve the loss of affected mitigation equipment. The finding has a human performance cross-cutting aspect associated with avoiding complacency because the licensee failed to ensure that work planning personnel planned for the possibility of mistakes and latent issues and did not implement appropriate error reduction tools [H.12].

Inspection Report# : 2014003 *(pdf)*

Mitigating Systems

Significance: G Sep 26, 2014
Identified By: NRC
Item Type: NCV NonCited 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: G Sep 26, 2014
Identified By: NRC
Item Type: NCV NonCited 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)*

Significance: G Jun 26, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Procedure for Brazing Copper Tubing
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow procedure for brazing copper joints. Specifically, personnel failed to follow procedure and exercise sufficient care to assure the copper tubing was not overheated during a brazing activity. As a result, personnel overheated copper joints and caused the inoperability of an uninterruptible power supply air conditioning unit when the component developed a leak. The licensee repaired the leak to the uninterruptible power

supply air conditioning unit. The licensee entered the finding into the corrective action program as Condition Report CR 2013 002298.

The failure to follow procedure for brazing copper tubing 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 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 at least a single train of equipment for greater than its technical specification allowed outage time. The inspectors determined that the finding was not representative of current license performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 26, 2014
Identified By: NRC
Item Type: VIO Violation
Failure to Correct Fire Protection Violations in a Timely Manner.
The inspectors identified a violation of License Condition 2.G for the failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the inspectors identified two examples where the licensee failed to implement corrective actions and restore compliance in a timely manner for two non-cited violations associated with the fire protection program. The licensee implemented compensatory measures that included: hourly fire watches, changes to the safe shutdown procedures, and administrative changes to the fire protection program. The licensee entered the finding into the corrective action program as Condition Report 2014-007713.

The failure to implement corrective actions and restore compliance in a timely manner for two violations associated with the fire protection program was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events (fire) attribute of the Mitigating Systems Cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the potential loss of the credited charging pump or spurious opening of a power operated relief valve adversely affected the availability, reliability, and capability of the systems required to achieve and maintain safe shutdown in the event of a fire. The inspectors evaluated the finding using Inspection Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” because it affected the ability to reach and maintain safe-shutdown conditions in case of a fire. A senior reactor analyst performed a Phase 3 evaluation to determine the risk significance of this finding. The senior reactor analyst determined this finding was of very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with work management because the licensee failed to include the identification and management of risk commensurate to the work performed [H.5].

Inspection Report# : 2014003 *(pdf)*

Significance: G Dec 31, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Instructions for Containment Sump Inspection Results in Debris Left in the Sump
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure to follow instructions and maintain appropriate housekeeping and cleanliness controls when performing an inspection on the containment emergency sump. As a result, the four sections of tape that were

attached to the wheels of the robot, used to perform the inspection, fell off and remained in the sump for an operating cycle. The licensee entered the finding into the corrective action program as Condition Report CR-2013 -005097.

The finding 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 capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee did not follow documented instructions and ensure no foreign material remained in the sump after the inspection. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non technical specification trains of equipment. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure the work instruction was adequate for the inspection activity [H.2(c)].
Inspection Report# : 2013005 *(pdf)*

Significance: G Dec 31, 2013
Identified By: Self-Revealing
Item Type: FIN Finding
Cutting Incorrect Cable Results in an Inoperable Offsite Power Source
The inspectors reviewed a self-revealing finding for the failure of maintenance personnel to follow work instructions. Specifically, maintenance personnel failed to follow instructions and cut the wrong cable during a transformer modification. As a result, one offsite power source to both units was unavailable during the repair of the damaged cable. The licensee entered the finding into the corrective action program as Condition Report CR-2013-011124.

The finding 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 capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a design or qualification deficiency; did not represent an actual loss of safety function of a system or train; and did not result in the loss of one or more trains of non-technical specification trains of equipment. The finding has a human performance cross-cutting aspect associated with work practices in that the licensee personnel failed to use human performance error prevention techniques such as self and peer checking when cutting cables [H.4(a)].

Inspection Report# : 2013005 *(pdf)*

Significance: G Nov 20, 2013
Identified By: NRC
Item Type: FIN Finding
Failure to Perform Cause Evaluations for Maintenance Preventable Functional Failures
The team identified a Green finding for a failure to follow procedures that required the licensee to perform cause evaluations for maintenance preventable functional failures (MPFFs). Two MPFFs were not evaluated for their causes because a condition report was not generated to perform the evaluation. After identification of this performance deficiency, the licensee generated condition reports to evaluate the two MPFFs for causes.

The licensee's failure to ensure that cause evaluations were performed for MPFFs as required by procedure was a performance deficiency. This constituted a programmatic weakness in the licensee's maintenance rule program and corrective action program and resulted in MPFFs not being prioritized and evaluated appropriately for corrective action, which could result in recurring failures. The affected systems crossed the Initiating Events, Mitigating

Systems, and Emergency Preparedness cornerstones, but because the performance deficiency was associated with a programmatic weakness of the maintenance rule program, the inspectors determined that the Mitigating Systems cornerstone was the most affected. The finding was more than minor because it adversely affected the equipment performance attribute of the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At Power," the finding was determined to be of very low safety significance (Green) because the finding was not a deficiency affecting the design or qualification of a mitigating SSC, and did not represent a loss of system or function. The finding has a human performance cross-cutting aspect associated with work practices in that licensee supervision failed to define expectations regarding compliance with the maintenance rule and corrective action program procedures (H.4(b)).

Inspection Report# : 2013008 *(pdf)*

Significance: G Nov 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Provide Adequate Acceptance Criteria
• The team identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to provide adequate acceptance criteria for bearing oil level in its residual heat removal pump motors. The team identified two examples of this violation, one of which resulted in pump bearing oil being low-out-of-specification. After identification of this performance deficiency, operations management issued an Operations Shift Order to ensure equipment operators appropriately verified bearing oil levels.

The failure to provide adequate acceptance criteria for an activity affecting quality was a performance deficiency. The performance deficiency was more than minor because it adversely affected the human performance attribute of the mitigating systems cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance because it did not result in the loss of operability or functionality of a safety-related system or train. The finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee had failed to implement a corrective action program with a low threshold for identifying issues to ensure that an issue potentially affecting nuclear safety was promptly identified and fully evaluated (P.1(a)).

Inspection Report# : 2013008 *(pdf)*

Significance: G Nov 20, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Components of Indeterminate Quality Installed in Safety-Related Applications
The team identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to control deviations from quality standards. After identifying that maintenance personnel had failed to ensure that subcomponents of 480-volt switchgear were properly identified and controlled during refurbishment, the licensee failed to document or evaluate where subcomponents of an indeterminate pedigree had been installed in safety-related applications. The licensee took immediate action to confirm the operability of the installed trip units and to determine the scope of the problem.

The failure to control deviations from quality standards as required by 10 CFR 50, Appendix B, Criterion III was a performance deficiency. This performance deficiency was more than minor because it affected the design control attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of

components that respond to initiating events. Using Inspection Manual Chapter 0609, Appendix A, the team determined that the finding was of very low safety significance because it did not result in the loss of operability or functionality of a safety-related system or train. The finding had a cross-cutting aspect in the corrective action program component of the problem identification and resolution cross-cutting area because the licensee had failed to implement a corrective action program with a low threshold for identifying issues to ensure that an issue potentially affecting nuclear safety was promptly identified and fully evaluated (P.1(a)).

Inspection Report# : 2013008 *(pdf)*

Barrier Integrity

Significance: G Jun 26, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow 10 CFR 50.59 for a Change to the Spent Fuel Pool Configuration.
The inspectors identified a non-cited violation of 10 CFR 50.59, "Changes, Tests, and Experiments," for failure to conduct an adequate safety evaluation and submit a license amendment for a change to the facility that required a technical specification amendment. Specifically, the licensee changed Procedure NUC-211, "Surveillance of Region II Storage Limitations," Revision 1, to allow for storage of uprated fuel in Region II (high density racks) of the spent fuel pool using a methodology for fuel burnup penalties that had not been previously approved by the NRC and therefore, required an amendment to Technical Specification 3.7.17 "Spent Fuel Assembly Storage" prior to implementation. Subsequently, the licensee stopped all fuel movement in Region II of the spent fuel pool unless notifying the NRC prior to the movement. The licensee entered the finding into the corrective action program as Condition Report CR-2014-004693.

The failure to perform an adequate 10 CFR 50.59 evaluation and obtain prior NRC approval for a change to the facility that involved a change to the technical specifications was a performance deficiency. The inspectors concluded that this issue involved traditional enforcement because it had the potential for impacting the NRC's ability to perform its regulatory function. This performance deficiency is more than minor because it was associated with the reactivity control attribute of the Barrier Integrity Cornerstone and adversely the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Because the significance determination process does not directly address spent fuel pool criticality, a senior reactor analyst evaluated this issue using Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on calculations provided by the licensee, the analyst determined that even with all uncertainties included in the calculations, the spent fuel pools would remain subcritical under all conditions, including a complete dilution of the borated water. The analyst qualitatively considered a completed dilution of the spent fuel pools to be a very low probability event. Therefore, the analyst concluded that this issue was of very low safety significance (Green). Because this issue was considered to be Green, it is treated as a Severity Level IV violation in traditional enforcement. The inspectors determined that the finding was not representative of current license performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014003 *(pdf)*

Significance: G Mar 27, 2014
Identified By: Self-Revealing
Item Type: NCV NonCited Violation

Failure to Follow Procedure for Operation of the Containment Emergency Air Lock Doors
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 procedure for performing surveillance testing of the containment emergency air locks. Specifically, licensee personnel failed to fully close the Unit 1 containment emergency airlock exterior door and equalizing valve after performance of a door seal leak surveillance test. As a result, the containment emergency air lock exterior door was inoperable. Upon discovery, the licensee properly closed the containment emergency airlock door. The licensee entered the finding into the corrective action program as Condition Report CR 2013 000264.

The finding was more than minor because it was associated with the human performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that containment physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Appendix A, Exhibit 3, "Barrier Integrity Screening Questions," the finding was determined to be of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that equipment and procedures were adequate to support nuclear safety [H.1].

Inspection Report# : 2014002 *(pdf)*

Emergency Preparedness

Significance: G Sep 26, 2014
Identified By: NRC
Item Type: NCV NonCited 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)*

Occupational Radiation Safety

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Adequately Brief Workers on Radiological Conditions Prior to Entry into High Radiation Areas.
The inspectors reviewed a self-revealing, non-cited violation of Technical Specification 5.7.1 resulting from the licensee's failure to control high radiation areas with radiation levels of 100 millirem per hour or greater on three separate occasions. In each instance, the licensee failed to adequately inform the worker of current radiological dose rates prior to entry and the worker entered a posted high radiation area without proper knowledge of the radiological conditions (dose rates). Consequently, the workers received unanticipated high dose rate alarms on their electronic alarming dosimeters at 563 millirem per hour, 274 millirem per hour, and at 750 millirem per hour, respectively. As immediate corrective actions, the licensee performed follow-up surveys, coached the involved individuals, and reviewed the radiologically controlled area entry card requirements. The licensee entered the three issues into the corrective action program as Condition Reports CR 2013-004154, CR-2014-003464, and CR-2014-003997.

The failure to provide workers with proper knowledge of high radiation area radiological conditions prior to entry is a performance deficiency. The performance deficiency is more than minor because it impacted the program and process attribute (exposure control) of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, worker entry into high radiation areas without knowledge of the radiological conditions placed them at increased risk for unnecessary radiation exposure. Using Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance (Green) because: (1) it was not an as low as is reasonably achievable finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance cross-cutting aspect associated with teamwork because the workers failed to demonstrate and execute a strong sense of communication and collaboration in connection with the operational activities involved in the finding to ensure nuclear safety was maintained [H.4].

Inspection Report# : 2014003 *(pdf)*

Public Radiation Safety

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

Last modified : November 26, 2014

Comanche Peak 1
4Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Sep 26, 2014
Identified By: NRC
Item Type: FIN Finding
Failure to Install an Insulated Bushing on a Generator Current Transformer Circuit Results in an Automatic Reactor Trip
The inspectors reviewed a self-revealing finding for the licensee's failure to follow an electrical installation specification and install an insulated bushing on the end of a flexible conduit. As a result, a generator current transformer conductor shorted to ground causing a generator trip and ultimately an automatic reactor trip. The licensee repaired the conductor and returned the unit to service. The licensee entered the finding into the corrective action program as Condition Report CR-2014-000579.

The failure to follow an electrical installation specification and install an insulated bushing on the end of a flexible conduit was a performance deficiency. The performance deficiency was more than minor because it was associated with 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 Event Screening Questions," the finding was determined to be of very low safety significance (Green) because although the finding caused a reactor trip, it did not involve the loss of mitigation equipment. The inspectors determined that the finding was not representative of current licensee performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014004 *(pdf)*

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Follow the Site Design Modification Procedures.
The inspectors reviewed a self-revealing finding for the failure to follow the design modification process. The licensee implemented a design modification using incorrect technical information. The personnel who conducted the design modification walkdowns did not fully understand their responsibility and the licensee's work organization did not ensure that anyone actually verified the physical details of the cable route. As a result, the design modification was inadequate and an incorrect cable was cut which caused a loss of all offsite power to the safety related 6.9 kV busses on both units. The licensee suspended the modification activities, repaired the damaged offsite power cable, and restored offsite power to the safety-related 6.9 kV busses. The licensee entered the finding into the corrective action program as Condition Report CR 2013-012287.

The failure to follow the electronic design change process procedure was a performance deficiency. The performance deficiency was more than minor because it was associated with 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 Event Screening Questions,” the finding was determined to be of very low safety significance (Green) because although the finding involved the complete loss of a support system that caused an initiating event, it did not involve the loss of affected mitigation equipment. The finding has a human performance cross-cutting aspect associated with field presence because the licensee failed to ensure proper oversight of contractors to ensure deviations from standards and expectations were promptly corrected [H.2].

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Follow Procedure to Provide Adequate Work Instructions.
The inspectors reviewed a self-revealing finding for the failure to properly plan and review work activities to ensure equipment and personnel safety. Specifically, the licensee failed to ensure the work instructions met the requirements of Procedure STA-606, “Control of Maintenance and Work Activities,” Revision 32. As a result, during the implementation of a modification, personnel used an inadequate work instruction and cut the incorrect cable which caused a loss of all offsite power to the safety related 6.9 kV busses on both units. The licensee suspended the modification activities, repaired the damaged offsite power cable, and restored offsite power to the safety-related 6.9 kV busses. The licensee entered the finding into the corrective action program as Condition Report CR-2013-012287.

The failure to follow procedure and provide adequate work instructions was a performance deficiency. The performance deficiency was more than minor because it was associated with the procedure quality 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 Event Screening Questions,” the finding was determined to be of very low safety significance (Green) because although the finding involved the complete loss of a support system that caused an initiating event, it did not involve the loss of affected mitigation equipment. The finding has a human performance cross-cutting aspect associated with avoiding complacency because the licensee failed to ensure that work planning personnel planned for the possibility of mistakes and latent issues and did not implement appropriate error reduction tools [H.12].

Inspection Report# : 2014003 *(pdf)*

Mitigating Systems

Significance: G Sep 26, 2014
Identified By: NRC
Item Type: NCV NonCited 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: G Sep 26, 2014
Identified By: NRC
Item Type: NCV NonCited 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)*

Significance: G Jun 26, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Procedure for Brazing Copper Tubing
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow procedure for brazing copper joints. Specifically, personnel failed to follow procedure and exercise sufficient care to assure the copper tubing was not overheated during a brazing activity. As a result, personnel overheated copper joints and caused the inoperability of an uninterruptible power supply air conditioning unit when the component developed a leak. The licensee repaired the leak to the uninterruptible power

supply air conditioning unit. The licensee entered the finding into the corrective action program as Condition Report CR 2013 002298.

The failure to follow procedure for brazing copper tubing 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 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 at least a single train of equipment for greater than its technical specification allowed outage time. The inspectors determined that the finding was not representative of current license performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 26, 2014
Identified By: NRC
Item Type: VIO Violation
Failure to Correct Fire Protection Violations in a Timely Manner.
The inspectors identified a violation of License Condition 2.G for the failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the inspectors identified two examples where the licensee failed to implement corrective actions and restore compliance in a timely manner for two non-cited violations associated with the fire protection program. The licensee implemented compensatory measures that included: hourly fire watches, changes to the safe shutdown procedures, and administrative changes to the fire protection program. The licensee entered the finding into the corrective action program as Condition Report 2014-007713.

The failure to implement corrective actions and restore compliance in a timely manner for two violations associated with the fire protection program was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events (fire) attribute of the Mitigating Systems Cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the potential loss of the credited charging pump or spurious opening of a power operated relief valve adversely affected the availability, reliability, and capability of the systems required to achieve and maintain safe shutdown in the event of a fire. The inspectors evaluated the finding using Inspection Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” because it affected the ability to reach and maintain safe-shutdown conditions in case of a fire. A senior reactor analyst performed a Phase 3 evaluation to determine the risk significance of this finding. The senior reactor analyst determined this finding was of very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with work management because the licensee failed to include the identification and management of risk commensurate to the work performed [H.5].

Inspection Report# : 2014003 *(pdf)*

Barrier Integrity

Significance: G Jun 26, 2014
Identified By: NRC

Item Type: NCV NonCited Violation
Failure to Follow 10 CFR 50.59 for a Change to the Spent Fuel Pool Configuration.
The inspectors identified a non-cited violation of 10 CFR 50.59, “Changes, Tests, and Experiments,” for failure to conduct an adequate safety evaluation and submit a license amendment for a change to the facility that required a technical specification amendment. Specifically, the licensee changed Procedure NUC-211, “Surveillance of Region II Storage Limitations,” Revision 1, to allow for storage of uprated fuel in Region II (high density racks) of the spent fuel pool using a methodology for fuel burnup penalties that had not been previously approved by the NRC and therefore, required an amendment to Technical Specification 3.7.17 “Spent Fuel Assembly Storage” prior to implementation. Subsequently, the licensee stopped all fuel movement in Region II of the spent fuel pool unless notifying the NRC prior to the movement. The licensee entered the finding into the corrective action program as Condition Report CR-2014-004693.

The failure to perform an adequate 10 CFR 50.59 evaluation and obtain prior NRC approval for a change to the facility that involved a change to the technical specifications was a performance deficiency. The inspectors concluded that this issue involved traditional enforcement because it had the potential for impacting the NRC’s ability to perform its regulatory function. This performance deficiency is more than minor because it was associated with the reactivity control attribute of the Barrier Integrity Cornerstone and adversely the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Because the significance determination process does not directly address spent fuel pool criticality, a senior reactor analyst evaluated this issue using Inspection Manual Chapter 0609, Appendix M, “Significance Determination Process Using Qualitative Criteria.” Based on calculations provided by the licensee, the analyst determined that even with all uncertainties included in the calculations, the spent fuel pools would remain subcritical under all conditions, including a complete dilution of the borated water. The analyst qualitatively considered a completed dilution of the spent fuel pools to be a very low probability event. Therefore, the analyst concluded that this issue was of very low safety significance (Green). Because this issue was considered to be Green, it is treated as a Severity Level IV violation in traditional enforcement. The inspectors determined that the finding was not representative of current license performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014003 *(pdf)*

Significance:  Mar 27, 2014
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Follow Procedure for Operation of the Containment Emergency Air Lock Doors
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 procedure for performing surveillance testing of the containment emergency air locks. Specifically, licensee personnel failed to fully close the Unit 1 containment emergency airlock exterior door and equalizing valve after performance of a door seal leak surveillance test. As a result, the containment emergency air lock exterior door was inoperable. Upon discovery, the licensee properly closed the containment emergency airlock door. The licensee entered the finding into the corrective action program as Condition Report CR 2013 000264.

The finding was more than minor because it was associated with the human performance attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective to provide reasonable assurance that containment physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, Attachment 04, “Initial Characterization of Findings,” and Appendix A, Exhibit 3, “Barrier Integrity Screening Questions,” the finding was determined to be of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that equipment and procedures were adequate to support nuclear safety [H.1].

Inspection Report# : 2014002 *(pdf)*

Emergency Preparedness

Significance: G Sep 26, 2014
Identified By: NRC
Item Type: NCV NonCited 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)*

Occupational Radiation Safety

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Adequately Brief Workers on Radiological Conditions Prior to Entry into High Radiation Areas.
The inspectors reviewed a self-revealing, non-cited violation of Technical Specification 5.7.1 resulting from the licensee's failure to control high radiation areas with radiation levels of 100 millirem per hour or greater on three separate occasions. In each instance, the licensee failed to adequately inform the worker of current radiological dose rates prior to entry and the worker entered a posted high radiation area without proper knowledge of the radiological conditions (dose rates). Consequently, the workers received unanticipated high dose rate alarms on their electronic alarming dosimeters at 563 millirem per hour, 274 millirem per hour, and at 750 millirem per hour, respectively. As immediate corrective actions, the licensee performed follow-up surveys, coached the involved individuals, and reviewed the radiologically controlled area entry card requirements. The licensee entered the three issues into the

corrective action program as Condition Reports CR 2013-004154, CR-2014-003464, and CR-2014-003997.

The failure to provide workers with proper knowledge of high radiation area radiological conditions prior to entry is a performance deficiency. The performance deficiency is more than minor because it impacted the program and process attribute (exposure control) of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, worker entry into high radiation areas without knowledge of the radiological conditions placed them at increased risk for unnecessary radiation exposure. Using Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance (Green) because: (1) it was not an as low as is reasonably achievable finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance cross-cutting aspect associated with teamwork because the workers failed to demonstrate and execute a strong sense of communication and collaboration in connection with the operational activities involved in the finding to ensure nuclear safety was maintained [H.4].

Inspection Report# : 2014003 *(pdf)*

Public Radiation Safety

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

Last modified : February 26, 2015

Comanche Peak 1
1Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Sep 26, 2014
Identified By: NRC
Item Type: FIN Finding
Failure to Install an Insulated Bushing on a Generator Current Transformer Circuit Results in an Automatic Reactor Trip
The inspectors reviewed a self-revealing finding for the licensee's failure to follow an electrical installation specification and install an insulated bushing on the end of a flexible conduit. As a result, a generator current transformer conductor shorted to ground causing a generator trip and ultimately an automatic reactor trip. The licensee repaired the conductor and returned the unit to service. The licensee entered the finding into the corrective action program as Condition Report CR-2014-000579.

The failure to follow an electrical installation specification and install an insulated bushing on the end of a flexible conduit was a performance deficiency. The performance deficiency was more than minor because it was associated with 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 Event Screening Questions," the finding was determined to be of very low safety significance (Green) because although the finding caused a reactor trip, it did not involve the loss of mitigation equipment. The inspectors determined that the finding was not representative of current licensee performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014004 *(pdf)*

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Follow the Site Design Modification Procedures.
The inspectors reviewed a self-revealing finding for the failure to follow the design modification process. The licensee implemented a design modification using incorrect technical information. The personnel who conducted the design modification walkdowns did not fully understand their responsibility and the licensee's work organization did not ensure that anyone actually verified the physical details of the cable route. As a result, the design modification was inadequate and an incorrect cable was cut which caused a loss of all offsite power to the safety related 6.9 kV busses on both units. The licensee suspended the modification activities, repaired the damaged offsite power cable, and restored offsite power to the safety-related 6.9 kV busses. The licensee entered the finding into the corrective action program as Condition Report CR 2013-012287.

The failure to follow the electronic design change process procedure was a performance deficiency. The performance deficiency was more than minor because it was associated with 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 Event Screening Questions,” the finding was determined to be of very low safety significance (Green) because although the finding involved the complete loss of a support system that caused an initiating event, it did not involve the loss of affected mitigation equipment. The finding has a human performance cross-cutting aspect associated with field presence because the licensee failed to ensure proper oversight of contractors to ensure deviations from standards and expectations were promptly corrected [H.2].

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Follow Procedure to Provide Adequate Work Instructions.
The inspectors reviewed a self-revealing finding for the failure to properly plan and review work activities to ensure equipment and personnel safety. Specifically, the licensee failed to ensure the work instructions met the requirements of Procedure STA-606, “Control of Maintenance and Work Activities,” Revision 32. As a result, during the implementation of a modification, personnel used an inadequate work instruction and cut the incorrect cable which caused a loss of all offsite power to the safety related 6.9 kV busses on both units. The licensee suspended the modification activities, repaired the damaged offsite power cable, and restored offsite power to the safety-related 6.9 kV busses. The licensee entered the finding into the corrective action program as Condition Report CR-2013-012287.

The failure to follow procedure and provide adequate work instructions was a performance deficiency. The performance deficiency was more than minor because it was associated with the procedure quality 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 Event Screening Questions,” the finding was determined to be of very low safety significance (Green) because although the finding involved the complete loss of a support system that caused an initiating event, it did not involve the loss of affected mitigation equipment. The finding has a human performance cross-cutting aspect associated with avoiding complacency because the licensee failed to ensure that work planning personnel planned for the possibility of mistakes and latent issues and did not implement appropriate error reduction tools [H.12].

Inspection Report# : 2014003 *(pdf)*

Mitigating Systems

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: G 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)*

Significance: G Jun 26, 2014
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Follow Procedure for Brazing Copper Tubing
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow procedure for brazing copper joints. Specifically, personnel failed to follow procedure and exercise sufficient care to assure the copper tubing was not overheated during a brazing activity. As a result, personnel overheated copper joints and caused the inoperability of an uninterruptible power supply air conditioning unit when the component developed a leak. The licensee repaired the leak to the uninterruptible power

supply air conditioning unit. The licensee entered the finding into the corrective action program as Condition Report CR 2013 002298.

The failure to follow procedure for brazing copper tubing 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 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 at least a single train of equipment for greater than its technical specification allowed outage time. The inspectors determined that the finding was not representative of current license performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014003 *(pdf)*

Significance: G Jun 26, 2014
Identified By: NRC
Item Type: VIO Violation
Failure to Correct Fire Protection Violations in a Timely Manner.
The inspectors identified a violation of License Condition 2.G for the failure to implement and maintain in effect all provisions of the approved fire protection program. Specifically, the inspectors identified two examples where the licensee failed to implement corrective actions and restore compliance in a timely manner for two non-cited violations associated with the fire protection program. The licensee implemented compensatory measures that included: hourly fire watches, changes to the safe shutdown procedures, and administrative changes to the fire protection program. The licensee entered the finding into the corrective action program as Condition Report 2014-007713.

The failure to implement corrective actions and restore compliance in a timely manner for two violations associated with the fire protection program was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events (fire) attribute of the Mitigating Systems Cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the potential loss of the credited charging pump or spurious opening of a power operated relief valve adversely affected the availability, reliability, and capability of the systems required to achieve and maintain safe shutdown in the event of a fire. The inspectors evaluated the finding using Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," because it affected the ability to reach and maintain safe-shutdown conditions in case of a fire. A senior reactor analyst performed a Phase 3 evaluation to determine the risk significance of this finding. The senior reactor analyst determined this finding was of very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with work management because the licensee failed to include the identification and management of risk commensurate to the work performed [H.5].

Inspection Report# : 2014003 *(pdf)*

Barrier Integrity

Significance: G Jun 26, 2014
Identified By: NRC

Item Type: NCV Non-Cited Violation
Failure to Follow 10 CFR 50.59 for a Change to the Spent Fuel Pool Configuration.
The inspectors identified a non-cited violation of 10 CFR 50.59, "Changes, Tests, and Experiments," for failure to conduct an adequate safety evaluation and submit a license amendment for a change to the facility that required a technical specification amendment. Specifically, the licensee changed Procedure NUC-211, "Surveillance of Region II Storage Limitations," Revision 1, to allow for storage of uprated fuel in Region II (high density racks) of the spent fuel pool using a methodology for fuel burnup penalties that had not been previously approved by the NRC and therefore, required an amendment to Technical Specification 3.7.17 "Spent Fuel Assembly Storage" prior to implementation. Subsequently, the licensee stopped all fuel movement in Region II of the spent fuel pool unless notifying the NRC prior to the movement. The licensee entered the finding into the corrective action program as Condition Report CR-2014-004693.

The failure to perform an adequate 10 CFR 50.59 evaluation and obtain prior NRC approval for a change to the facility that involved a change to the technical specifications was a performance deficiency. The inspectors concluded that this issue involved traditional enforcement because it had the potential for impacting the NRC's ability to perform its regulatory function. This performance deficiency is more than minor because it was associated with the reactivity control attribute of the Barrier Integrity Cornerstone and adversely the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Because the significance determination process does not directly address spent fuel pool criticality, a senior reactor analyst evaluated this issue using Inspection Manual Chapter 0609, Appendix M, "Significance Determination Process Using Qualitative Criteria." Based on calculations provided by the licensee, the analyst determined that even with all uncertainties included in the calculations, the spent fuel pools would remain subcritical under all conditions, including a complete dilution of the borated water. The analyst qualitatively considered a completed dilution of the spent fuel pools to be a very low probability event. Therefore, the analyst concluded that this issue was of very low safety significance (Green). Because this issue was considered to be Green, it is treated as a Severity Level IV violation in traditional enforcement. The inspectors determined that the finding was not representative of current license performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014003 *(pdf)*

Emergency Preparedness

Significance: G 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)*

Occupational Radiation Safety

Significance: G Jun 26, 2014
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Adequately Brief Workers on Radiological Conditions Prior to Entry into High Radiation Areas.
The inspectors reviewed a self-revealing, non-cited violation of Technical Specification 5.7.1 resulting from the licensee's failure to control high radiation areas with radiation levels of 100 millirem per hour or greater on three separate occasions. In each instance, the licensee failed to adequately inform the worker of current radiological dose rates prior to entry and the worker entered a posted high radiation area without proper knowledge of the radiological conditions (dose rates). Consequently, the workers received unanticipated high dose rate alarms on their electronic alarming dosimeters at 563 millirem per hour, 274 millirem per hour, and at 750 millirem per hour, respectively. As immediate corrective actions, the licensee performed follow-up surveys, coached the involved individuals, and reviewed the radiologically controlled area entry card requirements. The licensee entered the three issues into the corrective action program as Condition Reports CR 2013-004154, CR-2014-003464, and CR-2014-003997.

The failure to provide workers with proper knowledge of high radiation area radiological conditions prior to entry is a performance deficiency. The performance deficiency is more than minor because it impacted the program and process attribute (exposure control) of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, worker entry into high radiation areas without knowledge of the radiological conditions placed them at increased risk for unnecessary radiation exposure. Using Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance (Green) because: (1) it was not an as low as is reasonably achievable finding, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. The finding has a human performance cross-cutting aspect associated with teamwork because the workers failed to demonstrate and execute a strong sense of communication and collaboration in connection with the operational activities involved in the finding to ensure nuclear safety was maintained [H.4].

Inspection Report# : 2014003 *(pdf)*

Public Radiation Safety

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

Last modified : June 16, 2015

Comanche Peak 1
2Q/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 Sep 26, 2014
Identified By: NRC
Item Type: FIN Finding
Failure to Install an Insulated Bushing on a Generator Current Transformer Circuit Results in an Automatic Reactor Trip
The inspectors reviewed a self-revealing finding for the licensee's failure to follow an electrical installation specification and install an insulated bushing on the end of a flexible conduit. As a result, a generator current transformer conductor shorted to ground causing a generator trip and ultimately an automatic reactor trip. The licensee repaired the conductor and returned the unit to service. The licensee entered the finding into the corrective action program as Condition Report CR-2014-000579.

The failure to follow an electrical installation specification and install an insulated bushing on the end of a flexible conduit was a performance deficiency. The performance deficiency was more than minor because it was associated with 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 Event Screening Questions,” the finding was determined to be of very low safety significance (Green) because although the finding caused a reactor trip, it did not involve the loss of mitigation equipment. The inspectors determined that the finding was not representative of current licensee performance and no cross-cutting aspect was assigned.

Inspection Report# : 2014004 *(pdf)*

Mitigating Systems

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 Follow Work Planning Procedure
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 follow the requirements of Procedure STI-606.03, “Work

Planning," when developing work instructions for replacing concrete expansion anchors. Specifically, when developing Work Order 4851077 to replace Hilti Kwik-Bolt II expansion anchors with Hilti Kwik-Bolt 3 anchors on Manhole MH-E2B, planners failed to follow the requirements of Procedure STI 606.03. This failure resulted in the wrong anchors being installed in the facility. The licensee performed an operability determination for the affected anchors that established a reasonable expectation for operability. The licensee entered the finding into the corrective action program as Condition Report CR-2015-001579.

The licensee's failure to follow the requirements of Procedure STI-606.03, "Work Planning," when developing work instructions 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 failure to follow procedure resulted in incorrect material being installed in the plant which resulted in a condition where a structure necessary to mitigate the effects of a tornado 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 be of very low safety significance (Green) because the finding was a deficiency affecting the design and qualification of a mitigating structure, and did not result in a loss of operability or functionality. The finding has a human performance cross cutting aspect associated with work management because the licensee failed to implement a process of planning activities such that nuclear safety is the overriding priority [H.5].

Inspection Report# : 2015001 *(pdf)*

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Follow Procedure Damages a Centrifugal Charging Pump
The inspectors identified a non-cited violation of 10 Part CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to follow procedure during the performance of a surveillance test. Specifically, the licensee failed to ensure applicable prerequisites were met for performing the Unit 1 train A integrated surveillance test procedure by not ensuring component cooling water was properly aligned for operation. This resulted in the overheating and damage to a centrifugal charging pump. The licensee entered the finding into the corrective action program as Condition Report CR 2015-003150.

The licensee's failure to follow the requirements of Procedure STA-201, "Procedure Use and Adherence," to verify all applicable prerequisites were met prior to performing Procedure OPT-430A, "Train A Integrated Test Sequence," 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 affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, operations personnel's failure to ensure that component cooling water was properly aligned to the minimum flow line resulted in damage to a centrifugal charging pump. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1 Exhibit 3, "Mitigating Systems Screening Questions," dated May 9, 2014, the finding was determined to be of very low safety significance (Green) because the finding did not represent a loss of safety function of a single required train, did not degrade level indication, and did not involve external events or fire protection. The finding has a human performance cross-cutting aspect associated with avoiding complacency because the licensee failed to plan for latent issues and inherent risk in performing a major test [H.12].
Inspection Report# : 2015001 *(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: G 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)*

Barrier Integrity

Emergency Preparedness

Significance: G 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)*

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

Last modified : August 07, 2015

Comanche Peak 1
3Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Take Appropriate Maintenance Rule Corrective Actions for the Instrument Air System
The inspectors identified a non-cited violation of 10 CFR Part 50.65(a)(1) for the failure to take appropriate corrective actions for a system that did not meet established goals. Specifically, the Unit 1 instrument air system had been in maintenance rule (a)(1) status since 2011 due to dryer component failures. In 2014, the instrument air system experienced additional failures that resulted in water accumulating in air operated valve actuators on Unit 1. The water intrusion resulted in abnormal operation of the air operated valves in the Unit 1 main feedwater system. These failures were determined to be due to inadequate maintenance on the instrument air dryers unrelated to the 2011 failures. However, the licensee failed to revise their corrective actions to address the causes of the water intrusion. The licensee entered these issues into corrective action program as Condition Report CR-2015-009077.

The licensee's failure to take appropriate corrective actions for a system that did not meet established goals was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Initiating Events cornerstone and 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. Specifically, the failure to take appropriate corrective actions adversely affected the reliability of a system scoped in the plant's maintenance rule program. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and 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 affected a support system initiator but did not involve the loss of a support system that contributed to the likelihood of an initiating event and affected mitigation equipment. The finding has a problem identification and resolution cross-cutting aspect associated with evaluation, in that, the licensee failed to thoroughly evaluate issues to ensure that resolutions address causes. Specifically, the licensee performed an inadequate cause evaluation and failed to identify the cause of the water intrusion [P.2].
Inspection Report# : 2015003 *(pdf)*

Significance: G Sep 30, 2015
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Maintenance Procedure Results in Power Reduction
The inspectors reviewed a self-revealing finding associated with an inadequate procedure which resulted in a unit down power. Specifically, the procedure used for over speed testing of the main feedwater pumps did not provide adequate guidance for operation of the test push button which resulted in a trip of main feedwater pump 1A and subsequent unit power reduction. The licensee entered this issue into the corrective action program as Condition Report CR-2015-005195, and took actions to increase the maintenance frequency on the mechanical trip device, and to reduce power when performing mechanical over speed testing in the future.

The failure to provide adequate procedures for main feedwater pump over speed testing was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the procedural quality attribute of the Initiating Events Cornerstone, and directly affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations, and is therefore a finding. 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 the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The inspectors determined that this finding does not have a cross-cutting aspect because the most significant contributor of this finding would have occurred more than three years ago, in 2001, and is not reflective of current licensee performance.
Inspection Report# : 2015003 *(pdf)*

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)*

Mitigating Systems

Significance: G Aug 03, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Inverter Fault Interrupting Capability During Design Basis Loss of Offsite Power and Seismic Conditions

The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "Measures shall be established to assure that applicable regulatory requirements and the design basis, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. The design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program." Specifically, prior to June 18, 2015, the licensee failed to check the adequacy of the design by performing an analysis or test that demonstrated that the Class 1E inverters would continue to operate reliably when subjected to the effects of electrical faults that could be postulated to occur at non-Class loads, due to a lack of seismic qualification of the loads, during and after a design basis loss-of-offsite power and seismic event. In response to this issue, the licensee performed an analysis of the condition and an operability determination, and concluded, upon their review of all non-1E loads connected to 1E inverters, that the load protective devices would actuate in time to prevent a loss of function to the 1E loads. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-005530.

The team determined that the failure to evaluate the fault clearing capability of the Class 1E inverters was a performance deficiency. This finding 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, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to evaluate the fault clearing capability of the inverter during design basis loss of offsite power and seismic conditions which resulted in a reasonable doubt on the operability of the system. 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 result in the 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 did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2015007 *(pdf)*

Significance:  Aug 03, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Validate Inverter Ouput Demand Factor and to use the Correct Value of Inverter Efficiency when Determining Inverter Input D-C Power Requirements.
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "Measures shall be established to assure that applicable regulatory requirements and the design basis, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to June 30, 2015, the licensee did not correctly evaluate the inverter output loading by assuming an incorrectly low demand factor, and also did not correctly identify the inverter efficiency when determining the inverter input d-c power required from the Class 1E station battery. In response to this issue, the licensee performed an operability evaluation and reevaluated the battery inverter loads. The corrected inverter loads were compared with the inverter load performance test data. Based on Design Engineering bounding calculations, all of the safety-related battery inverters remained operable and capable of meeting the four hour mission time. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-005805.

The team determined that the failure to correctly evaluate the inverter input d-c power requirement was a performance deficiency. 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 of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences.

Specifically, the licensee failed to correctly evaluate the inverter input d c power requirements that resulted in a condition where there was reasonable doubt on the operability of the system. 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 result in the 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 did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2015007 *(pdf)*

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 Aug 03, 2015

Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Changes to Ensure They Did Not Require Prior NRC Approval
The team identified a Severity Level IV, non-cited violation of 10 CFR 50.59, "Changes, Test, and Experiments," which states in part, "Section (c)(1), that a licensee may make changes in the facility as described in the Updated Safety Analysis Report without obtaining a license amendment pursuant to 10 CFR 50.90 only if: (i) a change to the technical specifications incorporated in the license is not required, and (ii) the change, test, or experiment does not meet any of the criteria in paragraph (c)(2). Section(c)(2), states in part, "A licensee shall obtain a license amendment pursuant to Section 50.90 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would: (ii) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the final safety analysis report." Specifically, on March 12, 2013, the licensee performed a 10 CFR 50.59 evaluation for the unprotected turbine driven auxiliary feedwater pump exhaust stack, and during the Applicability Determination phase, determined that exempting the exhaust stack from being protected was acceptable without NRC approval. The licensee failed to recognize that the proposed change would result in more than a minimal increase in the likelihood that the turbine driven auxiliary feedwater pump's steam exhaust piping would be susceptible to tornado driven missiles during a station black out, when the turbine driven auxiliary feedwater pump would be required to be operational. In response to this issue, the licensee has demonstrated that the auxiliary feedwater system is capable of safely shutting down the plant in the event of a tornado missile strike on the turbine driven auxiliary feedwater pump's steam exhaust piping and the single failure of an additional auxiliary feedwater pump. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-007625.

The team determined that the licensee's failure to implement the requirements of 10 CFR 50.59 and adequately evaluate changes to determine if prior NRC approval is required was a performance deficiency. Because this performance deficiency had the potential to impact the NRC's ability to perform its regulatory function, the team evaluated the performance deficiency using traditional enforcement. In accordance with Section 2.1.3.E.6 of the NRC Enforcement Manual, the team evaluated this finding using the significance determination process to assess its significance. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, the finding was determined to have 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. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, the team characterized this performance deficiency as a Severity Level IV violation. The team determined that this finding did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2015007 *(pdf)*

Significance:  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:  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:  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 Follow Work Planning Procedure
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 follow the requirements of Procedure STI-606.03, "Work Planning," when developing work instructions for replacing concrete expansion anchors. Specifically, when developing Work Order 4851077 to replace Hilti Kwik-Bolt II expansion anchors with Hilti Kwik-Bolt 3 anchors on Manhole MH-E2B, planners failed to follow the requirements of Procedure STI 606.03. This failure resulted in the wrong anchors being installed in the facility. The licensee performed an operability determination for the affected anchors that established a reasonable expectation for operability. The licensee entered the finding into the corrective action program as Condition Report CR-2015-001579.

The licensee's failure to follow the requirements of Procedure STI-606.03, "Work Planning," when developing work instructions 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 failure to follow procedure resulted in incorrect material being installed in the plant which resulted in a condition where a structure necessary to mitigate the effects of a tornado 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 be of very low safety significance (Green) because the finding was a

deficiency affecting the design and qualification of a mitigating structure, and did not result in a loss of operability or functionality. The finding has a human performance cross cutting aspect associated with work management because the licensee failed to implement a process of planning activities such that nuclear safety is the overriding priority [H.5].

Inspection Report# : 2015001 *(pdf)*

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Follow Procedure Damages a Centrifugal Charging Pump
The inspectors identified a non-cited violation of 10 Part CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to follow procedure during the performance of a surveillance test. Specifically, the licensee failed to ensure applicable prerequisites were met for performing the Unit 1 train A integrated surveillance test procedure by not ensuring component cooling water was properly aligned for operation. This resulted in the overheating and damage to a centrifugal charging pump. The licensee entered the finding into the corrective action program as Condition Report CR 2015-003150.

The licensee's failure to follow the requirements of Procedure STA-201, "Procedure Use and Adherence," to verify all applicable prerequisites were met prior to performing Procedure OPT-430A, "Train A Integrated Test Sequence," 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 affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, operations personnel's failure to ensure that component cooling water was properly aligned to the minimum flow line resulted in damage to a centrifugal charging pump. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1 Exhibit 3, "Mitigating Systems Screening Questions," dated May 9, 2014, the finding was determined to be of very low safety significance (Green) because the finding did not represent a loss of safety function of a single required train, did not degrade level indication, and did not involve external events or fire protection. The finding has a human performance cross-cutting aspect associated with avoiding complacency because the licensee failed to plan for latent issues and inherent risk in performing a major test [H.12].
Inspection Report# : 2015001 *(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

Comanche Peak 1
4Q/2015 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Incorrect Visual Resolution Requirements in Augmented Dissimilar Metal Weld Visual Examination Procedures
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," because the licensee failed to assure that visual examination activities for the reactor vessel dissimilar metal nozzle welds and bottom-mounted instrumentation nozzles were accomplished in accordance with the visual acuity requirements of ASME Code Case N-722-1. In response to the issue, for Unit 2, the licensee scheduled reexamination of the welds prior to the end of the outage, and, for Unit 1, performed a reasonable degradation evaluation to determine that reexamination of the welds could be delayed to the next outage. This finding was entered into the corrective action program as Condition Report 2015-009586.

The inspectors determined that the failure to assure visual examination activities were accomplished in accordance with the visual acuity requirements of ASME Code Case N-722-1 was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, routinely performing examinations with incorrect visual acuity requirements of N-722-1 has the potential to lead to missed opportunities to identify and correct relevant indications in reactor coolant system pressure boundaries. In accordance with Inspection Manual Chapter MC 0609, Attachment 4, "Significance Determination Process Initial Characterization," the inspectors determined that this finding affected the Initiating Events cornerstone as a primary system LOCA initiator contributor. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, Exhibit 1, "Initiating Events Screening Questions," the finding screened as having very low safety significance (Green) because after a reasonable assessment of degradation, the finding did not result in exceeding the RCS leak rate for a small LOCA and did not affect other systems used to mitigate a LOCA. The finding does not have a crosscutting aspect because the most significant contributor is not reflective of current licensee performance.
Inspection Report# : 2015004 *(pdf)*

Significance: G Sep 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Take Appropriate Maintenance Rule Corrective Actions for the Instrument Air System
The inspectors identified a non-cited violation of 10 CFR Part 50.65(a)(1) for the failure to take appropriate corrective actions for a system that did not meet established goals. Specifically, the Unit 1 instrument air system had been in maintenance rule (a)(1) status since 2011 due to dryer component failures. In 2014, the instrument air system experienced additional failures that resulted in water accumulating in air operated valve actuators on Unit 1. The water intrusion resulted in abnormal operation of the air operated valves in the Unit 1 main feedwater system. These failures were determined to be due to inadequate maintenance on the instrument air dryers unrelated to the 2011 failures. However, the licensee failed to revise their corrective actions to address the causes of

the water intrusion. The licensee entered these issues into corrective action program as Condition Report CR-2015-009077.

The licensee's failure to take appropriate corrective actions for a system that did not meet established goals was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Initiating Events cornerstone and 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. Specifically, the failure to take appropriate corrective actions adversely affected the reliability of a system scoped in the plant's maintenance rule program. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and 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 affected a support system initiator but did not involve the loss of a support system that contributed to the likelihood of an initiating event and affected mitigation equipment. The finding has a problem identification and resolution cross-cutting aspect associated with evaluation, in that, the licensee failed to thoroughly evaluate issues to ensure that resolutions address causes. Specifically, the licensee performed an inadequate cause evaluation and failed to identify the cause of the water intrusion [P.2].
Inspection Report# : 2015003 *(pdf)*

Significance: G Sep 30, 2015
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Maintenance Procedure Results in Power Reduction
The inspectors reviewed a self-revealing finding associated with an inadequate procedure which resulted in a unit down power. Specifically, the procedure used for over speed testing of the main feedwater pumps did not provide adequate guidance for operation of the test push button which resulted in a trip of main feedwater pump 1A and subsequent unit power reduction. The licensee entered this issue into the corrective action program as Condition Report CR-2015-005195, and took actions to increase the maintenance frequency on the mechanical trip device, and to reduce power when performing mechanical over speed testing in the future.

The failure to provide adequate procedures for main feedwater pump over speed testing was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the procedural quality attribute of the Initiating Events Cornerstone, and directly affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations, and is therefore a finding. 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 the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The inspectors determined that this finding does not have a cross-cutting aspect because the most significant contributor of this finding would have occurred more than three years ago, in 2001, and is not reflective of current licensee performance.
Inspection Report# : 2015003 *(pdf)*

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)*

Mitigating Systems

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Take Appropriate Maintenance Rule Corrective Actions for the 6.9 kV System
The inspectors identified a non-cited violation of 10 CFR Part 50.65(a)(1), for the failure to establish goals that provide reasonable assurance that the 6.9 kV electrical distribution system is capable of fulfilling its intended functions. Specifically, the 6.9 kV electrical distribution system had been in maintenance rule (a)(1) status since 2009 due to the failure of breakers to close on demand. Subsequently, in 2013 and 2015 there were additional breaker failures, which exceeded the established performance criteria, and were due to causes not previously evaluated. These additional failures were determined to be due to inadequate maintenance, but the licensee did not re-evaluate the established goals and revise the corrective actions to address these additional failures. The licensee implemented corrective actions to re-evaluate the goals and corrective actions for the 6.9 kV AC system. The licensee entered this issue into the corrective action program as Condition Report CR-2015-009077.

The licensee's failure to evaluate existing goals and corrective actions for a system that did not meet established performance goals was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to take appropriate corrective actions adversely affected the reliability of a system scoped in the plant's maintenance rule program. 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 finding has a human performance cross-cutting aspect associated with procedure adherence, in that, the licensee failed to follow maintenance rule implementing procedures [H.8].
Inspection Report# : 2015004 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Identify Conditions Adverse to Quality
The inspectors identified two examples of a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to identify conditions adverse to quality. Specifically, in two separate instances involving extent of condition reviews for grease on 6.9 kV breaker stabs and degraded piping in the Unit 1 service water system, the licensee failed to identify conditions adverse to quality that were reasonably within their ability to identify. As a result, the licensee failed to: (1) identify 24 additional breakers that were in a degraded condition due to grease on secondary stabs, and (2) identify a section of service water piping that was below the ASME minimum wall thickness. The licensee implemented immediate corrective actions by entering the issues into the corrective action program for resolution and performed an operability determination for the identified degraded conditions. The licensee entered these issues into the corrective action program as Condition Reports CR-2015-009992 and CR-2015-010120.

The licensee's failure to identify conditions adverse to quality for quality related systems was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to identify degraded conditions could affect the reliability or availability of multiple safety related systems. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and 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 is a deficiency affecting the design or qualification of a mitigating SSC, but the SSC maintained its operability. The finding has a problem identification and resolution cross-cutting aspect associated with evaluation, in that, the licensee failed to thoroughly evaluate issues to ensure that resolutions address extent of conditions. Specifically, the licensee failed to adequately consider the extent of the degraded conditions on similar safety related components [P.2].
Inspection Report# : 2015004 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: FIN Finding
Failure to Follow Procedure When Disabling a Hazard Barrier
The inspectors identified a finding associated with the licensee's failure to follow procedural requirements for disabling a hazard barrier. Specifically, Station Procedure STA 696, "Hazard Barrier Controls," Revision 2, requires that appropriate temporary barriers be prescribed when a hazard barrier is impaired. However, in support of an auxiliary, safeguards and fuel building negative pressure test, the licensee failed to follow Procedure STA 696 and incorrectly credited alternate doors to protect safety-related equipment from the effects of a high-energy line break when disabling the primary hazard barrier. The licensee implemented corrective actions to correctly assess the activity and implemented appropriate risk management actions. The licensee entered the finding into corrective action program as Condition Report CR-2015-005583.

The licensee's failure to follow station procedures when crediting temporary hazard barriers was a performance deficiency. The 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 cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, opening the high energy line break door without an appropriate temporary barrier in place removed a credited barrier for safety-related electrical equipment. 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 would have occurred more than three years ago, and is not reflective of current licensee performance.
Inspection Report# : 2015004 *(pdf)*

Significance: G Nov 13, 2015
Identified By: NRC
Item Type: VIO Violation
Failure to Evaluate the Lack of Missile Protection on the Turbine Driven Auxiliary Feedwater Pumps' Steam Exhaust Piping
Green. The team identified a cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to evaluate the lack of missile protection on the turbine driven auxiliary feedwater pumps' steam exhaust piping. Specifically, since June 13, 2012, the licensee failed to verify the adequacy of design of the turbine driven auxiliary feedwater pumps' steam exhaust piping to withstand impact from a tornado driven missile hazard, or to evaluate for exemption from missile protection requirements using an approved methodology. This issue does not represent an immediate safety concern because the licensee performed an operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007869.

The licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5a)

Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Properly Assess and Document the Basis for Operability associated with the Turbine Driven Auxiliary Feedwater Pumps' Steam Exhaust Piping not being Evaluated for Tornado Generated Missil
Green. The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," associated the licensee's failure to perform adequate operability assessments when a degraded or nonconforming condition was identified associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts. Specifically, operators used probabilistic assumptions and failed to adequately assess and document the basis for operability when a degraded or nonconforming condition was identified associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts. This issue does not represent an immediate safety concern because the licensee performed a subsequent operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007919.

The licensee's failure to properly assess and document the basis for operability when a degraded or nonconforming condition associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts was identified, was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5b)

Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Procedure for Surveillance on Safety-Related Service Water Systems
Green. The team identified a non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," for an inadequate procedure for performing surveillances on the station service water (SSW) systems in units 1 and 2. Specifically, Procedures OPT-207 A and B, "Service Water System," were modified in September 2010 so that failure of any SSW vacuum breaker to OPEN was considered a degraded condition and not an inoperable condition of the associated SSW System train. However, per DBD-ME-233, "Station Service Water," Revision 33, "Active Valves," vacuum breakers are required by ASME [Code Section] III on the inlet and outlet piping to the diesel generator jacket water coolers to mitigate the effects of water hammer due to water column separation and subsequent rejoining

following a pump trip. This issue does not represent an immediate safety concern because the licensee confirmed that all of the vacuum breakers in service had passed their most recent surveillance test. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-010800.

The finding is more than minor because it is associated with the procedure quality attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee did not ensure the guidance incorporated into quality related procedures was accurate and consistent with the design basis analysis for the systems and this conflict resulted in inadequate operability determinations associated with the SSW System. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. This finding has a human performance cross cutting aspect associated with design margins because the licensee failed to operate and maintain the SSW system equipment within design margins. Rather than ensure that margins are carefully guarded and changed only through a systematic and rigorous process, the licensee failed to re-evaluate SSW system operability with failed vacuum breaker valves even when additional test information indicated previous assumptions were incorrect [H.6]. (Section 4OA2.5c)
Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Maintain Adequate Controls for Design Calculations
Green. The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," with two examples 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: (1) The licensee instituted an engineering change package to modify the design and setpoints for the station service water (SSW) system vacuum breaker valves (CP1/2-SWVAVB-01/02/03/04) and did not consider the allowable tolerance for the setpoint for all design basis events and operating conditions. The licensee adequately addressed this issue by reperforming the calculation incorporating the setpoint allowable tolerance. (2) The licensee failed to account for system design leakage in design calculation DBD-CS-096, for the safe shutdown impoundment minimum level. The licensee evaluated the water loss from the impoundment due to evaporation, but failed to account for losses due to system design leakage. The licensee adequately addressed this issue by applying the design system leak rate for a 30-day mission time to the available water in the safe shutdown impoundment.

The licensee's failure to evaluate properly the effects of modifying the setpoint including allowable tolerances for all modes of operation and all sources of water loss from the safe shutdown impoundment was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the configuration control attribute of the Mitigating Systems Cornerstone, and 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, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated June 19, 2012, the team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more

non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. 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. (Section 4OA2.5d)
Inspection Report# : 2015008 *(pdf)*

Significance: G Aug 03, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Inverter Fault Interrupting Capability During Design Basis Loss of Offsite Power and Seismic Conditions
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "Measures shall be established to assure that applicable regulatory requirements and the design basis, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. The design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program." Specifically, prior to June 18, 2015, the licensee failed to check the adequacy of the design by performing an analysis or test that demonstrated that the Class 1E inverters would continue to operate reliably when subjected to the effects of electrical faults that could be postulated to occur at non-Class loads, due to a lack of seismic qualification of the loads, during and after a design basis loss-of-offsite power and seismic event. In response to this issue, the licensee performed an analysis of the condition and an operability determination, and concluded, upon their review of all non-1E loads connected to 1E inverters, that the load protective devices would actuate in time to prevent a loss of function to the 1E loads. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-005530.

The team determined that the failure to evaluate the fault clearing capability of the Class 1E inverters was a performance deficiency. This finding 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, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to evaluate the fault clearing capability of the inverter during design basis loss of offsite power and seismic conditions which resulted in a reasonable doubt on the operability of the system. 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 result in the 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 did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2015007 *(pdf)*

Significance: G Aug 03, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Validate Inverter Ouput Demand Factor and to use the Correct Value of Inverter Efficiency when Determining Inverter Input D-C Power Requirements.
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "Measures shall be established to assure that applicable regulatory requirements and the design basis, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to June 30, 2015, the licensee did not

correctly evaluate the inverter output loading by assuming an incorrectly low demand factor, and also did not correctly identify the inverter efficiency when determining the inverter input d-c power required from the Class 1E station battery. In response to this issue, the licensee performed an operability evaluation and reevaluated the battery inverter loads. The corrected inverter loads were compared with the inverter load performance test data. Based on Design Engineering bounding calculations, all of the safety-related battery inverters remained operable and capable of meeting the four hour mission time. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-005805.

The team determined that the failure to correctly evaluate the inverter input d-c power requirement was a performance deficiency. 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 of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to correctly evaluate the inverter input d c power requirements that resulted in a condition where there was reasonable doubt on the operability of the system. 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 result in the 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 did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2015007 *(pdf)*

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 Aug 03, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Changes to Ensure They Did Not Require Prior NRC Approval
The team identified a Severity Level IV, non-cited violation of 10 CFR 50.59, "Changes, Test, and Experiments," which states in part, "Section (c)(1), that a licensee may make changes in the facility as described in the Updated Safety Analysis Report without obtaining a license amendment pursuant to 10 CFR 50.90 only if: (i) a change to the technical specifications incorporated in the license is not required, and (ii) the change, test, or experiment does not meet any of the criteria in paragraph (c)(2). Section(c)(2), states in part, "A licensee shall obtain a license amendment pursuant to Section 50.90 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would: (ii) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the final safety analysis report." Specifically, on March 12, 2013, the licensee performed a 10 CFR 50.59 evaluation for the unprotected turbine driven auxiliary feedwater pump exhaust stack, and during the Applicability Determination phase, determined that exempting the exhaust stack from being protected was acceptable without NRC approval. The licensee failed to recognize that the proposed change would result in more than a minimal increase in the likelihood that the turbine driven auxiliary feedwater pump's steam exhaust piping would be susceptible to tornado driven missiles during a station black out, when the turbine driven auxiliary feedwater pump would be required to be operational. In response to this issue, the licensee has demonstrated that the auxiliary feedwater system is capable of safely shutting down the plant in the event of a tornado missile strike on the turbine driven auxiliary feedwater pump's steam exhaust piping and the single failure of an additional auxiliary feedwater pump. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-007625.

The team determined that the licensee's failure to implement the requirements of 10 CFR 50.59 and adequately evaluate changes to determine if prior NRC approval is required was a performance deficiency. Because this performance deficiency had the potential to impact the NRC's ability to perform its regulatory function, the team evaluated the performance deficiency using traditional enforcement. In accordance with Section 2.1.3.E.6 of the NRC Enforcement Manual, the team evaluated this finding using the significance determination process to assess its significance. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, the finding was determined to have 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. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, the team characterized this performance deficiency as a Severity Level IV violation. The team determined that this finding did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.

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 Follow Work Planning Procedure
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 follow the requirements of Procedure STI-606.03, "Work Planning," when developing work instructions for replacing concrete expansion anchors. Specifically, when developing Work Order 4851077 to replace Hilti Kwik-Bolt II expansion anchors with Hilti Kwik-Bolt 3 anchors on Manhole MH-E2B, planners failed to follow the requirements of Procedure STI 606.03. This failure resulted in the

wrong anchors being installed in the facility. The licensee performed an operability determination for the affected anchors that established a reasonable expectation for operability. The licensee entered the finding into the corrective action program as Condition Report CR-2015-001579.

The licensee's failure to follow the requirements of Procedure STI-606.03, "Work Planning," when developing work instructions 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 failure to follow procedure resulted in incorrect material being installed in the plant which resulted in a condition where a structure necessary to mitigate the effects of a tornado 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 be of very low safety significance (Green) because the finding was a deficiency affecting the design and qualification of a mitigating structure, and did not result in a loss of operability or functionality. The finding has a human performance cross cutting aspect associated with work management because the licensee failed to implement a process of planning activities such that nuclear safety is the overriding priority [H.5].

Inspection Report# : 2015001 *(pdf)*

Significance: G Mar 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Follow Procedure Damages a Centrifugal Charging Pump
The inspectors identified a non-cited violation of 10 Part CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to follow procedure during the performance of a surveillance test. Specifically, the licensee failed to ensure applicable prerequisites were met for performing the Unit 1 train A integrated surveillance test procedure by not ensuring component cooling water was properly aligned for operation. This resulted in the overheating and damage to a centrifugal charging pump. The licensee entered the finding into the corrective action program as Condition Report CR 2015-003150.

The licensee's failure to follow the requirements of Procedure STA-201, "Procedure Use and Adherence," to verify all applicable prerequisites were met prior to performing Procedure OPT-430A, "Train A Integrated Test Sequence," 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 affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, operations personnel's failure to ensure that component cooling water was properly aligned to the minimum flow line resulted in damage to a centrifugal charging pump. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1 Exhibit 3, "Mitigating Systems Screening Questions," dated May 9, 2014, the finding was determined to be of very low safety significance (Green) because the finding did not represent a loss of safety function of a single required train, did not degrade level indication, and did not involve external events or fire protection. The finding has a human performance cross-cutting aspect associated with avoiding complacency because the licensee failed to plan for latent issues and inherent risk in performing a major test [H.12].
Inspection Report# : 2015001 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Compensatory Measures for Seismic Monitoring System Maintenance
The inspectors identified a non-cited violation of 10 CFR 50.54(q)(2) for a failure to meet planning standard 10 CFR 50.47(b)(4) during periodic outages of the seismic monitoring system. Specifically, during planned maintenance on the seismic monitoring system, inspectors determined that the system would not be able to perform its function of alerting control room staff of an entry condition into the emergency action levels for a seismic event, and the specified compensatory measures were not adequate. The licensee implemented correction actions to establish viable compensatory measures for periods when the seismic monitoring system is unavailable. The licensee entered these issues into corrective action program as Condition Report CR-2016-000091.

The licensee's failure to maintain the effectiveness of their emergency plan was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the ERO Performance attribute of the Emergency Preparedness cornerstone and impacted the cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," the inspector determined that the violation is of very low safety significance (Green) because the finding represented a failure to comply with planning standard (b)(4), and, using table 5.4-1, was screened as a Green finding because an emergency action level initiating condition was rendered ineffective such that an Alert would be declared in a degraded manner for a seismic event, but no Site Area Emergency or General Emergency initiating conditions were affected. The violation was entered into the licensee's corrective action program as CR-2016-000091. The inspectors determined that this finding has a problem identification and resolution cross-cutting aspect associated with resolution, because the licensee failed to take appropriate corrective action after they recognized the inadequacy of their compensatory measures [P.3].
Inspection Report# : 2015004 *(pdf)*

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

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Barricade High Radiation Areas
The inspector identified a non-cited violation (NCV) of Technical Specification 5.7.1.a, with two examples, associated with not barricading High Radiation Areas (HRAs) with dose rates not exceeding 1.0 rem/hour at 30 centimeters from the radiation source. Specifically, access to the HRA containment trashracks and access to the HRA reactor cavity before flood up were not barricaded to prevent entry. The licensee took immediate corrective action to barricade the associated HRAs to restrict access and entered this issue into the corrective action program as CR-2015-009095 and CR-2015-009303.

The failure to barricade high radiation areas in accordance with TS 5.7.1.a was a performance deficiency. The inspector determined that the performance deficiency was more than minor, and therefore a finding, because it impacted the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Specifically, not barricading HRAs could lead to inadvertent worker entry into high dose rate areas without knowledge of the radiological conditions. The finding was assessed using IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," dated August 19, 2008, and was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee’s ability to assess dose was not compromised. The finding was associated with a cross-cutting aspect of Resolution in Problem Identification and Resolution area. Specifically, the organization’s corrective actions to address HRA issues raised by Nuclear Oversight, the NRC and independent assessments in a timely manner commensurate with their safety significance have not been effective [P.3].
Inspection Report# : 2015004 *(pdf)*

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 : March 01, 2016

Comanche Peak 1
1Q/2016 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Incorrect Visual Resolution Requirements in Augmented Dissimilar Metal Weld Visual Examination Procedures
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," because the licensee failed to assure that visual examination activities for the reactor vessel dissimilar metal nozzle welds and bottom-mounted instrumentation nozzles were accomplished in accordance with the visual acuity requirements of ASME Code Case N-722-1. In response to the issue, for Unit 2, the licensee scheduled reexamination of the welds prior to the end of the outage, and, for Unit 1, performed a reasonable degradation evaluation to determine that reexamination of the welds could be delayed to the next outage. This finding was entered into the corrective action program as Condition Report 2015-009586.

The inspectors determined that the failure to assure visual examination activities were accomplished in accordance with the visual acuity requirements of ASME Code Case N-722-1 was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, routinely performing examinations with incorrect visual acuity requirements of N-722-1 has the potential to lead to missed opportunities to identify and correct relevant indications in reactor coolant system pressure boundaries. In accordance with Inspection Manual Chapter MC 0609, Attachment 4, "Significance Determination Process Initial Characterization," the inspectors determined that this finding affected the Initiating Events cornerstone as a primary system LOCA initiator contributor. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, Exhibit 1, "Initiating Events Screening Questions," the finding screened as having very low safety significance (Green) because after a reasonable assessment of degradation, the finding did not result in exceeding the RCS leak rate for a small LOCA and did not affect other systems used to mitigate a LOCA. The finding does not have a crosscutting aspect because the most significant contributor is not reflective of current licensee performance.
Inspection Report# : 2015004 *(pdf)*

Significance: G Sep 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Take Appropriate Maintenance Rule Corrective Actions for the Instrument Air System
The inspectors identified a non-cited violation of 10 CFR Part 50.65(a)(1) for the failure to take appropriate corrective actions for a system that did not meet established goals. Specifically, the Unit 1 instrument air system had been in maintenance rule (a)(1) status since 2011 due to dryer component failures. In 2014, the instrument air system experienced additional failures that resulted in water accumulating in air operated valve actuators on Unit 1. The water intrusion resulted in abnormal operation of the air operated valves in the Unit 1 main feedwater system. These failures were determined to be due to inadequate maintenance on the instrument air dryers unrelated to the 2011 failures. However, the licensee failed to revise their corrective actions to address the causes of the water intrusion. The licensee

entered these issues into corrective action program as Condition Report CR-2015-009077.

The licensee's failure to take appropriate corrective actions for a system that did not meet established goals was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Initiating Events cornerstone and 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. Specifically, the failure to take appropriate corrective actions adversely affected the reliability of a system scoped in the plant's maintenance rule program. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and 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 affected a support system initiator but did not involve the loss of a support system that contributed to the likelihood of an initiating event and affected mitigation equipment. The finding has a problem identification and resolution cross-cutting aspect associated with evaluation, in that, the licensee failed to thoroughly evaluate issues to ensure that resolutions address causes. Specifically, the licensee performed an inadequate cause evaluation and failed to identify the cause of the water intrusion [P.2].
Inspection Report# : 2015003 *(pdf)*

Significance: G Sep 30, 2015
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Maintenance Procedure Results in Power Reduction
The inspectors reviewed a self-revealing finding associated with an inadequate procedure which resulted in a unit down power. Specifically, the procedure used for over speed testing of the main feedwater pumps did not provide adequate guidance for operation of the test push button which resulted in a trip of main feedwater pump 1A and subsequent unit power reduction. The licensee entered this issue into the corrective action program as Condition Report CR-2015-005195, and took actions to increase the maintenance frequency on the mechanical trip device, and to reduce power when performing mechanical over speed testing in the future.

The failure to provide adequate procedures for main feedwater pump over speed testing was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the procedural quality attribute of the Initiating Events Cornerstone, and directly affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations, and is therefore a finding. 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 the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The inspectors determined that this finding does not have a cross-cutting aspect because the most significant contributor of this finding would have occurred more than three years ago, in 2001, and is not reflective of current licensee performance.
Inspection Report# : 2015003 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2015
Identified By: NRC

Item Type: NCV Non-Cited Violation
Failure to Take Appropriate Maintenance Rule Corrective Actions for the 6.9 kV System
The inspectors identified a non-cited violation of 10 CFR Part 50.65(a)(1), for the failure to establish goals that provide reasonable assurance that the 6.9 kV electrical distribution system is capable of fulfilling its intended functions. Specifically, the 6.9 kV electrical distribution system had been in maintenance rule (a)(1) status since 2009 due to the failure of breakers to close on demand. Subsequently, in 2013 and 2015 there were additional breaker failures, which exceeded the established performance criteria, and were due to causes not previously evaluated. These additional failures were determined to be due to inadequate maintenance, but the licensee did not re-evaluate the established goals and revise the corrective actions to address these additional failures. The licensee implemented corrective actions to re-evaluate the goals and corrective actions for the 6.9 kV AC system. The licensee entered this issue into the corrective action program as Condition Report CR-2015-009077.

The licensee's failure to evaluate existing goals and corrective actions for a system that did not meet established performance goals was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to take appropriate corrective actions adversely affected the reliability of a system scoped in the plant's maintenance rule program. 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 finding has a human performance cross-cutting aspect associated with procedure adherence, in that, the licensee failed to follow maintenance rule implementing procedures [H.8].
Inspection Report# : 2015004 *(pdf)*

Significance:  Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Identify Conditions Adverse to Quality
The inspectors identified two examples of a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to identify conditions adverse to quality. Specifically, in two separate instances involving extent of condition reviews for grease on 6.9 kV breaker stabs and degraded piping in the Unit 1 service water system, the licensee failed to identify conditions adverse to quality that were reasonably within their ability to identify. As a result, the licensee failed to: (1) identify 24 additional breakers that were in a degraded condition due to grease on secondary stabs, and (2) identify a section of service water piping that was below the ASME minimum wall thickness. The licensee implemented immediate corrective actions by entering the issues into the corrective action program for resolution and performed an operability determination for the identified degraded conditions. The licensee entered these issues into the corrective action program as Condition Reports CR-2015-009992 and CR-2015-010120.

The licensee's failure to identify conditions adverse to quality for quality related systems was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to identify degraded conditions could affect the reliability or availability of

multiple safety related systems. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and 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 is a deficiency affecting the design or qualification of a mitigating SSC, but the SSC maintained its operability. The finding has a problem identification and resolution cross-cutting aspect associated with evaluation, in that, the licensee failed to thoroughly evaluate issues to ensure that resolutions address extent of conditions. Specifically, the licensee failed to adequately consider the extent of the degraded conditions on similar safety related components [P.2].
Inspection Report# : 2015004 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: FIN Finding
Failure to Follow Procedure When Disabling a Hazard Barrier
The inspectors identified a finding associated with the licensee's failure to follow procedural requirements for disabling a hazard barrier. Specifically, Station Procedure STA 696, "Hazard Barrier Controls," Revision 2, requires that appropriate temporary barriers be prescribed when a hazard barrier is impaired. However, in support of an auxiliary, safeguards and fuel building negative pressure test, the licensee failed to follow Procedure STA 696 and incorrectly credited alternate doors to protect safety-related equipment from the effects of a high-energy line break when disabling the primary hazard barrier. The licensee implemented corrective actions to correctly assess the activity and implemented appropriate risk management actions. The licensee entered the finding into corrective action program as Condition Report CR-2015-005583.

The licensee's failure to follow station procedures when crediting temporary hazard barriers was a performance deficiency. The 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 cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, opening the high energy line break door without an appropriate temporary barrier in place removed a credited barrier for safety-related electrical equipment. 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 would have occurred more than three years ago, and is not reflective of current licensee performance.
Inspection Report# : 2015004 *(pdf)*

Significance: G Nov 13, 2015
Identified By: NRC
Item Type: VIO Violation
Failure to Evaluate the Lack of Missile Protection on the Turbine Driven Auxiliary Feedwater Pumps' Steam Exhaust Piping
Green. The team identified a cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to evaluate the lack of missile protection on the turbine driven auxiliary feedwater pumps' steam

exhaust piping. Specifically, since June 13, 2012, the licensee failed to verify the adequacy of design of the turbine driven auxiliary feedwater pumps' steam exhaust piping to withstand impact from a tornado driven missile hazard, or to evaluate for exemption from missile protection requirements using an approved methodology. This issue does not represent an immediate safety concern because the licensee performed an operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007869.

The licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5a)

Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Properly Assess and Document the Basis for Operability associated with the Turbine Driven Auxiliary Feedwater Pumps' Steam Exhaust Piping not being Evaluated for Tornado Generated Missil
Green. The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," associated the licensee's failure to perform adequate operability assessments when a degraded or nonconforming condition was identified associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts. Specifically, operators used probabilistic assumptions and failed to adequately assess and document the basis for operability when a degraded or nonconforming condition was identified associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts. This issue does not represent an immediate safety concern because the licensee performed a subsequent operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007919.

The licensee's failure to properly assess and document the basis for operability when a degraded or nonconforming condition associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts was identified, was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5b)

Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Procedure for Surveillance on Safety-Related Service Water Systems
Green. The team identified a non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," for an inadequate procedure for performing surveillances on the station service water (SSW) systems in units 1 and 2. Specifically, Procedures OPT-207 A and B, "Service Water System," were modified in September 2010 so that failure of any SSW vacuum breaker to OPEN was considered a degraded condition and not an inoperable condition of the associated SSW System train. However, per DBD-ME-233, "Station Service Water," Revision 33, "Active Valves," vacuum breakers are required by ASME [Code Section] III on the inlet and outlet piping to the diesel generator jacket water coolers to mitigate the effects of water hammer due to water column separation and subsequent rejoining following a pump trip. This issue does not represent an immediate safety concern because the licensee confirmed that all of the vacuum breakers in service had passed their most recent surveillance test. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-010800.

The finding is more than minor because it is associated with the procedure quality attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee did not ensure the guidance incorporated into quality related procedures was accurate and consistent with the design basis analysis for the systems and this conflict resulted in inadequate operability determinations associated with the SSW System. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. This finding has a human performance cross cutting aspect associated with design margins because the licensee failed to operate and maintain the SSW system equipment within design margins. Rather than ensure that margins are carefully guarded and changed only through a systematic and rigorous process, the licensee failed to re-evaluate SSW system operability with failed vacuum breaker valves even when additional test information indicated previous assumptions were incorrect [H.6]. (Section 4OA2.5c)
Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation

Failure to Maintain Adequate Controls for Design Calculations
Green. The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," with two examples 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: (1) The licensee instituted an engineering change package to modify the design and setpoints for the station service water (SSW) system vacuum breaker valves (CP1/2-SWVAVB-01/02/03/04) and did not consider the allowable tolerance for the setpoint for all design basis events and operating conditions. The licensee adequately addressed this issue by reperforming the calculation incorporating the setpoint allowable tolerance. (2) The licensee failed to account for system design leakage in design calculation DBD-CS-096, for the safe shutdown impoundment minimum level. The licensee evaluated the water loss from the impoundment due to evaporation, but failed to account for losses due to system design leakage. The licensee adequately addressed this issue by applying the design system leak rate for a 30-day mission time to the available water in the safe shutdown impoundment.

The licensee's failure to evaluate properly the effects of modifying the setpoint including allowable tolerances for all modes of operation and all sources of water loss from the safe shutdown impoundment was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the configuration control attribute of the Mitigating Systems Cornerstone, and 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, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated June 19, 2012, the team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. 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. (Section 4OA2.5d)
Inspection Report# : 2015008 *(pdf)*

Significance:  Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Adequately Evaluate Operability for a Degraded Condition
The inspectors identified seven examples of a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," associated with the licensee's failure to perform adequate operability assessments for a degraded or nonconforming condition. Specifically, when vacuum breakers installed in the service water system failed to actuate during surveillance testing, the licensee completed an operability evaluation that relied on judgement, and was contrary to the station design analysis. In particular, the licensee concluded that the vacuum breakers were not required to support operability of the service water system. Following questions from inspectors, the licensee determined that this judgement was not correct and performed a new evaluation to establish operational parameters necessary to ensure operability of the service water system with a failed vacuum breaker. The licensee entered this issue into corrective action program as Condition Report CR-2015-008334.

The failure to properly assess and document the basis for operability for a degraded or nonconforming condition was a performance deficiency. The 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 cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, service water vacuum breakers failing to open resulted in a condition where structures, systems, and components necessary to mitigate the effects of a column separation event may not

have functioned as required. 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 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 is not indicative of current licensee performance.
Inspection Report# : 2015008 *(pdf)*
Inspection Report# : 2016001 *(pdf)*

Significance: G Aug 03, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Inverter Fault Interrupting Capability During Design Basis Loss of Offsite Power and Seismic Conditions
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "Measures shall be established to assure that applicable regulatory requirements and the design basis, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. The design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program." Specifically, prior to June 18, 2015, the licensee failed to check the adequacy of the design by performing an analysis or test that demonstrated that the Class 1E inverters would continue to operate reliably when subjected to the effects of electrical faults that could be postulated to occur at non-Class loads, due to a lack of seismic qualification of the loads, during and after a design basis loss-of-offsite power and seismic event. In response to this issue, the licensee performed an analysis of the condition and an operability determination, and concluded, upon their review of all non-1E loads connected to 1E inverters, that the load protective devices would actuate in time to prevent a loss of function to the 1E loads. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-005530.

The team determined that the failure to evaluate the fault clearing capability of the Class 1E inverters was a performance deficiency. This finding 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, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to evaluate the fault clearing capability of the inverter during design basis loss of offsite power and seismic conditions which resulted in a reasonable doubt on the operability of the system. 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 result in the 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 did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2015007 *(pdf)*

Significance: G Aug 03, 2015

Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Validate Inverter Ouput Demand Factor and to use the Correct Value of Inverter Efficiency when Determining Inverter Input D-C Power Requirements.
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "Measures shall be established to assure that applicable regulatory requirements and the design basis, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to June 30, 2015, the licensee did not correctly evaluate the inverter output loading by assuming an incorrectly low demand factor, and also did not correctly identify the inverter efficiency when determining the inverter input d-c power required from the Class 1E station battery. In response to this issue, the licensee performed an operability evaluation and reevaluated the battery inverter loads. The corrected inverter loads were compared with the inverter load performance test data. Based on Design Engineering bounding calculations, all of the safety-related battery inverters remained operable and capable of meeting the four hour mission time. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-005805.

The team determined that the failure to correctly evaluate the inverter input d-c power requirement was a performance deficiency. 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 of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to correctly evaluate the inverter input d c power requirements that resulted in a condition where there was reasonable doubt on the operability of the system. 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 result in the 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 did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2015007 *(pdf)*

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 Aug 03, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Changes to Ensure They Did Not Require Prior NRC Approval
The team identified a Severity Level IV, non-cited violation of 10 CFR 50.59, "Changes, Test, and Experiments," which states in part, "Section (c)(1), that a licensee may make changes in the facility as described in the Updated Safety Analysis Report without obtaining a license amendment pursuant to 10 CFR 50.90 only if: (i) a change to the technical specifications incorporated in the license is not required, and (ii) the change, test, or experiment does not meet any of the criteria in paragraph (c)(2). Section(c)(2), states in part, "A licensee shall obtain a license amendment pursuant to Section 50.90 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would: (ii) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the final safety analysis report." Specifically, on March 12, 2013, the licensee performed a 10 CFR 50.59 evaluation for the unprotected turbine driven auxiliary feedwater pump exhaust stack, and during the Applicability Determination phase, determined that exempting the exhaust stack from being protected was acceptable without NRC approval. The licensee failed to recognize that the proposed change would result in more than a minimal increase in the likelihood that the turbine driven auxiliary feedwater pump's steam exhaust piping would be susceptible to tornado driven missiles during a station black out, when the turbine driven auxiliary feedwater pump would be required to be operational. In response to this issue, the licensee has demonstrated that the auxiliary feedwater system is capable of safely shutting down the plant in the event of a tornado missile strike on the turbine driven auxiliary feedwater pump's steam exhaust piping and the single failure of an additional auxiliary feedwater pump. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-007625.

The team determined that the licensee's failure to implement the requirements of 10 CFR 50.59 and adequately evaluate changes to determine if prior NRC approval is required was a performance deficiency. Because this performance deficiency had the potential to impact the NRC's ability to perform its regulatory function, the team evaluated the performance deficiency using traditional enforcement. In accordance with Section 2.1.3.E.6 of the NRC Enforcement Manual, the team evaluated this finding using the significance determination process to assess its significance. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, the finding was determined to have 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. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, the team characterized this performance deficiency as a Severity Level IV violation. The team determined that this finding did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.

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)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Compensatory Measures for Seismic Monitoring System Maintenance
The inspectors identified a non-cited violation of 10 CFR 50.54(q)(2) for a failure to meet planning standard 10 CFR 50.47(b)(4) during periodic outages of the seismic monitoring system. Specifically, during planned maintenance on the seismic monitoring system, inspectors determined that the system would not be able to perform its function of alerting control room staff of an entry condition into the emergency action levels for a seismic event, and the specified compensatory measures were not adequate. The licensee implemented correction actions to establish viable compensatory measures for periods when the seismic monitoring system is unavailable. The licensee entered these issues into corrective action program as Condition Report CR-2016-000091.

The licensee's failure to maintain the effectiveness of their emergency plan was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the ERO Performance attribute of the Emergency Preparedness cornerstone and impacted the cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," the inspector determined that the violation is of very low safety significance (Green) because the finding represented a failure to comply with planning standard (b)(4), and, using table 5.4-1, was screened as a Green finding because an emergency action level initiating condition was rendered ineffective such that an Alert would be declared in a degraded manner for a seismic event, but no Site Area Emergency or General Emergency initiating conditions were affected. The violation was entered into the licensee's corrective action program as CR-2016-000091. The

inspectors determined that this finding has a problem identification and resolution cross-cutting aspect associated with resolution, because the licensee failed to take appropriate corrective action after they recognized the inadequacy of their compensatory measures [P.3].
Inspection Report# : 2015004 *(pdf)*

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

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Barricade High Radiation Areas
The inspector identified a non-cited violation (NCV) of Technical Specification 5.7.1.a, with two examples, associated with not barricading High Radiation Areas (HRAs) with dose rates not exceeding 1.0 rem/hour at 30 centimeters from the radiation source. Specifically, access to the HRA containment trashracks and access to the HRA reactor cavity before flood up were not barricaded to prevent entry. The licensee took immediate corrective action to barricade the associated HRAs to restrict access and entered this issue into the corrective action program as CR-2015-009095 and CR-2015-009303.

The failure to barricade high radiation areas in accordance with TS 5.7.1.a was a performance deficiency. The inspector determined that the performance deficiency was more than minor, and therefore a finding, because it impacted the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected

the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Specifically, not barricading HRAs could lead to inadvertent worker entry into high dose rate areas without knowledge of the radiological conditions. The finding was assessed using IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," dated August 19, 2008, and was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. The finding was associated with a cross-cutting aspect of Resolution in Problem Identification and Resolution area. Specifically, the organization's corrective actions to address HRA issues raised by Nuclear Oversight, the NRC and independent assessments in a timely manner commensurate with their safety significance have not been effective [P.3].
Inspection Report# : 2015004 *(pdf)*

Public Radiation Safety

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 : July 11, 2016

Comanche Peak 1
2Q/2016 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Incorrect Visual Resolution Requirements in Augmented Dissimilar Metal Weld Visual Examination Procedures
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," because the licensee failed to assure that visual examination activities for the reactor vessel dissimilar metal nozzle welds and bottom-mounted instrumentation nozzles were accomplished in accordance with the visual acuity requirements of ASME Code Case N-722-1. In response to the issue, for Unit 2, the licensee scheduled reexamination of the welds prior to the end of the outage, and, for Unit 1, performed a reasonable degradation evaluation to determine that reexamination of the welds could be delayed to the next outage. This finding was entered into the corrective action program as Condition Report 2015-009586.

The inspectors determined that the failure to assure visual examination activities were accomplished in accordance with the visual acuity requirements of ASME Code Case N-722-1 was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, routinely performing examinations with incorrect visual acuity requirements of N-722-1 has the potential to lead to missed opportunities to identify and correct relevant indications in reactor coolant system pressure boundaries. In accordance with Inspection Manual Chapter MC 0609, Attachment 4, "Significance Determination Process Initial Characterization," the inspectors determined that this finding affected the Initiating Events cornerstone as a primary system LOCA initiator contributor. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, Exhibit 1, "Initiating Events Screening Questions," the finding screened as having very low safety significance (Green) because after a reasonable assessment of degradation, the finding did not result in exceeding the RCS leak rate for a small LOCA and did not affect other systems used to mitigate a LOCA. The finding does not have a crosscutting aspect because the most significant contributor is not reflective of current licensee performance.
Inspection Report# : 2015004 *(pdf)*

Significance: G Sep 30, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Take Appropriate Maintenance Rule Corrective Actions for the Instrument Air System
The inspectors identified a non-cited violation of 10 CFR Part 50.65(a)(1) for the failure to take appropriate corrective actions for a system that did not meet established goals. Specifically, the Unit 1 instrument air system had been in maintenance rule (a)(1) status since 2011 due to dryer component failures. In 2014, the instrument air system experienced additional failures that resulted in water accumulating in air operated valve actuators on Unit 1. The water intrusion resulted in abnormal operation of the air operated valves in the Unit 1 main feedwater system. These failures were determined to be due to inadequate maintenance on the instrument air dryers unrelated to the 2011 failures. However, the licensee failed to revise their corrective actions to address the causes of the water intrusion. The licensee

entered these issues into corrective action program as Condition Report CR-2015-009077.

The licensee's failure to take appropriate corrective actions for a system that did not meet established goals was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Initiating Events cornerstone and 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. Specifically, the failure to take appropriate corrective actions adversely affected the reliability of a system scoped in the plant's maintenance rule program. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and 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 affected a support system initiator but did not involve the loss of a support system that contributed to the likelihood of an initiating event and affected mitigation equipment. The finding has a problem identification and resolution cross-cutting aspect associated with evaluation, in that, the licensee failed to thoroughly evaluate issues to ensure that resolutions address causes. Specifically, the licensee performed an inadequate cause evaluation and failed to identify the cause of the water intrusion [P.2].
Inspection Report# : 2015003 *(pdf)*

Significance: G Sep 30, 2015
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Maintenance Procedure Results in Power Reduction
The inspectors reviewed a self-revealing finding associated with an inadequate procedure which resulted in a unit down power. Specifically, the procedure used for over speed testing of the main feedwater pumps did not provide adequate guidance for operation of the test push button which resulted in a trip of main feedwater pump 1A and subsequent unit power reduction. The licensee entered this issue into the corrective action program as Condition Report CR-2015-005195, and took actions to increase the maintenance frequency on the mechanical trip device, and to reduce power when performing mechanical over speed testing in the future.

The failure to provide adequate procedures for main feedwater pump over speed testing was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the procedural quality attribute of the Initiating Events Cornerstone, and directly affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations, and is therefore a finding. 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 the loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition. The inspectors determined that this finding does not have a cross-cutting aspect because the most significant contributor of this finding would have occurred more than three years ago, in 2001, and is not reflective of current licensee performance.
Inspection Report# : 2015003 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2015
Identified By: NRC

Item Type: NCV Non-Cited Violation
Failure to Take Appropriate Maintenance Rule Corrective Actions for the 6.9 kV System
The inspectors identified a non-cited violation of 10 CFR Part 50.65(a)(1), for the failure to establish goals that provide reasonable assurance that the 6.9 kV electrical distribution system is capable of fulfilling its intended functions. Specifically, the 6.9 kV electrical distribution system had been in maintenance rule (a)(1) status since 2009 due to the failure of breakers to close on demand. Subsequently, in 2013 and 2015 there were additional breaker failures, which exceeded the established performance criteria, and were due to causes not previously evaluated. These additional failures were determined to be due to inadequate maintenance, but the licensee did not re-evaluate the established goals and revise the corrective actions to address these additional failures. The licensee implemented corrective actions to re-evaluate the goals and corrective actions for the 6.9 kV AC system. The licensee entered this issue into the corrective action program as Condition Report CR-2015-009077.

The licensee's failure to evaluate existing goals and corrective actions for a system that did not meet established performance goals was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to take appropriate corrective actions adversely affected the reliability of a system scoped in the plant's maintenance rule program. 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 finding has a human performance cross-cutting aspect associated with procedure adherence, in that, the licensee failed to follow maintenance rule implementing procedures [H.8].
Inspection Report# : 2015004 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Identify Conditions Adverse to Quality
The inspectors identified two examples of a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to identify conditions adverse to quality. Specifically, in two separate instances involving extent of condition reviews for grease on 6.9 kV breaker stabs and degraded piping in the Unit 1 service water system, the licensee failed to identify conditions adverse to quality that were reasonably within their ability to identify. As a result, the licensee failed to: (1) identify 24 additional breakers that were in a degraded condition due to grease on secondary stabs, and (2) identify a section of service water piping that was below the ASME minimum wall thickness. The licensee implemented immediate corrective actions by entering the issues into the corrective action program for resolution and performed an operability determination for the identified degraded conditions. The licensee entered these issues into the corrective action program as Condition Reports CR-2015-009992 and CR-2015-010120.

The licensee's failure to identify conditions adverse to quality for quality related systems was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to identify degraded conditions could affect the reliability or availability of

multiple safety related systems. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and 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 is a deficiency affecting the design or qualification of a mitigating SSC, but the SSC maintained its operability. The finding has a problem identification and resolution cross-cutting aspect associated with evaluation, in that, the licensee failed to thoroughly evaluate issues to ensure that resolutions address extent of conditions. Specifically, the licensee failed to adequately consider the extent of the degraded conditions on similar safety related components [P.2].
Inspection Report# : 2015004 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: FIN Finding
Failure to Follow Procedure When Disabling a Hazard Barrier
The inspectors identified a finding associated with the licensee's failure to follow procedural requirements for disabling a hazard barrier. Specifically, Station Procedure STA 696, "Hazard Barrier Controls," Revision 2, requires that appropriate temporary barriers be prescribed when a hazard barrier is impaired. However, in support of an auxiliary, safeguards and fuel building negative pressure test, the licensee failed to follow Procedure STA 696 and incorrectly credited alternate doors to protect safety-related equipment from the effects of a high-energy line break when disabling the primary hazard barrier. The licensee implemented corrective actions to correctly assess the activity and implemented appropriate risk management actions. The licensee entered the finding into corrective action program as Condition Report CR-2015-005583.

The licensee's failure to follow station procedures when crediting temporary hazard barriers was a performance deficiency. The 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 cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, opening the high energy line break door without an appropriate temporary barrier in place removed a credited barrier for safety-related electrical equipment. 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 would have occurred more than three years ago, and is not reflective of current licensee performance.
Inspection Report# : 2015004 *(pdf)*

Significance: G Nov 13, 2015
Identified By: NRC
Item Type: VIO Violation
Failure to Evaluate the Lack of Missile Protection on the Turbine Driven Auxiliary Feedwater Pumps' Steam Exhaust Piping
Green. The team identified a cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to evaluate the lack of missile protection on the turbine driven auxiliary feedwater pumps' steam

exhaust piping. Specifically, since June 13, 2012, the licensee failed to verify the adequacy of design of the turbine driven auxiliary feedwater pumps' steam exhaust piping to withstand impact from a tornado driven missile hazard, or to evaluate for exemption from missile protection requirements using an approved methodology. This issue does not represent an immediate safety concern because the licensee performed an operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007869.

The licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5a)

Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Properly Assess and Document the Basis for Operability associated with the Turbine Driven Auxiliary Feedwater Pumps' Steam Exhaust Piping not being Evaluated for Tornado Generated Missil
Green. The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," associated the licensee's failure to perform adequate operability assessments when a degraded or nonconforming condition was identified associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts. Specifically, operators used probabilistic assumptions and failed to adequately assess and document the basis for operability when a degraded or nonconforming condition was identified associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts. This issue does not represent an immediate safety concern because the licensee performed a subsequent operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007919.

The licensee's failure to properly assess and document the basis for operability when a degraded or nonconforming condition associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts was identified, was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5b)

Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Procedure for Surveillance on Safety-Related Service Water Systems
Green. The team identified a non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," for an inadequate procedure for performing surveillances on the station service water (SSW) systems in units 1 and 2. Specifically, Procedures OPT-207 A and B, "Service Water System," were modified in September 2010 so that failure of any SSW vacuum breaker to OPEN was considered a degraded condition and not an inoperable condition of the associated SSW System train. However, per DBD-ME-233, "Station Service Water," Revision 33, "Active Valves," vacuum breakers are required by ASME [Code Section] III on the inlet and outlet piping to the diesel generator jacket water coolers to mitigate the effects of water hammer due to water column separation and subsequent rejoining following a pump trip. This issue does not represent an immediate safety concern because the licensee confirmed that all of the vacuum breakers in service had passed their most recent surveillance test. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-010800.

The finding is more than minor because it is associated with the procedure quality attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee did not ensure the guidance incorporated into quality related procedures was accurate and consistent with the design basis analysis for the systems and this conflict resulted in inadequate operability determinations associated with the SSW System. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. This finding has a human performance cross cutting aspect associated with design margins because the licensee failed to operate and maintain the SSW system equipment within design margins. Rather than ensure that margins are carefully guarded and changed only through a systematic and rigorous process, the licensee failed to re-evaluate SSW system operability with failed vacuum breaker valves even when additional test information indicated previous assumptions were incorrect [H.6]. (Section 4OA2.5c)
Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation

Failure to Maintain Adequate Controls for Design Calculations
Green. The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," with two examples 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: (1) The licensee instituted an engineering change package to modify the design and setpoints for the station service water (SSW) system vacuum breaker valves (CP1/2-SWVAVB-01/02/03/04) and did not consider the allowable tolerance for the setpoint for all design basis events and operating conditions. The licensee adequately addressed this issue by reperforming the calculation incorporating the setpoint allowable tolerance. (2) The licensee failed to account for system design leakage in design calculation DBD-CS-096, for the safe shutdown impoundment minimum level. The licensee evaluated the water loss from the impoundment due to evaporation, but failed to account for losses due to system design leakage. The licensee adequately addressed this issue by applying the design system leak rate for a 30-day mission time to the available water in the safe shutdown impoundment.

The licensee's failure to evaluate properly the effects of modifying the setpoint including allowable tolerances for all modes of operation and all sources of water loss from the safe shutdown impoundment was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the configuration control attribute of the Mitigating Systems Cornerstone, and 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, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated June 19, 2012, the team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. 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. (Section 4OA2.5d)
Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Adequately Evaluate Operability for a Degraded Condition
The inspectors identified seven examples of a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," associated with the licensee's failure to perform adequate operability assessments for a degraded or nonconforming condition. Specifically, when vacuum breakers installed in the service water system failed to actuate during surveillance testing, the licensee completed an operability evaluation that relied on judgement, and was contrary to the station design analysis. In particular, the licensee concluded that the vacuum breakers were not required to support operability of the service water system. Following questions from inspectors, the licensee determined that this judgement was not correct and performed a new evaluation to establish operational parameters necessary to ensure operability of the service water system with a failed vacuum breaker. The licensee entered this issue into corrective action program as Condition Report CR-2015-008334.

The failure to properly assess and document the basis for operability for a degraded or nonconforming condition was a performance deficiency. The 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 cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, service water vacuum breakers failing to open resulted in a condition where structures, systems, and components necessary to mitigate the effects of a column separation event may not

have functioned as required. 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 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 is not indicative of current licensee performance.
Inspection Report# : 2015008 *(pdf)*
Inspection Report# : 2016001 *(pdf)*

Significance: G Aug 03, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Inverter Fault Interrupting Capability During Design Basis Loss of Offsite Power and Seismic Conditions
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "Measures shall be established to assure that applicable regulatory requirements and the design basis, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. The design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program." Specifically, prior to June 18, 2015, the licensee failed to check the adequacy of the design by performing an analysis or test that demonstrated that the Class 1E inverters would continue to operate reliably when subjected to the effects of electrical faults that could be postulated to occur at non-Class loads, due to a lack of seismic qualification of the loads, during and after a design basis loss-of-offsite power and seismic event. In response to this issue, the licensee performed an analysis of the condition and an operability determination, and concluded, upon their review of all non-1E loads connected to 1E inverters, that the load protective devices would actuate in time to prevent a loss of function to the 1E loads. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-005530.

The team determined that the failure to evaluate the fault clearing capability of the Class 1E inverters was a performance deficiency. This finding 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, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to evaluate the fault clearing capability of the inverter during design basis loss of offsite power and seismic conditions which resulted in a reasonable doubt on the operability of the system. 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 result in the 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 did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2015007 *(pdf)*

Significance: G Aug 03, 2015

Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Validate Inverter Ouput Demand Factor and to use the Correct Value of Inverter Efficiency when Determining Inverter Input D-C Power Requirements.
The team identified a Green, non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," which states, in part, "Measures shall be established to assure that applicable regulatory requirements and the design basis, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions." Specifically, prior to June 30, 2015, the licensee did not correctly evaluate the inverter output loading by assuming an incorrectly low demand factor, and also did not correctly identify the inverter efficiency when determining the inverter input d-c power required from the Class 1E station battery. In response to this issue, the licensee performed an operability evaluation and reevaluated the battery inverter loads. The corrected inverter loads were compared with the inverter load performance test data. Based on Design Engineering bounding calculations, all of the safety-related battery inverters remained operable and capable of meeting the four hour mission time. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-005805.

The team determined that the failure to correctly evaluate the inverter input d-c power requirement was a performance deficiency. 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 of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee failed to correctly evaluate the inverter input d c power requirements that resulted in a condition where there was reasonable doubt on the operability of the system. 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 result in the 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 did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.
Inspection Report# : 2015007 *(pdf)*

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 Aug 03, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Changes to Ensure They Did Not Require Prior NRC Approval
The team identified a Severity Level IV, non-cited violation of 10 CFR 50.59, "Changes, Test, and Experiments," which states in part, "Section (c)(1), that a licensee may make changes in the facility as described in the Updated Safety Analysis Report without obtaining a license amendment pursuant to 10 CFR 50.90 only if: (i) a change to the technical specifications incorporated in the license is not required, and (ii) the change, test, or experiment does not meet any of the criteria in paragraph (c)(2). Section(c)(2), states in part, "A licensee shall obtain a license amendment pursuant to Section 50.90 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would: (ii) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the final safety analysis report." Specifically, on March 12, 2013, the licensee performed a 10 CFR 50.59 evaluation for the unprotected turbine driven auxiliary feedwater pump exhaust stack, and during the Applicability Determination phase, determined that exempting the exhaust stack from being protected was acceptable without NRC approval. The licensee failed to recognize that the proposed change would result in more than a minimal increase in the likelihood that the turbine driven auxiliary feedwater pump's steam exhaust piping would be susceptible to tornado driven missiles during a station black out, when the turbine driven auxiliary feedwater pump would be required to be operational. In response to this issue, the licensee has demonstrated that the auxiliary feedwater system is capable of safely shutting down the plant in the event of a tornado missile strike on the turbine driven auxiliary feedwater pump's steam exhaust piping and the single failure of an additional auxiliary feedwater pump. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-007625.

The team determined that the licensee's failure to implement the requirements of 10 CFR 50.59 and adequately evaluate changes to determine if prior NRC approval is required was a performance deficiency. Because this performance deficiency had the potential to impact the NRC's ability to perform its regulatory function, the team evaluated the performance deficiency using traditional enforcement. In accordance with Section 2.1.3.E.6 of the NRC Enforcement Manual, the team evaluated this finding using the significance determination process to assess its significance. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, the finding was determined to have 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. In accordance with Section 6.1.d.2 of the NRC Enforcement Policy, the team characterized this performance deficiency as a Severity Level IV violation. The team determined that this finding did not have a cross-cutting aspect because the most significant contributor did not reflect current licensee performance.

Inspection Report# : 2015007 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Compensatory Measures for Seismic Monitoring System Maintenance
The inspectors identified a non-cited violation of 10 CFR 50.54(q)(2) for a failure to meet planning standard 10 CFR 50.47(b)(4) during periodic outages of the seismic monitoring system. Specifically, during planned maintenance on the seismic monitoring system, inspectors determined that the system would not be able to perform its function of alerting control room staff of an entry condition into the emergency action levels for a seismic event, and the specified compensatory measures were not adequate. The licensee implemented correction actions to establish viable compensatory measures for periods when the seismic monitoring system is unavailable. The licensee entered these issues into corrective action program as Condition Report CR-2016-000091.

The licensee's failure to maintain the effectiveness of their emergency plan was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the ERO Performance attribute of the Emergency Preparedness cornerstone and impacted the cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," the inspector determined that the violation is of very low safety significance (Green) because the finding represented a failure to comply with planning standard (b)(4), and, using table 5.4-1, was screened as a Green finding because an emergency action level initiating condition was rendered ineffective such that an Alert would be declared in a degraded manner for a seismic event, but no Site Area Emergency or General Emergency initiating conditions were affected. The violation was entered into the licensee's corrective action program as CR-2016-000091. The inspectors determined that this finding has a problem identification and resolution cross-cutting aspect associated with resolution, because the licensee failed to take appropriate corrective action after they recognized the inadequacy of their compensatory measures [P.3].
Inspection Report# : 2015004 *(pdf)*

Occupational Radiation Safety

Significance: G Jun 30, 2016
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Determine Dose Rates Prior to Allowing Entry into a High Radiation Area
The inspectors reviewed a self-revealed non-cited violation of Technical Specification 5.7.1.e associated with the licensee allowing a worker access into the 2-077-B penetration valve room, a high radiation area, without an adequate knowledge of the radiological conditions. Specifically, the licensee briefed the worker on the conditions with outdated radiation survey information even though the 2-077-B penetration valve room was subject to changing radiological conditions. As a result, an individual entered areas with general area dose rates of 210 mrem per hour rather than the briefed dose rates of less than 50 mrem per hour. This issue was entered into the licensee's corrective action program as Condition Report CR-2015-010211. Corrective actions included performing follow-up radiation surveys and implementing improvements to the high radiation area access control program.

The inspectors determined that allowing a worker access into a high radiation without an adequate knowledge of the radiological conditions was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the program and process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, entry into a high radiation area without adequate knowledge of the radiological conditions placed the individual at risk for unnecessary exposure. The finding was assessed using Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," issued August 19, 2008, and was determined to be of very low safety significance (Green) because the performance deficiency was not an ALARA planning issue, there was not an overexposure nor substantial potential for an overexposure, and the licensee's ability to assess dose was not compromised. The finding has a human performance cross-cutting aspect associated with work management, because the organization failed to implement a process of planning, controlling, and executing work activities such that nuclear safety was the overriding priority [H.5].
Inspection Report# : 2016002 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Barricade High Radiation Areas
The inspector identified a non-cited violation (NCV) of Technical Specification 5.7.1.a, with two examples, associated with not barricading High Radiation Areas (HRAs) with dose rates not exceeding 1.0 rem/hour at 30 centimeters from the radiation source. Specifically, access to the HRA containment trashracks and access to the HRA reactor cavity before flood up were not barricaded to prevent entry. The licensee took immediate corrective action to barricade the associated HRAs to restrict access and entered this issue into the corrective action program as CR-2015-009095 and CR-2015-009303.

The failure to barricade high radiation areas in accordance with TS 5.7.1.a was a performance deficiency. The inspector determined that the performance deficiency was more than minor, and therefore a finding, because it impacted the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Specifically, not barricading HRAs could lead to inadvertent worker entry into high dose rate areas without knowledge of the radiological conditions. The finding was assessed using IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," dated August 19, 2008, and was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. The finding was associated with a cross-cutting aspect of Resolution in Problem Identification and Resolution area. Specifically, the organization's corrective actions to address HRA issues

raised by Nuclear Oversight, the NRC and independent assessments in a timely manner commensurate with their safety significance have not been effective [P.3].
Inspection Report# : 2015004 *(pdf)*

Public Radiation Safety

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

Last modified : August 29, 2016

Comanche Peak 1
3Q/2016 Plant Inspection Findings

Initiating Events

Significance: G Sep 15, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate the Suitability of Teflon Gaskets in a Safety-Related Pressure Boundary
The inspectors identified a Green, non-cited violation of 10 CFR 50 Appendix B, Criterion III, "Design Control," which requires, in part, that measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety related functions of the structures, systems and components. Specifically, from November 25, 2014, to September 15, 2016, the licensee failed to appropriately evaluate the suitability of polytetrafluoroethylene (PTFE) gaskets in pressure indication diaphragm assemblies that form the pressure boundary of the chemical and volume control system. In response to this issue, the licensee immediately isolated all affected diaphragm seal assemblies from the safety-related pressure boundary of the chemical and volume control system. This condition was entered into the corrective action program as Condition Reports CR-2016-008180 and CR-2016-008215.

The inspectors determined that the failure to meet 10 CFR 50, Appendix B, Criterion III, "Design Control" was performance deficiency. The performance deficiency was more than minor because the finding is associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affects the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, in the event of an accident with 1% core damage, the high radiation environment of the centrifugal charging pump rooms would cause degradation to Teflon gaskets in pressure indication diaphragm assemblies, which would potentially cause an intersystem loss-of-coolant accident through the safety-related chemical and volume control system pressure boundary. Using the Manual Chapter 0609, Appendix A, Significance Determination Process for Findings At-power, Exhibit 1, "Initiating Events Screening Questions," the finding screens to a detailed risk evaluation because, after a reasonable assessment of degradation, the finding could have an effect on systems used to mitigate a loss-of-cooling accident resulting in a total loss of their function (e.g. intersystem loss-of-coolant accident). A senior reactor analyst performed a qualitative detailed risk evaluation. The analyst determined that the finding was of very low safety significance (Green). The inspectors determined that the most significant contributor to this finding had an Evaluation cross-cutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, in November 2014, the licensee's engineering department failed to properly evaluate the effects of radiation on the PTFE gasket, as documented in Condition Report CR 2014 012353. [P.2] (Section 1R17.2.b)

Inspection Report# : 2016007 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Incorrect Visual Resolution Requirements in Augmented Dissimilar Metal Weld Visual Examination Procedures

The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," because the licensee failed to assure that visual examination activities for the reactor vessel dissimilar metal nozzle welds and bottom-mounted instrumentation nozzles were accomplished in accordance with the visual acuity requirements of ASME Code Case N-722-1. In response to the issue, for Unit 2, the licensee scheduled reexamination of the welds prior to the end of the outage, and, for Unit 1, performed a reasonable degradation evaluation to determine that reexamination of the welds could be delayed to the next outage. This finding was entered into the corrective action program as Condition Report 2015-009586.

The inspectors determined that the failure to assure visual examination activities were accomplished in accordance with the visual acuity requirements of ASME Code Case N-722-1 was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because if left uncorrected, the performance deficiency would have the potential to lead to a more significant safety concern. Specifically, routinely performing examinations with incorrect visual acuity requirements of N-722-1 has the potential to lead to missed opportunities to identify and correct relevant indications in reactor coolant system pressure boundaries. In accordance with Inspection Manual Chapter MC 0609, Attachment 4, "Significance Determination Process Initial Characterization," the inspectors determined that this finding affected the Initiating Events cornerstone as a primary system LOCA initiator contributor. In accordance with Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated June 19, 2012, Exhibit 1, "Initiating Events Screening Questions," the finding screened as having very low safety significance (Green) because after a reasonable assessment of degradation, the finding did not result in exceeding the RCS leak rate for a small LOCA and did not affect other systems used to mitigate a LOCA. The finding does not have a crosscutting aspect because the most significant contributor is not reflective of current licensee performance.
Inspection Report# : 2015004 *(pdf)*

Mitigating Systems

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Take Appropriate Maintenance Rule Corrective Actions for the 6.9 kV System
The inspectors identified a non-cited violation of 10 CFR Part 50.65(a)(1), for the failure to establish goals that provide reasonable assurance that the 6.9 kV electrical distribution system is capable of fulfilling its intended functions. Specifically, the 6.9 kV electrical distribution system had been in maintenance rule (a)(1) status since 2009 due to the failure of breakers to close on demand. Subsequently, in 2013 and 2015 there were additional breaker failures, which exceeded the established performance criteria, and were due to causes not previously evaluated. These additional failures were determined to be due to inadequate maintenance, but the licensee did not re-evaluate the established goals and revise the corrective actions to address these additional failures. The licensee implemented corrective actions to re-evaluate the goals and corrective actions for the 6.9 kV AC system. The licensee entered this issue into the corrective action program as Condition Report CR-2015-009077.

The licensee’s failure to evaluate existing goals and corrective actions for a system that did not meet established performance goals was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to take appropriate corrective actions adversely affected the reliability of a system scoped in the plant's maintenance rule program. 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 finding has a human performance cross-cutting aspect associated with procedure adherence, in that, the licensee failed to follow maintenance rule implementing procedures [H.8].
Inspection Report# : 2015004 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Identify Conditions Adverse to Quality
The inspectors identified two examples of a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to identify conditions adverse to quality. Specifically, in two separate instances involving extent of condition reviews for grease on 6.9 kV breaker stabs and degraded piping in the Unit 1 service water system, the licensee failed to identify conditions adverse to quality that were reasonably within their ability to identify. As a result, the licensee failed to: (1) identify 24 additional breakers that were in a degraded condition due to grease on secondary stabs, and (2) identify a section of service water piping that was below the ASME minimum wall thickness. The licensee implemented immediate corrective actions by entering the issues into the corrective action program for resolution and performed an operability determination for the identified degraded conditions. The licensee entered these issues into the corrective action program as Condition Reports CR-2015-009992 and CR-2015-010120.

The licensee's failure to identify conditions adverse to quality for quality related systems was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to identify degraded conditions could affect the reliability or availability of multiple safety related systems. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and 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 is a deficiency affecting the design or qualification of a mitigating SSC, but the SSC maintained its operability. The finding has a problem identification and resolution cross-cutting aspect associated with evaluation, in that, the licensee failed to thoroughly evaluate issues to ensure that resolutions address extent of conditions. Specifically, the licensee failed to adequately consider the extent of the degraded conditions on similar safety related components [P.2].
Inspection Report# : 2015004 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: FIN Finding
Failure to Follow Procedure When Disabling a Hazard Barrier
The inspectors identified a finding associated with the licensee's failure to follow procedural requirements for disabling a hazard barrier. Specifically, Station Procedure STA 696, "Hazard Barrier Controls," Revision 2, requires that appropriate temporary barriers be prescribed when a hazard barrier is impaired. However, in support of an auxiliary, safeguards and fuel building negative pressure test, the licensee failed to follow Procedure STA 696 and

incorrectly credited alternate doors to protect safety-related equipment from the effects of a high-energy line break when disabling the primary hazard barrier. The licensee implemented corrective actions to correctly assess the activity and implemented appropriate risk management actions. The licensee entered the finding into corrective action program as Condition Report CR-2015-005583.

The licensee's failure to follow station procedures when crediting temporary hazard barriers was a performance deficiency. The 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 cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, opening the high energy line break door without an appropriate temporary barrier in place removed a credited barrier for safety-related electrical equipment. 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 would have occurred more than three years ago, and is not reflective of current licensee performance.
Inspection Report# : 2015004 *(pdf)*

Significance:  Nov 13, 2015
Identified By: NRC
Item Type: VIO Violation
Failure to Evaluate the Lack of Missile Protection on the Turbine Driven Auxiliary Feedwater Pumps' Steam Exhaust Piping
Green. The team identified a cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to evaluate the lack of missile protection on the turbine driven auxiliary feedwater pumps' steam exhaust piping. Specifically, since June 13, 2012, the licensee failed to verify the adequacy of design of the turbine driven auxiliary feedwater pumps' steam exhaust piping to withstand impact from a tornado driven missile hazard, or to evaluate for exemption from missile protection requirements using an approved methodology. This issue does not represent an immediate safety concern because the licensee performed an operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007869.

The licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains

of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5a)

Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Properly Assess and Document the Basis for Operability associated with the Turbine Driven Auxiliary Feedwater Pumps' Steam Exhaust Piping not being Evaluated for Tornado Generated Missil
Green. The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," associated the licensee's failure to perform adequate operability assessments when a degraded or nonconforming condition was identified associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts. Specifically, operators used probabilistic assumptions and failed to adequately assess and document the basis for operability when a degraded or nonconforming condition was identified associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts. This issue does not represent an immediate safety concern because the licensee performed a subsequent operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007919.

The licensee's failure to properly assess and document the basis for operability when a degraded or nonconforming condition associated with the turbine driven auxiliary feedwater pumps' steam exhaust piping not being evaluated for tornado generated missile impacts was identified, was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5b)

Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Procedure for Surveillance on Safety-Related Service Water Systems
Green. The team identified a non-cited violation of Technical Specification (TS) 5.4.1, "Procedures," for an inadequate procedure for performing surveillances on the station service water (SSW) systems in units 1 and 2.

Specifically, Procedures OPT-207 A and B, “Service Water System,” were modified in September 2010 so that failure of any SSW vacuum breaker to OPEN was considered a degraded condition and not an inoperable condition of the associated SSW System train. However, per DBD-ME-233, “Station Service Water,” Revision 33, “Active Valves,” vacuum breakers are required by ASME [Code Section] III on the inlet and outlet piping to the diesel generator jacket water coolers to mitigate the effects of water hammer due to water column separation and subsequent rejoining following a pump trip. This issue does not represent an immediate safety concern because the licensee confirmed that all of the vacuum breakers in service had passed their most recent surveillance test. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-010800.

The finding is more than minor because it is associated with the procedure quality attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee did not ensure the guidance incorporated into quality related procedures was accurate and consistent with the design basis analysis for the systems and this conflict resulted in inadequate operability determinations associated with the SSW System. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee’s maintenance rule program for greater than 24 hours. This finding has a human performance cross cutting aspect associated with design margins because the licensee failed to operate and maintain the SSW system equipment within design margins. Rather than ensure that margins are carefully guarded and changed only through a systematic and rigorous process, the licensee failed to re-evaluate SSW system operability with failed vacuum breaker valves even when additional test information indicated previous assumptions were incorrect [H.6]. (Section 4OA2.5c)
Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Maintain Adequate Controls for Design Calculations
Green. The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” with two examples 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: (1) The licensee instituted an engineering change package to modify the design and setpoints for the station service water (SSW) system vacuum breaker valves (CP1/2-SWVAVB-01/02/03/04) and did not consider the allowable tolerance for the setpoint for all design basis events and operating conditions. The licensee adequately addressed this issue by reperforming the calculation incorporating the setpoint allowable tolerance. (2) The licensee failed to account for system design leakage in design calculation DBD-CS-096, for the safe shutdown impoundment minimum level. The licensee evaluated the water loss from the impoundment due to evaporation, but failed to account for losses due to system design leakage. The licensee adequately addressed this issue by applying the design system leak rate for a 30-day mission time to the available water in the safe shutdown impoundment.

The licensee’s failure to evaluate properly the effects of modifying the setpoint including allowable tolerances for all modes of operation and all sources of water loss from the safe shutdown impoundment was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the configuration control attribute of the Mitigating Systems Cornerstone, and 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, Appendix A, “The Significance Determination Process (SDP)

for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated June 19, 2012, the team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. 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. (Section 4OA2.5d)
Inspection Report# : 2015008 *(pdf)*

Significance: G Oct 01, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Adequately Evaluate Operability for a Degraded Condition
The inspectors identified seven examples of a non-cited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," associated with the licensee's failure to perform adequate operability assessments for a degraded or nonconforming condition. Specifically, when vacuum breakers installed in the service water system failed to actuate during surveillance testing, the licensee completed an operability evaluation that relied on judgement, and was contrary to the station design analysis. In particular, the licensee concluded that the vacuum breakers were not required to support operability of the service water system. Following questions from inspectors, the licensee determined that this judgement was not correct and performed a new evaluation to establish operational parameters necessary to ensure operability of the service water system with a failed vacuum breaker. The licensee entered this issue into corrective action program as Condition Report CR-2015-008334.

The failure to properly assess and document the basis for operability for a degraded or nonconforming condition was a performance deficiency. The 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 cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, service water vacuum breakers failing to open resulted in a condition where structures, systems, and components necessary to mitigate the effects of a column separation event may not have functioned as required. 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 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 is not indicative of current licensee performance.
Inspection Report# : 2016001 *(pdf)*
Inspection Report# : 2015008 *(pdf)*

Barrier Integrity

Emergency Preparedness

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Compensatory Measures for Seismic Monitoring System Maintenance
The inspectors identified a non-cited violation of 10 CFR 50.54(q)(2) for a failure to meet planning standard 10 CFR 50.47(b)(4) during periodic outages of the seismic monitoring system. Specifically, during planned maintenance on the seismic monitoring system, inspectors determined that the system would not be able to perform its function of alerting control room staff of an entry condition into the emergency action levels for a seismic event, and the specified compensatory measures were not adequate. The licensee implemented correction actions to establish viable compensatory measures for periods when the seismic monitoring system is unavailable. The licensee entered these issues into corrective action program as Condition Report CR-2016-000091.

The licensee's failure to maintain the effectiveness of their emergency plan was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the ERO Performance attribute of the Emergency Preparedness cornerstone and impacted the cornerstone objective to ensure that the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," and Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," the inspector determined that the violation is of very low safety significance (Green) because the finding represented a failure to comply with planning standard (b)(4), and, using table 5.4-1, was screened as a Green finding because an emergency action level initiating condition was rendered ineffective such that an Alert would be declared in a degraded manner for a seismic event, but no Site Area Emergency or General Emergency initiating conditions were affected. The violation was entered into the licensee's corrective action program as CR-2016-000091. The inspectors determined that this finding has a problem identification and resolution cross-cutting aspect associated with resolution, because the licensee failed to take appropriate corrective action after they recognized the inadequacy of their compensatory measures [P.3].
Inspection Report# : 2015004 *(pdf)*

Occupational Radiation Safety

Significance: G Jun 30, 2016
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Determine Dose Rates Prior to Allowing Entry into a High Radiation Area
The inspectors reviewed a self-revealed non-cited violation of Technical Specification 5.7.1.e associated with the licensee allowing a worker access into the 2-077-B penetration valve room, a high radiation area, without an adequate knowledge of the radiological conditions. Specifically, the licensee briefed the worker on the conditions with outdated radiation survey information even though the 2-077-B penetration valve room was subject to changing radiological conditions. As a result, an individual entered areas with general area dose rates of 210 mrem per hour rather than the briefed dose rates of less than 50 mrem per hour. This issue was entered into the licensee's corrective action program as Condition Report CR-2015-010211. Corrective actions included performing follow-up radiation surveys and implementing improvements to the high radiation area access control program.

The inspectors determined that allowing a worker access into a high radiation without an adequate knowledge of the

radiological conditions was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the program and process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, entry into a high radiation area without adequate knowledge of the radiological conditions placed the individual at risk for unnecessary exposure. The finding was assessed using Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," issued August 19, 2008, and was determined to be of very low safety significance (Green) because the performance deficiency was not an ALARA planning issue, there was not an overexposure nor substantial potential for an overexposure, and the licensee's ability to assess dose was not compromised. The finding has a human performance cross-cutting aspect associated with work management, because the organization failed to implement a process of planning, controlling, and executing work activities such that nuclear safety was the overriding priority [H.5].
Inspection Report# : 2016002 *(pdf)*

Significance: G Dec 31, 2015
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Barricade High Radiation Areas
The inspector identified a non-cited violation (NCV) of Technical Specification 5.7.1.a, with two examples, associated with not barricading High Radiation Areas (HRAs) with dose rates not exceeding 1.0 rem/hour at 30 centimeters from the radiation source. Specifically, access to the HRA containment trashracks and access to the HRA reactor cavity before flood up were not barricaded to prevent entry. The licensee took immediate corrective action to barricade the associated HRAs to restrict access and entered this issue into the corrective action program as CR-2015-009095 and CR-2015-009303.

The failure to barricade high radiation areas in accordance with TS 5.7.1.a was a performance deficiency. The inspector determined that the performance deficiency was more than minor, and therefore a finding, because it impacted the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affected the cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Specifically, not barricading HRAs could lead to inadvertent worker entry into high dose rate areas without knowledge of the radiological conditions. The finding was assessed using IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," dated August 19, 2008, and was determined to be of very low safety significance (Green) because the problem was not an ALARA planning issue; there was no overexposure, nor substantial potential for an overexposure; and the licensee's ability to assess dose was not compromised. The finding was associated with a cross-cutting aspect of Resolution in Problem Identification and Resolution area. Specifically, the organization's corrective actions to address HRA issues raised by Nuclear Oversight, the NRC and independent assessments in a timely manner commensurate with their safety significance have not been effective [P.3].
Inspection Report# : 2015004 *(pdf)*

Public Radiation Safety

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.

Security

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Security

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Miscellaneous

Significance: N/A Sep 29, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Update FSAR Section 8.3.1.1.11
The inspectors identified a Severity Level IV non-cited violation of 10 CFR50.71(e) which requires, in part, that licensee shall update periodically the final safety analysis report originally submitted as part of the application for the license, to assure that the information included in the report contains the latest information developed. The submittal shall include the effects of all changes to the facility as described in the final safety analysis report, or all safety analyses and evaluation performed by the licensee either in support of approved license amendments or in support of conclusion that changes did not require a license amendment in accordance with 10 CFR 50.59 (c)(2). Specifically, from October 9, 2012 to September 29, 2016, the licensee did not include the effects of changes to the K300 voltage relay setpoint or the safety evaluation in submittals to the Final Safety Analysis Report, Section 8.3.1.1.11, that supported the conclusion that the changes did not require a license amendment. The licensee plans to initiate a Licensing Document Change Request to update the final safety analysis report. This is not an immediate safety concern. The licensee entered this issue into their corrective action program as Condition Report CR-2016-008177.

The licensee's failure to initiate a Licensing Document Change Request, in accordance with procedure STA-116, "Maintenance of CPNPP Licensing Basis Documents, Operating License conditions and Technical Specifications,"

Revision 14, instruction 6.1, to update the Final Safety Analysis Report, Section 8.3.1.1.11, for the setpoint revision of voltage K300 voltage relays was a performance deficiency. This led to a violation of 10 CFR 50.71(e) for failing to update the final safety analysis report. Using NRC Inspection Manual Chapter 0612, Appendix B, “Issue Screening,” dated September 7, 2012, this was determined to be a minor performance deficiency. This violation was evaluated using the traditional enforcement process because it impacted the NRC’s ability to perform its regulatory oversight function. The reactor oversight process’s significance determination process does not consider violations that impacts the NRC’s regulatory oversight function. This violation was determined to be a Severity Level IV violation because it was consistent with the example in Paragraph 6.1.d.3 of the NRC Enforcement Policy, dated August 1, 2016. Specifically, the licensee failed to update the final safety analysis report as required by 10 CFR 50.71(e), but the lack of up-to-date information has not resulted in any unacceptable change to the facility or procedures. No cross-cutting aspect was assigned to this violation because there was no reactor oversight process finding associated with the performance deficiency.
(Section 1R17.2.b)

Inspection Report# : 2016007 *(pdf)*

Last modified : December 08, 2016

Comanche Peak 1
4Q/2016 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Manage Risk During Refueling Outages
Green. 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 manage the increase in risk associated with the potential for a loss of decay heat removal during refueling outages. Specifically, the licensee implemented a risk management action that did not reduce the risk, but instead called for placing a safety injection pump in service during periods where this action is prohibited by plant's technical specifications for low temperature over pressure protection. The inspectors determined this was an ineffective risk management action because the use of a safety injection pump during low pressure and temperature conditions would place the plant in an unanalyzed condition, resulting in an increase in risk. As an immediate corrective action, the licensee initiated Condition Report CR-2015-009109 to evaluate appropriate risk management actions. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-009109.

The failure to manage the increase in risk associated with the potential for a loss of decay heat removal during refueling activities is a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the procedure quality attribute of the Initiating Events Cornerstone and 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, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," dated May 19, 2005, Flowchart 1, "Assessment of Risk Deficit," the inspectors determined the need to calculate the risk deficit to determine the significance of this issue. A senior reactor analyst performed a bounding qualitative assessment and determined the incremental core damage probability deficit was less than 1E-6 and the incremental large early release probability deficit was less than 1E-7, based on the availability of additional equipment to mitigate the loss of decay heat removal. In accordance with Flowchart 1 in Appendix K, because incremental core damage probability deficit was less than 1E-6 and incremental large early release probability deficit was less than 1E-7, the finding screened as having very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with bases for decisions, in that, the licensee failed to ensure that operations leadership adequately communicate potential problems with the risk management action to start a safety injection pump when in a mode of applicability for low temperature over pressure protection [H.10].
Inspection Report# : 2016003 *(pdf)*

Significance: G Sep 15, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate the Suitability of Teflon Gaskets in a Safety-Related Pressure Boundary
The inspectors identified a Green, non-cited violation of 10 CFR 50 Appendix B, Criterion III, "Design Control," which requires, in part, that measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety related functions of the

structures, systems and components. Specifically, from November 25, 2014, to September 15, 2016, the licensee failed to appropriately evaluate the suitability of polytetrafluoroethylene (PTFE) gaskets in pressure indication diaphragm assemblies that form the pressure boundary of the chemical and volume control system. In response to this issue, the licensee immediately isolated all affected diaphragm seal assemblies from the safety-related pressure boundary of the chemical and volume control system. This condition was entered into the corrective action program as Condition Reports CR-2016-008180 and CR-2016-008215.

The inspectors determined that the failure to meet 10 CFR 50, Appendix B, Criterion III, “Design Control” was performance deficiency. The performance deficiency was more than minor because the finding is associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affects the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, in the event of an accident with 1% core damage, the high radiation environment of the centrifugal charging pump rooms would cause degradation to Teflon gaskets in pressure indication diaphragm assemblies, which would potentially cause an intersystem loss-of-coolant accident through the safety-related chemical and volume control system pressure boundary. Using the Manual Chapter 0609, Appendix A, Significance Determination Process for Findings At-power, Exhibit 1, “Initiating Events Screening Questions,” the finding screens to a detailed risk evaluation because, after a reasonable assessment of degradation, the finding could have an effect on systems used to mitigate a loss-of-cooling accident resulting in a total loss of their function (e.g. intersystem loss-of-coolant accident). A senior reactor analyst performed a qualitative detailed risk evaluation. The analyst determined that the finding was of very low safety significance (Green). The inspectors determined that the most significant contributor to this finding had an Evaluation cross-cutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, in November 2014, the licensee’s engineering department failed to properly evaluate the effects of radiation on the PTFE gasket, as documented in Condition Report CR 2014 012353. [P.2] (Section 1R17.2.b)

Inspection Report# : 2016007 *(pdf)*

Mitigating Systems

Significance: G Nov 13, 2015
Identified By: NRC
Item Type: VIO Violation
Failure to Evaluate the Lack of Missile Protection on the Turbine Driven Auxiliary Feedwater Pumps’ Steam Exhaust Piping
Green. The team identified a cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control,” for the licensee’s failure to evaluate the lack of missile protection on the turbine driven auxiliary feedwater pumps’ steam exhaust piping. Specifically, since June 13, 2012, the licensee failed to verify the adequacy of design of the turbine driven auxiliary feedwater pumps’ steam exhaust piping to withstand impact from a tornado driven missile hazard, or to evaluate for exemption from missile protection requirements using an approved methodology. This issue does not represent an immediate safety concern because the licensee performed an operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007869.

The licensee’s failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps’ steam exhaust piping was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5a)

Inspection Report# : 2015008 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Jun 30, 2016
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Determine Dose Rates Prior to Allowing Entry into a High Radiation Area
The inspectors reviewed a self-revealed non-cited violation of Technical Specification 5.7.1.e associated with the licensee allowing a worker access into the 2-077-B penetration valve room, a high radiation area, without an adequate knowledge of the radiological conditions. Specifically, the licensee briefed the worker on the conditions with outdated radiation survey information even though the 2-077-B penetration valve room was subject to changing radiological conditions. As a result, an individual entered areas with general area dose rates of 210 mrem per hour rather than the briefed dose rates of less than 50 mrem per hour. This issue was entered into the licensee's corrective action program as Condition Report CR-2015-010211. Corrective actions included performing follow-up radiation surveys and implementing improvements to the high radiation area access control program.

The inspectors determined that allowing a worker access into a high radiation without an adequate knowledge of the radiological conditions was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the program and process attribute of the Occupational Radiation Safety cornerstone and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. Specifically, entry into a high radiation area without adequate knowledge of the radiological conditions placed the individual at risk for unnecessary exposure. The finding was assessed using Inspection Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process,"

issued August 19, 2008, and was determined to be of very low safety significance (Green) because the performance deficiency was not an ALARA planning issue, there was not an overexposure nor substantial potential for an overexposure, and the licensee's ability to assess dose was not compromised. The finding has a human performance cross-cutting aspect associated with work management, because the organization failed to implement a process of planning, controlling, and executing work activities such that nuclear safety was the overriding priority [H.5].
Inspection Report# : 2016002 *(pdf)*

Public Radiation Safety

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.

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 Sep 29, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Update FSAR Section 8.3.1.1.11
The inspectors identified a Severity Level IV non-cited violation of 10 CFR50.71(e) which requires, in part, that licensee shall update periodically the final safety analysis report originally submitted as part of the application for the license, to assure that the information included in the report contains the latest information developed. The submittal shall include the effects of all changes to the facility as described in the final safety analysis report, or all safety analyses and evaluation performed by the licensee either in support of approved license amendments or in support of conclusion that changes did not require a license amendment in accordance with 10 CFR 50.59 (c)(2). Specifically, from October 9, 2012 to September 29, 2016, the licensee did not include the effects of changes to the K300 voltage relay setpoint or the safety evaluation in submittals to the Final Safety Analysis Report, Section 8.3.1.1.11, that

supported the conclusion that the changes did not require a license amendment. The licensee plans to initiate a Licensing Document Change Request to update the final safety analysis report. This is not an immediate safety concern. The licensee entered this issue into their corrective action program as Condition Report CR-2016-008177.

The licensee's failure to initiate a Licensing Document Change Request, in accordance with procedure STA-116, "Maintenance of CPNPP Licensing Basis Documents, Operating License conditions and Technical Specifications," Revision 14, instruction 6.1, to update the Final Safety Analysis Report, Section 8.3.1.1.11, for the setpoint revision of voltage K300 voltage relays was a performance deficiency. This led to a violation of 10 CFR 50.71(e) for failing to update the final safety analysis report. Using NRC Inspection Manual Chapter 0612, Appendix B, "Issue Screening," dated September 7, 2012, this was determined to be a minor performance deficiency. This violation was evaluated using the traditional enforcement process because it impacted the NRC's ability to perform its regulatory oversight function. The reactor oversight process's significance determination process does not consider violations that impacts the NRC's regulatory oversight function. This violation was determined to be a Severity Level IV violation because it was consistent with the example in Paragraph 6.1.d.3 of the NRC Enforcement Policy, dated August 1, 2016. Specifically, the licensee failed to update the final safety analysis report as required by 10 CFR 50.71(e), but the lack of up-to-date information has not resulted in any unacceptable change to the facility or procedures. No cross-cutting aspect was assigned to this violation because there was no reactor oversight process finding associated with the performance deficiency.
(Section 1R17.2.b)

Inspection Report# : 2016007 *(pdf)*

Last modified : February 01, 2017

Comanche Peak 1 – Quarterly Plant Inspection Findings

2Q/2017 – Plant Inspection Findings

On this page:

Initiating Events

Significance: G Sep 30, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Manage Risk During Refueling Outages
Green. 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 manage the increase in risk associated with the potential for a loss of decay heat removal during refueling outages. Specifically, the licensee implemented a risk management action that did not reduce the risk, but instead called for placing a safety injection pump in service during periods where this action is prohibited by plant's technical specifications for low temperature over pressure protection. The inspectors determined this was an ineffective risk management action because the use of a safety injection pump during low pressure and temperature conditions would place the plant in an unanalyzed condition, resulting in an increase in risk. As an immediate corrective action, the licensee initiated Condition Report CR-2015-009109 to evaluate appropriate risk management actions. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-009109.

The failure to manage the increase in risk associated with the potential for a loss of decay heat removal during refueling activities is a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the procedure quality attribute of the Initiating Events Cornerstone and 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, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," dated May 19, 2005, Flowchart 1, "Assessment of Risk Deficit," the inspectors determined the need to calculate the risk deficit to determine the significance of this issue. A senior reactor analyst performed a bounding qualitative assessment and determined the incremental core damage probability deficit was less than 1E-6 and the incremental large early release probability deficit was less than 1E-7, based on the availability of additional equipment to mitigate the loss of decay heat removal.

In accordance with Flowchart 1 in Appendix K, because incremental core damage probability deficit was less than 1E-6 and incremental large early release probability deficit was less than 1E-7, the finding screened as having very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with bases for decisions, in that, the licensee failed to ensure that operations leadership adequately communicate potential problems with the risk management action to start a safety injection pump when in a mode of applicability for low temperature over pressure protection [H.10].
Inspection Report# : 2016003 *(pdf)*

Significance: G Sep 15, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate the Suitability of Teflon Gaskets in a Safety-Related Pressure Boundary
The inspectors identified a Green, non-cited violation of 10 CFR 50 Appendix B, Criterion III, "Design Control," which requires, in part, that measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety related functions of the structures, systems and components. Specifically, from November 25, 2014, to September 15, 2016, the licensee failed to appropriately evaluate the suitability of polytetrafluoroethylene (PTFE) gaskets in pressure indication diaphragm assemblies that form the pressure boundary of the chemical and volume control system. In response to this issue, the licensee immediately isolated all affected diaphragm seal assemblies from the safety-related pressure boundary of the chemical and volume control system. This condition was entered into the corrective action program as Condition Reports CR-2016-008180 and CR-2016-008215.

The inspectors determined that the failure to meet 10 CFR 50, Appendix B, Criterion III, "Design Control" was performance deficiency. The performance deficiency was more than minor because the finding is associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affects the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, in the event of an accident with 1% core damage, the high radiation environment of the centrifugal charging pump rooms would cause degradation to Teflon gaskets in pressure indication diaphragm assemblies, which would potentially cause an intersystem loss-of-coolant accident through the safety-related chemical and volume control system pressure boundary. Using the Manual Chapter 0609, Appendix A, Significance Determination Process for Findings At-power, Exhibit 1, "Initiating Events Screening Questions," the finding screens to a detailed risk evaluation because, after a reasonable assessment of degradation, the finding could have an effect on systems used to mitigate a loss-of-cooling accident resulting in a total loss of their function (e.g. intersystem loss-of-coolant accident). A senior reactor analyst performed a qualitative detailed risk evaluation. The analyst determined that the finding was of very low safety significance (Green). The inspectors determined that the most significant contributor to this finding had an Evaluation cross-cutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, in November 2014, the licensee's engineering department failed to properly evaluate the effects of radiation on the PTFE gasket, as documented in Condition Report CR 2014 012353. [P.2]
(Section 1R17.2.b)

Inspection Report# : 2016007 *(pdf)*

Mitigating Systems

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation

Failure to Maintain B.5.b Equipment in a State of Readiness to Support Mitigation Strategies
The inspectors identified a non-cited violation of 10 CFR 50.54(hh)(2), "Conditions of License," involving the licensee's failure to maintain available equipment needed to implement mitigating strategies to provide makeup to steam generators following loss of large areas of the plant due to explosions or fire. Specifically, the licensee failed to maintain available a portable alternate mitigation equipment pump related to the steam generator makeup strategy. The licensee entered this issue into their corrective action program as Condition Report CR-2016-010832.

The failure to maintain all necessary equipment available to implement mitigating strategies as required by regulations and conditions of the operating license was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control attribute of the Mitigating Systems cornerstone and 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, Appendix L, "B.5.b Significance Determination Process," dated December 24, 2009, the inspectors determined the finding was of very low safety significance (Green) because it resulted in an unrecoverable unavailability of an individual mitigating strategy; but did not result in multiple unavailable mitigating strategies, or loss of all on-site, self-powered, portable pumping capability. The inspectors determined that no cross-cutting aspect was assigned because the performance deficiency was not reflective of present performance.

Inspection Report# : 2017001 *(pdf)*

Significance:  Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Heat Loads on Control Room Air Conditioning System
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to properly evaluate heat loads on the control room air conditioning system. Specifically, the licensee used a non-conservative assumption of the number of persons in the control room envelope when calculating the required capacity of the system. The licensee had only assumed there would be six personnel to be in the technical support center (which is included in the control room envelope) during a design basis event. However, the emergency plan nominally staffed the technical support center with 25 station personnel, and an additional five NRC personnel. The licensee entered this issue into their corrective action program as Condition Report CR-2017-000744.

The failure to evaluate heat loads to determine the required system capacity is a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control 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. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the 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 safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The inspectors determined that no cross-cutting aspect was assigned because the performance deficiency was not reflective of present performance.

Inspection Report# : 2017001 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Use of Non-Design Fouling Factor for Component Cooling Water Heat Exchanger in Station Service Water Tornado Missile Calculation
The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," involving the use of a non-design fouling factor for the component cooling water heat exchanger in a design basis calculation evaluating a tornado missile strike of station service water system piping. The licensee entered this issue into their corrective action program as Issue Report IR-2017-001465.

The team determined that the failure to use the design fouling factor for the component cooling water heat exchanger in the tornado missile analysis of the station service water system discharge piping was a performance deficiency. This 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 of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the use of a non-conservative heat exchanger fouling factor in a design basis accident analysis resulted in a more restrictive temperature limit (i.e., less than the technical specification allowed value) of the safe shutdown impoundment. 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 (1) did not represent a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of non-technical specification equipment; and (4) did not screen as potentially risk-significant due to seismic, flooding, or severe weather. The team determined that this finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance. Specifically, the licensee performed the calculation in 1988, therefore, the performance deficiency occurred outside of the nominal three-year period for "present performance."

Inspection Report# : 2017001 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Promptly Correct a Condition Adverse to Quality
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," associated with the licensee's failure to take timely corrective actions for a previously identified condition adverse to quality. Specifically, the licensee failed to verify the adequacy of the design of the unit 1 120 VAC vital bus inverter 1PC1 with respect to use of alternate AC power to the inverter. The 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. This issue does not represent an immediate safety concern because, following the inspectors identification, the licensee performed an operability evaluation which established a reasonable expectation of operability. The licensee entered this issue into their corrective action program as CR-2017-001296.

The licensee's failure to take timely and adequate corrective actions to correct a condition adverse to quality was a performance deficiency. The performance deficiency is more than minor, and therefore a finding, because it is 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 failure to correct the low voltage susceptibility resulted in delayed restoration of a bus following the failure of the swing inverter to sync. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the 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 safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that resources were adequate to support nuclear safety [H.1].

Inspection Report# : 2017001 *(pdf)*

Significance: G Dec 31, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Scope the Containment Ventilation System in the Maintenance Rule Program
The inspectors identified a non-cited violation of 10 CFR 50.65(b)(2) associated with the licensee's failure to scope the containment ventilation system into the maintenance rule program. Specifically, the containment ventilation system, a non-safety related system that is relied upon to mitigate accidents or transients and used in emergency operating procedures, was not included in the scope of the monitoring program specified in 10 CFR 50.65(a)(1). In response to this issue the licensee scoped the system in the plants' maintenance rule monitoring program, and placed the equipment under 10 CFR 50.65(a)(1) monitoring requirements pending further review. The licensee entered this issue into the corrective action program as CR-2016-008491.

The failure to monitor the performance and condition of a system that meets the maintenance rule scoping criteria of 10 CFR 50.65(b)(2) is the performance deficiency. The 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 cornerstone objective to ensure 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," dated July 1, 2012, and Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated October 7, 2016, Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the finding affected the Mitigating Systems cornerstone and was of very low safety significance (Green), because the finding did not represent a loss of system function and the system was not designated as high safety-significant in accordance with the licensee's maintenance rule program. The finding has a human performance cross-cutting aspect associated with avoiding complacency, in that, the licensee failed to ensure that individuals recognized and planned for the possibility of mistakes and latent issues when re-evaluating the basis for excluding the system [H.12].
Inspection Report# : 2016004 *(pdf)*

Significance: G Nov 13, 2015
Identified By: NRC
Item Type: VIO Violation
Failure to Evaluate the Lack of Missile Protection on the Turbine Driven Auxiliary Feedwater Pumps' Steam

Exhaust Piping
Green. The team identified a cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to evaluate the lack of missile protection on the turbine driven auxiliary feedwater pumps' steam exhaust piping. Specifically, since June 13, 2012, the licensee failed to verify the adequacy of design of the turbine driven auxiliary feedwater pumps' steam exhaust piping to withstand impact from a tornado driven missile hazard, or to evaluate for exemption from missile protection requirements using an approved methodology. This issue does not represent an immediate safety concern because the licensee performed an operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007869.

The licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5a)

Inspection Report# : 2015008 *(pdf)*

Barrier Integrity

Significance: G Dec 31, 2016
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Evaluate Inservice Testing Results of Power Operated Relief Valve
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to evaluate inservice testing results of a power operated relief valve (PORV). Specifically, the licensee restored a unit 1 PORV to service that did not meet its specified opening time, which resulted in the inoperability of the low temperature overpressure protection (LTOP) system. Following maintenance on
PORV 1-PCV-455A during October 2014, the licensee performed stroke time testing on the valve, but failed to recognize that the valve exceeded its test acceptance criteria until it failed again in May 2016. The licensee entered this issue into the corrective action program as CR-2016-003920.

The failure to evaluate test results to ensure they met test requirements is a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the Reactor Coolant System Equipment and Barrier Performance attribute of the Barrier Integrity cornerstone and affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, Inspection Manual Chapter 0609, Appendix G, "Shutdown Operations Significance

Determination Process," dated May 9, 2014, and Appendix G Attachment 1, "Phase 1 Initial Screening and Characterization of Findings," Exhibit 4, "Barrier Integrity Screening Questions," the inspectors determined the finding affected the Barrier Integrity cornerstone and required a detailed risk evaluation because the finding involved the unavailability of a PORV during LTOP operations. Using the assumption that the slow opening time prevents the PORV from fulfilling its LTOP system function, a senior reactor analyst performed a bounding qualitative assessment, using Inspection Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process." The influential assumptions used by the senior reactor analyst included an exposure time of approximately 9 hours and that the licensee maintained the availability of a single additional relief valve with capability sufficient to mitigate an LTOP event as described in the final safety analysis report. Using these assumptions, the senior reactor analyst determined that a bounding increase in core damage frequency for this issue was 1.45E-8 per year and was therefore, of very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with work management, in that, the licensee failed to ensure that the work process includes the need for coordination with different groups or job activities [H.5].
Inspection Report# : 2016004 *(pdf)*

Emergency Preparedness
Occupational Radiation Safety
Public Radiation Safety
Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Significance: N/A Sep 29, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Update FSAR Section 8.3.1.1.11

The inspectors identified a Severity Level IV non-cited violation of 10 CFR50.71(e) which requires, in part, that licensee shall update periodically the final safety analysis report originally submitted as part of the application for the license, to assure that the information included in the report contains the latest information developed. The submittal shall include the effects of all changes to the facility as described in the final safety analysis report, or all safety analyses and evaluation performed by the licensee either in support of approved license amendments or in support of conclusion that changes did not require a license amendment in accordance with 10 CFR 50.59 (c)(2). Specifically, from October 9, 2012 to September 29, 2016, the licensee did not include the effects of changes to the K300 voltage relay setpoint or the safety evaluation in submittals to the Final Safety Analysis Report, Section 8.3.1.1.11, that supported the conclusion that the changes did not require a license amendment. The licensee plans to initiate a Licensing Document Change Request to update the final safety analysis report. This is not an immediate safety

concern. The licensee entered this issue into their corrective action program as Condition Report CR-2016-008177.

The licensee's failure to initiate a Licensing Document Change Request, in accordance with procedure STA-116, "Maintenance of CPNPP Licensing Basis Documents, Operating License conditions and Technical Specifications," Revision 14, instruction 6.1, to update the Final Safety Analysis Report, Section 8.3.1.1.11, for the setpoint revision of voltage K300 voltage relays was a performance deficiency. This led to a violation of 10 CFR 50.71(e) for failing to update the final safety analysis report. Using NRC Inspection Manual Chapter 0612, Appendix B, "Issue Screening," dated September 7, 2012, this was determined to be a minor performance deficiency. This violation was evaluated using the traditional enforcement process because it impacted the NRC's ability to perform its regulatory oversight function. The reactor oversight process's significance determination process does not consider violations that impacts the NRC's regulatory oversight function. This violation was determined to be a Severity Level IV violation because it was consistent with the example in Paragraph 6.1.d.3 of the NRC Enforcement Policy, dated August 1, 2016. Specifically, the licensee failed to update the final safety analysis report as required by 10 CFR 50.71(e), but the lack of up-to-date information has not resulted in any unacceptable change to the facility or procedures. No cross-cutting aspect was assigned to this violation because there was no reactor oversight process finding associated with the performance deficiency.
(Section 1R17.2.b)

Inspection Report# : 2016007 *(pdf)*

Current data as of : August 03, 2017

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U.S.NRC
United States Nuclear Regulatory Commission
Protecting People and the Environment

Comanche Peak 1 – Quarterly Plant Inspection Findings

2Q/2017 – Plant Inspection Findings

On this page:

Initiating Events

Significance: G Sep 30, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Manage Risk During Refueling Outages
Green. 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 manage the increase in risk associated with the potential for a loss of decay heat removal during refueling outages. Specifically, the licensee implemented a risk management action that did not reduce the risk, but instead called for placing a safety injection pump in service during periods where this action is prohibited by plant's technical specifications for low temperature over pressure protection. The inspectors determined this was an ineffective risk management action because the use of a safety injection pump during low pressure and temperature conditions would place the plant in an unanalyzed condition, resulting in an increase in risk. As an immediate corrective action, the licensee initiated Condition Report CR-2015-009109 to evaluate appropriate risk management actions. This finding was entered into the licensee's corrective action program as Condition Report CR-2015-009109.

The failure to manage the increase in risk associated with the potential for a loss of decay heat removal during refueling activities is a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the procedure quality attribute of the Initiating Events Cornerstone and 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, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," dated May 19, 2005, Flowchart 1, "Assessment of Risk Deficit," the inspectors determined the need to calculate the risk deficit to determine the significance of this issue. A senior reactor analyst performed a bounding qualitative assessment and determined the incremental core damage probability deficit was less than 1E-6 and the incremental large early release probability deficit was less than 1E-7, based on the availability of additional equipment to mitigate the loss of decay heat removal.

In accordance with Flowchart 1 in Appendix K, because incremental core damage probability deficit was less than 1E-6 and incremental large early release probability deficit was less than 1E-7, the finding screened as having very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with bases for decisions, in that, the licensee failed to ensure that operations leadership adequately communicate potential problems with the risk management action to start a safety injection pump when in a mode of applicability for low temperature over pressure protection [H.10].
Inspection Report# : 2016003 *(pdf)*

Significance: G Sep 15, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate the Suitability of Teflon Gaskets in a Safety-Related Pressure Boundary
The inspectors identified a Green, non-cited violation of 10 CFR 50 Appendix B, Criterion III, "Design Control," which requires, in part, that measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety related functions of the structures, systems and components. Specifically, from November 25, 2014, to September 15, 2016, the licensee failed to appropriately evaluate the suitability of polytetrafluoroethylene (PTFE) gaskets in pressure indication diaphragm assemblies that form the pressure boundary of the chemical and volume control system. In response to this issue, the licensee immediately isolated all affected diaphragm seal assemblies from the safety-related pressure boundary of the chemical and volume control system. This condition was entered into the corrective action program as Condition Reports CR-2016-008180 and CR-2016-008215.

The inspectors determined that the failure to meet 10 CFR 50, Appendix B, Criterion III, "Design Control" was performance deficiency. The performance deficiency was more than minor because the finding is associated with the equipment performance attribute of the Initiating Events cornerstone and adversely affects the cornerstone objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown. Specifically, in the event of an accident with 1% core damage, the high radiation environment of the centrifugal charging pump rooms would cause degradation to Teflon gaskets in pressure indication diaphragm assemblies, which would potentially cause an intersystem loss-of-coolant accident through the safety-related chemical and volume control system pressure boundary. Using the Manual Chapter 0609, Appendix A, Significance Determination Process for Findings At-power, Exhibit 1, "Initiating Events Screening Questions," the finding screens to a detailed risk evaluation because, after a reasonable assessment of degradation, the finding could have an effect on systems used to mitigate a loss-of-cooling accident resulting in a total loss of their function (e.g. intersystem loss-of-coolant accident). A senior reactor analyst performed a qualitative detailed risk evaluation. The analyst determined that the finding was of very low safety significance (Green). The inspectors determined that the most significant contributor to this finding had an Evaluation cross-cutting aspect in the area of problem identification and resolution because the licensee failed to thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance. Specifically, in November 2014, the licensee's engineering department failed to properly evaluate the effects of radiation on the PTFE gasket, as documented in Condition Report CR 2014 012353. [P.2]
(Section 1R17.2.b)

Inspection Report# : 2016007 *(pdf)*

Mitigating Systems

Significance: G Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation

Failure to Control Transient Combustible Material in Accordance with a Fire Protection Procedure
The inspectors identified a non-cited violation of Operating Licenses NPF-87 and NPF-89, License Condition 2.G, "Fire Protection Program," for the failure to control transient combustibles in accordance with the station's fire protection report. Specifically, Fire Protection Report, Revision 29, Section 5.3.8, "Fire Area EO - Control Room," includes Deviation 3c-1, "Control Room Missile Door," which requires, in part, that since the control room missile door in the west wall is not a 3-hour rated fire door, the area of the turbine deck within 100 feet of the door is to be void of combustibles. Contrary to this, the licensee allowed storage of combustible materials in this area without required compensatory measures. This issue does not represent an immediate safety concern because the licensee removed the combustible materials upon identification. The licensee entered this issue into corrective action program as Condition Report CR-2017-5564.

The failure to control transient combustible material in accordance with the approved fire protection report is a performance deficiency. The performance deficiency was more than minor and therefore a finding because it was associated with the protection against external factors attribute of the Mitigating System 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 introduction of transient combustible materials decreased the external event mitigation for fire prevention. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," June 19, 2012, the inspectors determined that the finding pertained to a failure to adequately implement fire prevention and administrative controls for transient combustible materials. As a result, the inspectors were directed to Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," September 20, 2013. The inspectors evaluated the finding through Appendix F, Attachment 1, "Fire Protection Significance Determination Process Worksheet," September 20, 2013, and determined that the finding was of very low safety consequence (Green) because the Fire Prevention and Administrative Controls finding would not prevent the reactor from reaching and maintaining a safe shutdown condition. The finding has a problem identification and resolution cross-cutting aspect associated with resolution, in that, the licensee failed to take effective corrective actions to address issues in a timely manner. Specifically, the licensee had previously identified this issue in Condition Report CR-2014-10224 but had failed to take corrective actions to address it.
Inspection Report# : 2017002 *(pdf)*

Significance: G Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Operability Evaluation for Safety-Related Pipe Supports
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," that occurred when the licensee failed on two occasions to perform an adequate operability determination associated with multiple safety-related pipe supports. Specifically, the operability determination of multiple carbon steel pipe support clamps exposed to boric acid and a bent sway strut pipe restraint lacked the engineering rigor necessary to provide a high degree of confidence to support the operability of the components. Subsequently, the inspectors concluded that the licensee established reasonable expectation for operability once engineering provided the control room with further analysis on the degraded conditions, and the new information was reviewed and accepted. This issue was entered into the licensee's corrective action program as Condition Report CR-2017-05418.

The licensee's failure to perform adequate operability determinations per plant procedures was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the equipment performance attribute of the Mitigating System cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee: (1) failed to perform the required corrosion evaluation for a

comparison of material wastage against design dimensions of the pipe support clamps; (2) failed to perform a visual inspection of the material condition of the pipe support clamps as required by the work order; (3) used non-seismic design tolerances for the qualification of a seismically qualified strut in the immediate operability determination; and (4) failed to consider that the bent condition of the strut occurred after the previously accepted visual examinations on the same pipe support. All these issues could have resulted in safety-related components failing to perform their specified safety function during accident conditions. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the finding was of very low safety significance (Green) because the finding: (1) it was not a design deficiency; (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 technical specification allowed outage time; (4) and did not result in the loss of a high safety-significant non-technical specification train. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with resolution because the licensee failed to adequately assess the degraded condition of the pipe supports in a complete and accurate manner to support a reasonable expectation of operability.
Inspection Report# : 2017002 *(pdf)*

Significance: G Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Relays Not Environmentally Qualified
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 assure that design changes were subject to design control measures commensurate with those applied to the original design. Specifically, the licensee changed internal components for safety-related, steam generator atmospheric relief valve booster relays but failed to verify that these new components could withstand the environment created during a high energy line break. This issue does not represent an immediate safety concern because the licensee performed an operability determination which established a reasonable expectation for operability, and implemented corrective actions to replace the relays with qualified relays. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2017-006236.

The failure to ensure that changes to the facility were subject to design control measures commensurate with those applied to the original design was a performance deficiency. The 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, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the 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 safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The inspectors did not assign a cross-cutting aspect because the performance deficiency was not reflective of present performance.
Inspection Report# : 2017002 *(pdf)*

Significance: G Jun 30, 2017
Identified By: NRC

Item Type: NCV Non-Cited Violation
Failure to Translate Design Requirements Into the As Built Facility
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 assure that applicable regulatory requirements and the design bases, as defined in 10 CFR 50.2 and as specified in the license application, for those structure, systems and components to which this appendix applies, were correctly translated into specifications, drawings, procedures, and instructions. Specifically, from initial construction through March 2017, the licensee failed to fully incorporate applicable moderate energy line break design requirements for fire protection piping located in the vicinity of the station service water pumps, the latter which are needed to ensure the capability to shut down the reactor and maintain it in a safe shutdown condition following a moderate energy line break. This issue does not represent an immediate safety concern because when the lines were identified the licensee took prompt action to isolate and depressurize them, and the licensee has implemented plant modifications. The licensee entered this issue into the corrective action program as Condition Report CR-2016-008147.

The failure to incorporate applicable design requirements into specifications for moderate energy line break protection was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, from initial construction through March 2017, the licensee failed to fully incorporate applicable design requirements for components needed to ensure the capability to shut down the reactor and maintain it in a safe shutdown condition following a moderate energy line break. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated July 1, 2012, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated October 7, 2016, the inspectors determined the finding required a detailed risk evaluation because the finding involved a deficiency affecting the design and qualification of a mitigating structure, system, or component, and resulted in a loss of operability, and represented an actual loss of function of at least a single train for longer than its allowed outage time. A senior reactor analysts from Region IV performed a detailed risk evaluation and determined that the bounding increase in core damage frequency for this issue was 5.1E-8/year for Unit 1 and 2.9E-10/year for Unit 2, and was therefore of very low safety significance (Green). The inspectors did not assign a cross-cutting aspect because the performance deficiency was not reflective of present performance.
Inspection Report# : 2017002 *(pdf)*

Significance:  Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Implement and Maintain Adequate Inspection Procedures for Penetration Sealing Devices
Green. The team identified a non-cited violation of Operating License Condition 2.G
related to the licensee's failure to maintain adequate procedures for the inspection of
required penetration sealing devices as required by the licensee's Fire Protection Report,
Section IV-2.1.c.1. Specifically, the Fire Protection Report required, in part, that required fire rated assemblies and penetration sealing devices be confirmed operable by visually inspecting the exposed surfaces using a site approved sampling plan every 18 months. Fire Protection Manual Procedure FIR-310, "Penetration Seal Inspection," Revision 3, did not appropriately capture all penetration sealing devices for inspection. In 2009, guidance was added to the procedure restricting inspections to equipment accessible from the floor (8 feet or below). Also, the licensee's automated random sampling process did not ensure that all penetration seals would be inspected within the licensee's 15-year sampling plan interval. The licensee entered this issue into their corrective action program as Condition Reports CR-2017-007745 and
CR-2017-007746 to revise the surveillance procedure and sampling plan to ensure all required penetration seals were

included and inspected within the 15-year sampling plan interval.

The failure to ensure that fire protection program procedures used to establish inspection criteria for penetration sealing devices appropriately captured all required penetration sealing devices for visual inspection using a site approved sampling plan every 18 months was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the reactor safety Mitigating Systems cornerstone attribute of protection against external factors (i.e., fire), and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," dated October 7, 2016, the finding was determined to require additional evaluation under Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," dated September 30, 2013. The finding was screened as a Green finding of very low safety significance in accordance with Task 1.4.3, "Fire Confinement," Question B. Based on the analysis performed, the team concluded that the degradation of the fire barrier penetration seals represented a low degradation of the fire confinement element. No inspected barriers were identified as degraded, and all inspected barriers provided at least a 1-hour or greater fire endurance rating. The team did not assign a cross-cutting aspect because the performance deficiency was not reflective of present performance in that the inspection procedure changes occurred in 2009. (Section 1R05.2.b)

Inspection Report# : 2017008 *(pdf)*

Significance:  Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Maintain B.5.b Equipment in a State of Readiness to Support Mitigation Strategies
The inspectors identified a non-cited violation of 10 CFR 50.54(hh)(2), "Conditions of License," involving the licensee's failure to maintain available equipment needed to implement mitigating strategies to provide makeup to steam generators following loss of large areas of the plant due to explosions or fire. Specifically, the licensee failed to maintain available a portable alternate mitigation equipment pump related to the steam generator makeup strategy. The licensee entered this issue into their corrective action program as Condition Report CR-2016-010832.

The failure to maintain all necessary equipment available to implement mitigating strategies as required by regulations and conditions of the operating license was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control attribute of the Mitigating Systems cornerstone and 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, Appendix L, "B.5.b Significance Determination Process," dated December 24, 2009, the inspectors determined the finding was of very low safety significance (Green) because it resulted in an unrecoverable unavailability of an individual mitigating strategy; but did not result in multiple unavailable mitigating strategies, or loss of all on-site, self-powered, portable pumping capability. The inspectors determined that no cross-cutting aspect was assigned because the performance deficiency was not reflective of present performance.

Inspection Report# : 2017001 *(pdf)*

Significance:  Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Heat Loads on Control Room Air Conditioning System
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the

licensee's failure to properly evaluate heat loads on the control room air conditioning system. Specifically, the licensee used a non-conservative assumption of the number of persons in the control room envelope when calculating the required capacity of the system. The licensee had only assumed there would be six personnel to be in the technical support center (which is included in the control room envelope) during a design basis event. However, the emergency plan nominally staffed the technical support center with 25 station personnel, and an additional five NRC personnel. The licensee entered this issue into their corrective action program as Condition Report CR-2017-000744.

The failure to evaluate heat loads to determine the required system capacity is a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control 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. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the 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 safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The inspectors determined that no cross-cutting aspect was assigned because the performance deficiency was not reflective of present performance.

Inspection Report# : 2017001 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Use of Non-Design Fouling Factor for Component Cooling Water Heat Exchanger in Station Service Water Tornado Missile Calculation
The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," involving the use of a non-design fouling factor for the component cooling water heat exchanger in a design basis calculation evaluating a tornado missile strike of station service water system piping. The licensee entered this issue into their corrective action program as Issue Report IR-2017-001465.

The team determined that the failure to use the design fouling factor for the component cooling water heat exchanger in the tornado missile analysis of the station service water system discharge piping was a performance deficiency. This 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 of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the use of a non-conservative heat exchanger fouling factor in a design basis accident analysis resulted in a more restrictive temperature limit (i.e., less than the technical specification allowed value) of the safe shutdown impoundment. 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 (1) did not represent a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of non-technical specification equipment; and (4) did not screen as potentially

risk-significant due to seismic, flooding, or severe weather. The team determined that this finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance. Specifically, the licensee performed the calculation in 1988, therefore, the performance deficiency occurred outside of the nominal three-year period for "present performance."

Inspection Report# : 2017001 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Promptly Correct a Condition Adverse to Quality
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," associated with the licensee's failure to take timely corrective actions for a previously identified condition adverse to quality. Specifically, the licensee failed to verify the adequacy of the design of the unit 1 120 VAC vital bus inverter 1PC1 with respect to use of alternate AC power to the inverter. The 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. This issue does not represent an immediate safety concern because, following the inspectors identification, the licensee performed an operability evaluation which established a reasonable expectation of operability. The licensee entered this issue into their corrective action program as CR-2017-001296.

The licensee's failure to take timely and adequate corrective actions to correct a condition adverse to quality was a performance deficiency. The performance deficiency is more than minor, and therefore a finding, because it is 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 failure to correct the low voltage susceptibility resulted in delayed restoration of a bus following the failure of the swing inverter to sync. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the 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 safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that resources were adequate to support nuclear safety [H.1].

Inspection Report# : 2017001 *(pdf)*

Significance: G Dec 31, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Scope the Containment Ventilation System in the Maintenance Rule Program
The inspectors identified a non-cited violation of 10 CFR 50.65(b)(2) associated with the licensee's failure to scope the containment ventilation system into the maintenance rule program. Specifically, the containment ventilation system, a non-safety related system that is relied upon to mitigate accidents or transients and used in emergency operating procedures, was not included in the scope of the monitoring program specified in 10 CFR 50.65(a)(1). In response to

this issue the licensee scoped the system in the plants' maintenance rule monitoring program, and placed the equipment under 10 CFR 50.65(a)(1) monitoring requirements pending further review. The licensee entered this issue into the corrective action program as CR-2016-008491.

The failure to monitor the performance and condition of a system that meets the maintenance rule scoping criteria of 10 CFR 50.65(b)(2) is the performance deficiency. The 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 cornerstone objective to ensure 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," dated July 1, 2012, and Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated October 7, 2016, Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the finding affected the Mitigating Systems cornerstone and was of very low safety significance (Green), because the finding did not represent a loss of system function and the system was not designated as high safety-significant in accordance with the licensee's maintenance rule program. The finding has a human performance cross-cutting aspect associated with avoiding complacency, in that, the licensee failed to ensure that individuals recognized and planned for the possibility of mistakes and latent issues when re-evaluating the basis for excluding the system [H.12].
Inspection Report# : 2016004 *(pdf)*

Significance: G Nov 13, 2015
Identified By: NRC
Item Type: VIO Violation
Failure to Evaluate the Lack of Missile Protection on the Turbine Driven Auxiliary Feedwater Pumps' Steam Exhaust Piping
Green. The team identified a cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to evaluate the lack of missile protection on the turbine driven auxiliary feedwater pumps' steam exhaust piping. Specifically, since June 13, 2012, the licensee failed to verify the adequacy of design of the turbine driven auxiliary feedwater pumps' steam exhaust piping to withstand impact from a tornado driven missile hazard, or to evaluate for exemption from missile protection requirements using an approved methodology. This issue does not represent an immediate safety concern because the licensee performed an operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007869.

The licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14].

(Section 4OA2.5a)

Inspection Report# : 2015008 *(pdf)*

Barrier Integrity

Significance: G Jun 30, 2017
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 and implement required risk management actions associated with disabling a hazard barrier and breeching the control room envelope when blocking open door E-40A. This issue did not represent an immediate safety concern because, at the time of identification, the licensee stopped the activity and secured the door. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2017-006019.

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 configuration control attribute of the Barrier Integrity Cornerstone and affected the associated objective to ensure physical design barriers protect the public from radionuclide releases caused by accidents or events. 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. A senior reactor analyst determined the finding to have very low safety significance (Green) based on combining the effects of the degradation of the radiological barrier and tornado missile barrier functions. The analyst performed a qualitative review of the screening criteria in Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," for the degradation of the radiological barrier function for the control room and considered the short exposure time (2.9E-5 years) and the Comanche Peak specific high winds frequency (3.0E-4/year) for the tornado missile barrier function of the control room to determine that the incremental core damage probability deficit and the incremental large early release probability deficit were less than 1E-6 and 1E-7, respectively. The finding has a human performance cross-cutting aspect associated with procedure adherence, in that operations personnel failed to follow procedures when allowing door E-40A to be opened.
Inspection Report# : 2017002 *(pdf)*

Significance: G Dec 31, 2016
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Evaluate Inservice Testing Results of Power Operated Relief Valve
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to evaluate inservice testing results of a power operated relief valve (PORV). Specifically, the licensee restored a unit 1 PORV to service that did not meet its specified opening time, which resulted in the inoperability of the low temperature overpressure protection (LTOP) system. Following maintenance on
PORV 1-PCV-455A during October 2014, the licensee performed stroke time testing on the valve, but failed to recognize that the valve exceeded its test acceptance criteria until it failed again in May 2016. The licensee entered this issue into the corrective action program as CR-2016-003920.

The failure to evaluate test results to ensure they met test requirements is a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the Reactor Coolant System Equipment and Barrier Performance attribute of the Barrier Integrity cornerstone and affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, Inspection Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process," dated May 9, 2014, and Appendix G Attachment 1, "Phase 1 Initial Screening and Characterization of Findings," Exhibit 4, "Barrier Integrity Screening Questions," the inspectors determined the finding affected the Barrier Integrity cornerstone and required a detailed risk evaluation because the finding involved the unavailability of a PORV during LTOP operations. Using the assumption that the slow opening time prevents the PORV from fulfilling its LTOP system function, a senior reactor analyst performed a bounding qualitative assessment, using Inspection Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process." The influential assumptions used by the senior reactor analyst included an exposure time of approximately 9 hours and that the licensee maintained the availability of a single additional relief valve with capability sufficient to mitigate an LTOP event as described in the final safety analysis report. Using these assumptions, the senior reactor analyst determined that a bounding increase in core damage frequency for this issue was 1.45E-8 per year and was therefore, of very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with work management, in that, the licensee failed to ensure that the work process includes the need for coordination with different groups or job activities [H.5].
Inspection Report# : 2016004 *(pdf)*

Emergency Preparedness
Occupational Radiation Safety
Public Radiation Safety
Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Significance: N/A Sep 29, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Update FSAR Section 8.3.1.1.11
The inspectors identified a Severity Level IV non-cited violation of 10 CFR50.71(e) which requires, in part, that licensee shall update periodically the final safety analysis report originally submitted as part of the application for the license, to assure that the information included in the report contains the latest information developed. The submittal shall include the effects of all changes to the facility as described in the final safety analysis report, or all safety

analyses and evaluation performed by the licensee either in support of approved license amendments or in support of conclusion that changes did not require a license amendment in accordance with 10 CFR 50.59 (c)(2). Specifically, from October 9, 2012 to September 29, 2016, the licensee did not include the effects of changes to the K300 voltage relay setpoint or the safety evaluation in submittals to the Final Safety Analysis Report, Section 8.3.1.1.11, that supported the conclusion that the changes did not require a license amendment. The licensee plans to initiate a Licensing Document Change Request to update the final safety analysis report. This is not an immediate safety concern. The licensee entered this issue into their corrective action program as Condition Report CR-2016-008177.

The licensee's failure to initiate a Licensing Document Change Request, in accordance with procedure STA-116, "Maintenance of CPNPP Licensing Basis Documents, Operating License conditions and Technical Specifications," Revision 14, instruction 6.1, to update the Final Safety Analysis Report, Section 8.3.1.1.11, for the setpoint revision of voltage K300 voltage relays was a performance deficiency. This led to a violation of 10 CFR 50.71(e) for failing to update the final safety analysis report. Using NRC Inspection Manual Chapter 0612, Appendix B, "Issue Screening," dated September 7, 2012, this was determined to be a minor performance deficiency. This violation was evaluated using the traditional enforcement process because it impacted the NRC's ability to perform its regulatory oversight function. The reactor oversight process's significance determination process does not consider violations that impacts the NRC's regulatory oversight function. This violation was determined to be a Severity Level IV violation because it was consistent with the example in Paragraph 6.1.d.3 of the NRC Enforcement Policy, dated August 1, 2016. Specifically, the licensee failed to update the final safety analysis report as required by 10 CFR 50.71(e), but the lack of up-to-date information has not resulted in any unacceptable change to the facility or procedures. No cross-cutting aspect was assigned to this violation because there was no reactor oversight process finding associated with the performance deficiency.
(Section 1R17.2.b)

Inspection Report# : 2016007 *(pdf)*

Current data as of : September 05, 2017

Page Last Reviewed/Updated Wednesday, June 07, 2017

Comanche Peak 1 – Quarterly Plant Inspection Findings

3Q/2017 – Plant Inspection Findings

On this page:

Initiating Events

Mitigating Systems

Significance: G Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Control Transient Combustible Material in Accordance with a Fire Protection Procedure
The inspectors identified a non-cited violation of Operating Licenses NPF-87 and NPF-89, License Condition 2.G, "Fire Protection Program," for the failure to control transient combustibles in accordance with the station's fire protection report. Specifically, Fire Protection Report, Revision 29, Section 5.3.8, "Fire Area EO - Control Room," includes Deviation 3c-1, "Control Room Missile Door," which requires, in part, that since the control room missile door in the west wall is not a 3-hour rated fire door, the area of the turbine deck within 100 feet of the door is to be void of combustibles. Contrary to this, the licensee allowed storage of combustible materials in this area without required compensatory measures. This issue does not represent an immediate safety concern because the licensee removed the combustible materials upon identification. The licensee entered this issue into corrective action program as Condition Report CR-2017-5564.

The failure to control transient combustible material in accordance with the approved fire protection report is a performance deficiency. The performance deficiency was more than minor and therefore a finding because it was associated with the protection against external factors attribute of the Mitigating System 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 introduction of transient combustible materials decreased the external event mitigation for fire prevention. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," June 19, 2012, the inspectors determined that the finding pertained to a failure to adequately implement fire prevention and administrative controls for transient combustible materials. As a result, the inspectors were directed to Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," September 20, 2013. The inspectors evaluated the finding through Appendix F, Attachment 1, "Fire

Protection Significance Determination Process Worksheet," September 20, 2013, and determined that the finding was of very low safety consequence (Green) because the Fire Prevention and Administrative Controls finding would not prevent the reactor from reaching and maintaining a safe shutdown condition. The finding has a problem identification and resolution cross-cutting aspect associated with resolution, in that, the licensee failed to take effective corrective actions to address issues in a timely manner. Specifically, the licensee had previously identified this issue in Condition Report CR-2014-10224 but had failed to take corrective actions to address it.
Inspection Report# : 2017002 *(pdf)*

Significance: G Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Operability Evaluation for Safety-Related Pipe Supports
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," that occurred when the licensee failed on two occasions to perform an adequate operability determination associated with multiple safety-related pipe supports. Specifically, the operability determination of multiple carbon steel pipe support clamps exposed to boric acid and a bent sway strut pipe restraint lacked the engineering rigor necessary to provide a high degree of confidence to support the operability of the components. Subsequently, the inspectors concluded that the licensee established reasonable expectation for operability once engineering provided the control room with further analysis on the degraded conditions, and the new information was reviewed and accepted. This issue was entered into the licensee's corrective action program as Condition Report CR-2017-05418.

The licensee's failure to perform adequate operability determinations per plant procedures was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the equipment performance attribute of the Mitigating System cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee: (1) failed to perform the required corrosion evaluation for a comparison of material wastage against design dimensions of the pipe support clamps; (2) failed to perform a visual inspection of the material condition of the pipe support clamps as required by the work order; (3) used non-seismic design tolerances for the qualification of a seismically qualified strut in the immediate operability determination; and (4) failed to consider that the bent condition of the strut occurred after the previously accepted visual examinations on the same pipe support. All these issues could have resulted in safety-related components failing to perform their specified safety function during accident conditions. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the finding was of very low safety significance (Green) because the finding: (1) it was not a design deficiency; (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 technical specification allowed outage time; (4) and did not result in the loss of a high safety-significant non-technical specification train. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with resolution because the licensee failed to adequately assess the degraded condition of the pipe supports in a complete and accurate manner to support a reasonable expectation of operability.
Inspection Report# : 2017002 *(pdf)*

Significance: G Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Relays Not Environmentally Qualified
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 assure that design changes were subject to design control measures commensurate with those applied to the original design. Specifically, the licensee changed internal components for safety-related, steam generator atmospheric relief valve booster relays but failed to verify that these new components could withstand the environment created during a high energy line break. This issue does not represent an immediate safety concern because the licensee performed an operability determination which established a reasonable expectation for operability, and implemented corrective actions to replace the relays with qualified relays. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2017-006236.

The failure to ensure that changes to the facility were subject to design control measures commensurate with those applied to the original design was a performance deficiency. The 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, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the 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 safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The inspectors did not assign a cross-cutting aspect because the performance deficiency was not reflective of present performance.
Inspection Report# : 2017002 *(pdf)*

Significance:  Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Translate Design Requirements Into the As Built Facility
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 assure that applicable regulatory requirements and the design bases, as defined in 10 CFR 50.2 and as specified in the license application, for those structure, systems and components to which this appendix applies, were correctly translated into specifications, drawings, procedures, and instructions. Specifically, from initial construction through March 2017, the licensee failed to fully incorporate applicable moderate energy line break design requirements for fire protection piping located in the vicinity of the station service water pumps, the latter which are needed to ensure the capability to shut down the reactor and maintain it in a safe shutdown condition following a moderate energy line break. This issue does not represent an immediate safety concern because when the lines were identified the licensee took prompt action to isolate and depressurize them, and the licensee has implemented plant modifications. The licensee entered this issue into the corrective action program as Condition Report CR-2016-008147.

The failure to incorporate applicable design requirements into specifications for moderate energy line break protection was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, from initial construction through March 2017, the licensee failed to fully incorporate applicable design requirements for components needed to ensure the capability to shut down the reactor and maintain it in a safe shutdown condition following a moderate energy line break. Using Inspection Manual Chapter

0609, Attachment 04, "Initial Characterization of Findings," dated July 1, 2012, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated October 7, 2016, the inspectors determined the finding required a detailed risk evaluation because the finding involved a deficiency affecting the design and qualification of a mitigating structure, system, or component, and resulted in a loss of operability, and represented an actual loss of function of at least a single train for longer than its allowed outage time. A senior reactor analysts from Region IV performed a detailed risk evaluation and determined that the bounding increase in core damage frequency for this issue was 5.1E-8/year for Unit 1 and 2.9E-10/year for Unit 2, and was therefore of very low safety significance (Green). The inspectors did not assign a cross-cutting aspect because the performance deficiency was not reflective of present performance.
Inspection Report# : 2017002 *(pdf)*

Significance: G Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Implement and Maintain Adequate Inspection Procedures for Penetration Sealing Devices
Green. The team identified a non-cited violation of Operating License Condition 2.G related to the licensee's failure to maintain adequate procedures for the inspection of required penetration sealing devices as required by the licensee's Fire Protection Report, Section IV-2.1.c.1. Specifically, the Fire Protection Report required, in part, that required fire rated assemblies and penetration sealing devices be confirmed operable by visually inspecting the exposed surfaces using a site approved sampling plan every 18 months. Fire Protection Manual Procedure FIR-310, "Penetration Seal Inspection," Revision 3, did not appropriately capture all penetration sealing devices for inspection. In 2009, guidance was added to the procedure restricting inspections to equipment accessible from the floor (8 feet or below). Also, the licensee's automated random sampling process did not ensure that all penetration seals would be inspected within the licensee's 15-year sampling plan interval. The licensee entered this issue into their corrective action program as Condition Reports CR-2017-007745 and CR-2017-007746 to revise the surveillance procedure and sampling plan to ensure all required penetration seals were included and inspected within the 15-year sampling plan interval.

The failure to ensure that fire protection program procedures used to establish inspection criteria for penetration sealing devices appropriately captured all required penetration sealing devices for visual inspection using a site approved sampling plan every 18 months was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the reactor safety Mitigating Systems cornerstone attribute of protection against external factors (i.e., fire), and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," dated October 7, 2016, the finding was determined to require additional evaluation under Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," dated September 30, 2013. The finding was screened as a Green finding of very low safety significance in accordance with Task 1.4.3, "Fire Confinement," Question B. Based on the analysis performed, the team concluded that the degradation of the fire barrier penetration seals represented a low degradation of the fire confinement element. No inspected barriers were identified as degraded, and all inspected barriers provided at least a 1-hour or greater fire endurance rating. The team did not assign a cross-cutting aspect because the performance deficiency was not reflective of present performance in that the inspection procedure changes occurred in 2009. (Section 1R05.2.b)

Inspection Report# : 2017008 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Maintain B.5.b Equipment in a State of Readiness to Support Mitigation Strategies
The inspectors identified a non-cited violation of 10 CFR 50.54(hh)(2), "Conditions of License," involving the licensee's failure to maintain available equipment needed to implement mitigating strategies to provide makeup to steam generators following loss of large areas of the plant due to explosions or fire. Specifically, the licensee failed to maintain available a portable alternate mitigation equipment pump related to the steam generator makeup strategy. The licensee entered this issue into their corrective action program as Condition Report CR-2016-010832.

The failure to maintain all necessary equipment available to implement mitigating strategies as required by regulations and conditions of the operating license was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control attribute of the Mitigating Systems cornerstone and 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, Appendix L, "B.5.b Significance Determination Process," dated December 24, 2009, the inspectors determined the finding was of very low safety significance (Green) because it resulted in an unrecoverable unavailability of an individual mitigating strategy; but did not result in multiple unavailable mitigating strategies, or loss of all on-site, self-powered, portable pumping capability. The inspectors determined that no cross-cutting aspect was assigned because the performance deficiency was not reflective of present performance.

Inspection Report# : 2017001 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Heat Loads on Control Room Air Conditioning System
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to properly evaluate heat loads on the control room air conditioning system. Specifically, the licensee used a non-conservative assumption of the number of persons in the control room envelope when calculating the required capacity of the system. The licensee had only assumed there would be six personnel to be in the technical support center (which is included in the control room envelope) during a design basis event. However, the emergency plan nominally staffed the technical support center with 25 station personnel, and an additional five NRC personnel. The licensee entered this issue into their corrective action program as Condition Report CR-2017-000744.

The failure to evaluate heat loads to determine the required system capacity is a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control 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. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the 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 safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The inspectors determined that no cross-cutting aspect was assigned because the performance deficiency was not reflective of present performance.

Inspection Report# : 2017001 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Use of Non-Design Fouling Factor for Component Cooling Water Heat Exchanger in Station Service Water Tornado Missile Calculation
The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," involving the use of a non-design fouling factor for the component cooling water heat exchanger in a design basis calculation evaluating a tornado missile strike of station service water system piping. The licensee entered this issue into their corrective action program as Issue Report IR-2017-001465.

The team determined that the failure to use the design fouling factor for the component cooling water heat exchanger in the tornado missile analysis of the station service water system discharge piping was a performance deficiency. This 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 of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the use of a non-conservative heat exchanger fouling factor in a design basis accident analysis resulted in a more restrictive temperature limit (i.e., less than the technical specification allowed value) of the safe shutdown impoundment. 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 (1) did not represent a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of non-technical specification equipment; and (4) did not screen as potentially risk-significant due to seismic, flooding, or severe weather. The team determined that this finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance. Specifically, the licensee performed the calculation in 1988, therefore, the performance deficiency occurred outside of the nominal three-year period for "present performance."

Inspection Report# : 2017001 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Promptly Correct a Condition Adverse to Quality
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," associated with the licensee's failure to take timely corrective actions for a previously identified condition adverse to quality. Specifically, the licensee failed to verify the adequacy of the design of the unit 1 120 VAC vital bus inverter 1PC1 with respect to use of alternate AC power to the inverter. The 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. This issue does not represent an immediate safety concern because, following the inspectors identification, the licensee performed an operability evaluation which established a reasonable expectation of operability. The licensee entered this issue into their corrective action program as CR-2017-001296.

The licensee's failure to take timely and adequate corrective actions to correct a condition adverse to quality was a performance deficiency. The performance deficiency is more than minor, and therefore a finding, because it is 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 failure to correct the low voltage susceptibility resulted in delayed restoration of a bus following the failure of the swing inverter to sync. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the 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 safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that resources were adequate to support nuclear safety [H.1].

Inspection Report# : 2017001 *(pdf)*

Significance:  Dec 31, 2016
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Scope the Containment Ventilation System in the Maintenance Rule Program
The inspectors identified a non-cited violation of 10 CFR 50.65(b)(2) associated with the licensee's failure to scope the containment ventilation system into the maintenance rule program. Specifically, the containment ventilation system, a non-safety related system that is relied upon to mitigate accidents or transients and used in emergency operating procedures, was not included in the scope of the monitoring program specified in 10 CFR 50.65(a)(1). In response to this issue the licensee scoped the system in the plants' maintenance rule monitoring program, and placed the equipment under 10 CFR 50.65(a)(1) monitoring requirements pending further review. The licensee entered this issue into the corrective action program as CR-2016-008491.

The failure to monitor the performance and condition of a system that meets the maintenance rule scoping criteria of 10 CFR 50.65(b)(2) is the performance deficiency. The 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 cornerstone objective to ensure 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," dated July 1, 2012, and Inspection Manual Chapter 0609, Appendix A, "The Significance Determination Process (SDP) for Findings At-Power," dated October 7, 2016, Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the finding affected the Mitigating Systems cornerstone and was of very low safety significance (Green), because the finding did not represent a loss of system function and the system was not designated as high safety-significant in accordance with the licensee's maintenance rule program. The finding has a human performance cross-cutting aspect associated with avoiding complacency, in that, the licensee failed to ensure that individuals recognized and planned for the possibility of mistakes and latent issues when re-evaluating the basis for excluding the system [H.12].
Inspection Report# : 2016004 *(pdf)*

Significance: G Nov 13, 2015
Identified By: NRC
Item Type: VIO Violation
Failure to Evaluate the Lack of Missile Protection on the Turbine Driven Auxiliary Feedwater Pumps' Steam Exhaust Piping
Green. The team identified a cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to evaluate the lack of missile protection on the turbine driven auxiliary feedwater pumps' steam exhaust piping. Specifically, since June 13, 2012, the licensee failed to verify the adequacy of design of the turbine driven auxiliary feedwater pumps' steam exhaust piping to withstand impact from a tornado driven missile hazard, or to evaluate for exemption from missile protection requirements using an approved methodology. This issue does not represent an immediate safety concern because the licensee performed an operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007869.

The licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24 hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5a)

Inspection Report# : 2015008 *(pdf)*

Barrier Integrity

Significance: G Jun 30, 2017
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 and implement required risk management actions associated with disabling a hazard barrier and breeching the control room envelope when blocking open door E-40A. This issue did not represent an immediate safety concern because, at the time of identification, the licensee stopped the activity and secured the door. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2017-006019.

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 configuration control attribute of the Barrier Integrity Cornerstone and affected the associated objective to ensure physical design barriers protect the public from radionuclide releases caused by accidents or events. 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. A senior reactor analyst determined the finding to have very low safety significance (Green) based on combining the effects of the degradation of the radiological barrier and tornado missile barrier functions. The analyst performed a qualitative review of the screening criteria in Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," for the degradation of the radiological barrier function for the control room and considered the short exposure time (2.9E-5 years) and the Comanche Peak specific high winds frequency (3.0E-4/year) for the tornado missile barrier function of the control room to determine that the incremental core damage probability deficit and the incremental large early release probability deficit were less than 1E-6 and 1E-7, respectively. The finding has a human performance cross-cutting aspect associated with procedure adherence, in that operations personnel failed to follow procedures when allowing door E-40A to be opened.
Inspection Report# : 2017002 *(pdf)*

Significance:  Dec 31, 2016
Identified By: Self-Revealing
Item Type: NCV Non-Cited Violation
Failure to Evaluate Inservice Testing Results of Power Operated Relief Valve
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to evaluate inservice testing results of a power operated relief valve (PORV). Specifically, the licensee restored a unit 1 PORV to service that did not meet its specified opening time, which resulted in the inoperability of the low temperature overpressure protection (LTOP) system. Following maintenance on
PORV 1-PCV-455A during October 2014, the licensee performed stroke time testing on the valve, but failed to recognize that the valve exceeded its test acceptance criteria until it failed again in May 2016. The licensee entered this issue into the corrective action program as CR-2016-003920.

The failure to evaluate test results to ensure they met test requirements is a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the Reactor Coolant System Equipment and Barrier Performance attribute of the Barrier Integrity cornerstone and affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, Inspection Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process," dated May 9, 2014, and Appendix G Attachment 1, "Phase 1 Initial Screening and Characterization of Findings," Exhibit 4, "Barrier Integrity Screening Questions," the inspectors determined the finding affected the Barrier Integrity cornerstone and required a detailed risk evaluation because the finding involved the unavailability of a PORV during LTOP operations. Using the assumption that the slow opening time prevents the PORV from fulfilling its LTOP system function, a senior reactor analyst performed a bounding qualitative assessment, using Inspection Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process." The influential assumptions used by the senior reactor analyst included an exposure time of approximately 9 hours and that the licensee maintained the availability of a single additional relief valve with capability sufficient to mitigate an LTOP event as described in the final safety analysis report. Using these assumptions, the senior reactor analyst determined that a bounding increase in core damage frequency for this issue was 1.45E-8 per year and was therefore, of very low safety significance (Green). The finding has a human performance cross-cutting aspect associated with work management, in that, the licensee failed to ensure that the work process includes the need for coordination with

different groups or job activities [H.5].
Inspection Report# : 2016004 *(pdf)*

Emergency Preparedness
Occupational Radiation Safety
Public Radiation Safety
Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : November 29, 2017

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Protecting People and the Environment

Comanche Peak 1 – Quarterly Plant Inspection Findings

4Q/2017 – Plant Inspection Findings

On this page:

Initiating Events

Mitigating Systems

Significance: G Aug 10, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Control Transient Combustible Material in Accordance with a Fire Protection Procedure
The inspectors identified a non-cited violation of Operating Licenses NPF-87 and NPF-89, License Condition 2.G, "Fire Protection Program," for the failure to control transient combustibles in accordance with the station's fire protection report. Specifically, Fire Protection Report, Revision 29, Section 5.3.8, "Fire Area EO - Control Room," includes Deviation 3c-1, "Control Room Missile Door," which requires, in part, that since the control room missile door in the west wall is not a 3-hour rated fire door, the area of the turbine deck within 100 feet of the door is to be void of combustibles. Contrary to this, the licensee allowed storage of combustible materials in this area without required compensatory measures. This issue does not represent an immediate safety concern because the licensee removed the combustible materials upon identification. The licensee entered this issue into corrective action program as Condition Report CR-2017-5564.

The failure to control transient combustible material in accordance with the approved fire protection report is a performance deficiency. The performance deficiency was more than minor and therefore a finding because it was associated with the protection against external factors attribute of the Mitigating System 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 introduction of transient combustible materials decreased the external event mitigation for fire prevention. Using NRC Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," June 19, 2012, the inspectors determined that the finding pertained to a failure to adequately implement fire prevention and administrative controls for transient combustible materials. As a result, the inspectors were directed to Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," September 20, 2013. The inspectors evaluated the finding through Appendix F, Attachment 1, "Fire

Protection Significance Determination Process Worksheet," September 20, 2013, and determined that the finding was of very low safety consequence (Green) because the Fire Prevention and Administrative Controls finding would not prevent the reactor from reaching and maintaining a safe shutdown condition. The finding has a problem identification and resolution cross-cutting aspect associated with resolution, in that, the licensee failed to take effective corrective actions to address issues in a timely manner. Specifically, the licensee had previously identified this issue in Condition Report CR-2014-10224 but had failed to take corrective actions to address it.
Inspection Report# : 2017002 *(pdf)*

Significance: G Aug 10, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Inadequate Operability Evaluation for Safety-Related Pipe Supports
The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," that occurred when the licensee failed on two occasions to perform an adequate operability determination associated with multiple safety-related pipe supports. Specifically, the operability determination of multiple carbon steel pipe support clamps exposed to boric acid and a bent sway strut pipe restraint lacked the engineering rigor necessary to provide a high degree of confidence to support the operability of the components. Subsequently, the inspectors concluded that the licensee established reasonable expectation for operability once engineering provided the control room with further analysis on the degraded conditions, and the new information was reviewed and accepted. This issue was entered into the licensee's corrective action program as Condition Report CR-2017-05418.

The licensee's failure to perform adequate operability determinations per plant procedures was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the equipment performance attribute of the Mitigating System cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the licensee: (1) failed to perform the required corrosion evaluation for a comparison of material wastage against design dimensions of the pipe support clamps; (2) failed to perform a visual inspection of the material condition of the pipe support clamps as required by the work order; (3) used non-seismic design tolerances for the qualification of a seismically qualified strut in the immediate operability determination; and (4) failed to consider that the bent condition of the strut occurred after the previously accepted visual examinations on the same pipe support. All these issues could have resulted in safety-related components failing to perform their specified safety function during accident conditions. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the finding was of very low safety significance (Green) because the finding: (1) it was not a design deficiency; (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 technical specification allowed outage time; (4) and did not result in the loss of a high safety-significant non-technical specification train. This finding had a cross-cutting aspect in the area of problem identification and resolution associated with resolution because the licensee failed to adequately assess the degraded condition of the pipe supports in a complete and accurate manner to support a reasonable expectation of operability.
Inspection Report# : 2017002 *(pdf)*

Significance: G Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Relays Not Environmentally Qualified
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 assure that design changes were subject to design control measures commensurate with those applied to the original design. Specifically, the licensee changed internal components for safety-related, steam generator atmospheric relief valve booster relays but failed to verify that these new components could withstand the environment created during a high energy line break. This issue does not represent an immediate safety concern because the licensee performed an operability determination which established a reasonable expectation for operability, and implemented corrective actions to replace the relays with qualified relays. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2017-006236.

The failure to ensure that changes to the facility were subject to design control measures commensurate with those applied to the original design was a performance deficiency. The 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, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the 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 safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The inspectors did not assign a cross-cutting aspect because the performance deficiency was not reflective of present performance.
Inspection Report# : 2017002 *(pdf)*

Significance: G Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Translate Design Requirements Into the As Built Facility
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 assure that applicable regulatory requirements and the design bases, as defined in 10 CFR 50.2 and as specified in the license application, for those structure, systems and components to which this appendix applies, were correctly translated into specifications, drawings, procedures, and instructions. Specifically, from initial construction through March 2017, the licensee failed to fully incorporate applicable moderate energy line break design requirements for fire protection piping located in the vicinity of the station service water pumps, the latter which are needed to ensure the capability to shut down the reactor and maintain it in a safe shutdown condition following a moderate energy line break. This issue does not represent an immediate safety concern because when the lines were identified the licensee took prompt action to isolate and depressurize them, and the licensee has implemented plant modifications. The licensee entered this issue into the corrective action program as Condition Report CR-2016-008147.

The failure to incorporate applicable design requirements into specifications for moderate energy line break protection was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, from initial construction through March 2017, the licensee failed to fully incorporate applicable design requirements for components needed to ensure the capability to shut down the reactor and maintain it in a safe shutdown condition following a moderate energy line break. Using Inspection Manual Chapter

0609, Attachment 04, "Initial Characterization of Findings," dated July 1, 2012, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated October 7, 2016, the inspectors determined the finding required a detailed risk evaluation because the finding involved a deficiency affecting the design and qualification of a mitigating structure, system, or component, and resulted in a loss of operability, and represented an actual loss of function of at least a single train for longer than its allowed outage time. A senior reactor analysts from Region IV performed a detailed risk evaluation and determined that the bounding increase in core damage frequency for this issue was 5.1E-8/year for Unit 1 and 2.9E-10/year for Unit 2, and was therefore of very low safety significance (Green). The inspectors did not assign a cross-cutting aspect because the performance deficiency was not reflective of present performance.
Inspection Report# : 2017002 *(pdf)*

Significance: G Jun 30, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Implement and Maintain Adequate Inspection Procedures for Penetration Sealing Devices
Green. The team identified a non-cited violation of Operating License Condition 2.G related to the licensee's failure to maintain adequate procedures for the inspection of required penetration sealing devices as required by the licensee's Fire Protection Report, Section IV-2.1.c.1. Specifically, the Fire Protection Report required, in part, that required fire rated assemblies and penetration sealing devices be confirmed operable by visually inspecting the exposed surfaces using a site approved sampling plan every 18 months. Fire Protection Manual Procedure FIR-310, "Penetration Seal Inspection," Revision 3, did not appropriately capture all penetration sealing devices for inspection. In 2009, guidance was added to the procedure restricting inspections to equipment accessible from the floor (8 feet or below). Also, the licensee's automated random sampling process did not ensure that all penetration seals would be inspected within the licensee's 15-year sampling plan interval. The licensee entered this issue into their corrective action program as Condition Reports CR-2017-007745 and CR-2017-007746 to revise the surveillance procedure and sampling plan to ensure all required penetration seals were included and inspected within the 15-year sampling plan interval.

The failure to ensure that fire protection program procedures used to establish inspection criteria for penetration sealing devices appropriately captured all required penetration sealing devices for visual inspection using a site approved sampling plan every 18 months was a performance deficiency. The performance deficiency was determined to be more than minor because it was associated with the reactor safety Mitigating Systems cornerstone attribute of protection against external factors (i.e., fire), and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Inspection Manual Chapter 0609, Attachment 4, "Initial Characterization of Findings," dated October 7, 2016, the finding was determined to require additional evaluation under Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," dated September 30, 2013. The finding was screened as a Green finding of very low safety significance in accordance with Task 1.4.3, "Fire Confinement," Question B. Based on the analysis performed, the team concluded that the degradation of the fire barrier penetration seals represented a low degradation of the fire confinement element. No inspected barriers were identified as degraded, and all inspected barriers provided at least a 1-hour or greater fire endurance rating. The team did not assign a cross-cutting aspect because the performance deficiency was not reflective of present performance in that the inspection procedure changes occurred in 2009. (Section 1R05.2.b)

Inspection Report# : 2017008 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Maintain B.5.b Equipment in a State of Readiness to Support Mitigation Strategies
The inspectors identified a non-cited violation of 10 CFR 50.54(hh)(2), "Conditions of License," involving the licensee's failure to maintain available equipment needed to implement mitigating strategies to provide makeup to steam generators following loss of large areas of the plant due to explosions or fire. Specifically, the licensee failed to maintain available a portable alternate mitigation equipment pump related to the steam generator makeup strategy. The licensee entered this issue into their corrective action program as Condition Report CR-2016-010832.

The failure to maintain all necessary equipment available to implement mitigating strategies as required by regulations and conditions of the operating license was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control attribute of the Mitigating Systems cornerstone and 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, Appendix L, "B.5.b Significance Determination Process," dated December 24, 2009, the inspectors determined the finding was of very low safety significance (Green) because it resulted in an unrecoverable unavailability of an individual mitigating strategy; but did not result in multiple unavailable mitigating strategies, or loss of all on-site, self-powered, portable pumping capability. The inspectors determined that no cross-cutting aspect was assigned because the performance deficiency was not reflective of present performance.

Inspection Report# : 2017001 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Evaluate Heat Loads on Control Room Air Conditioning System
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to properly evaluate heat loads on the control room air conditioning system. Specifically, the licensee used a non-conservative assumption of the number of persons in the control room envelope when calculating the required capacity of the system. The licensee had only assumed there would be six personnel to be in the technical support center (which is included in the control room envelope) during a design basis event. However, the emergency plan nominally staffed the technical support center with 25 station personnel, and an additional five NRC personnel. The licensee entered this issue into their corrective action program as Condition Report CR-2017-000744.

The failure to evaluate heat loads to determine the required system capacity is a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it was associated with the design control 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. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the 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 safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The inspectors determined that no cross-cutting aspect was assigned because the performance deficiency was not reflective of present performance.

Inspection Report# : 2017001 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Use of Non-Design Fouling Factor for Component Cooling Water Heat Exchanger in Station Service Water Tornado Missile Calculation
The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," involving the use of a non-design fouling factor for the component cooling water heat exchanger in a design basis calculation evaluating a tornado missile strike of station service water system piping. The licensee entered this issue into their corrective action program as Issue Report IR-2017-001465.

The team determined that the failure to use the design fouling factor for the component cooling water heat exchanger in the tornado missile analysis of the station service water system discharge piping was a performance deficiency. This 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 of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the use of a non-conservative heat exchanger fouling factor in a design basis accident analysis resulted in a more restrictive temperature limit (i.e., less than the technical specification allowed value) of the safe shutdown impoundment. 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 (1) did not represent a loss of operability or functionality; (2) did not represent an actual loss of safety function of the system or train; (3) did not result in the loss of one or more trains of non-technical specification equipment; and (4) did not screen as potentially risk-significant due to seismic, flooding, or severe weather. The team determined that this finding did not have a cross-cutting aspect because the most significant contributor to the performance deficiency did not reflect current licensee performance. Specifically, the licensee performed the calculation in 1988, therefore, the performance deficiency occurred outside of the nominal three-year period for "present performance."

Inspection Report# : 2017001 *(pdf)*

Significance: G Mar 27, 2017
Identified By: NRC
Item Type: NCV Non-Cited Violation
Failure to Promptly Correct a Condition Adverse to Quality
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," associated with the licensee's failure to take timely corrective actions for a previously identified condition adverse to quality. Specifically, the licensee failed to verify the adequacy of the design of the unit 1 120 VAC vital bus inverter 1PC1 with respect to use of alternate AC power to the inverter. The 120 VAC calculation did not properly account for low voltage when the buses are supplied from their alternate source. This issue does not represent an immediate safety concern because, following the inspectors identification, the licensee performed an operability evaluation which established a reasonable expectation of operability. The licensee entered this issue into their corrective action program as CR-2017-001296.

The licensee's failure to take timely and adequate corrective actions to correct a condition adverse to quality was a performance deficiency. The performance deficiency is more than minor, and therefore a finding, because it is 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 failure to correct the low voltage susceptibility resulted in delayed restoration of a bus following the failure of the swing inverter to sync. Using Inspection Manual Chapter 0609, Attachment 04, "Initial Characterization of Findings," dated October 7, 2016, and Inspection Manual Chapter 0609, Appendix A, "Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," the inspectors determined the 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 safety-significant for greater than 24 hours in accordance with the licensee's maintenance rule program. The finding has a human performance cross-cutting aspect associated with resources, in that, the licensee failed to ensure that resources were adequate to support nuclear safety [H.1].

Inspection Report# : 2017001 *(pdf)*

Significance: G Nov 13, 2015
Identified By: NRC
Item Type: VIO Violation
Failure to Evaluate the Lack of Missile Protection on the Turbine Driven Auxiliary Feedwater Pumps' Steam Exhaust Piping
Green. The team identified a cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to evaluate the lack of missile protection on the turbine driven auxiliary feedwater pumps' steam exhaust piping. Specifically, since June 13, 2012, the licensee failed to verify the adequacy of design of the turbine driven auxiliary feedwater pumps' steam exhaust piping to withstand impact from a tornado driven missile hazard, or to evaluate for exemption from missile protection requirements using an approved methodology. This issue does not represent an immediate safety concern because the licensee performed an operability evaluation, which established a reasonable expectation of operability. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2015-007869.

The licensee's failure to analyze the effects of a tornado missile strike on the turbine driven auxiliary feedwater pumps' steam exhaust piping was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events factors 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 failed to evaluate a design nonconformance on the turbine driven auxiliary feedwater pumps' steam exhaust piping for lack of missile protection. 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 team determined that the finding is of very low safety significance (Green) because (1) the finding was not a deficiency affecting the design or qualification of a mitigating system; (2) the finding did not represent a loss of system and/or function; (3) the finding did not represent an actual loss of function of a single train for greater than its technical specification allowed outage time; and (4) the finding does not represent an actual loss of function of one or more non-technical specification trains of equipment designated as high safety-significant in accordance with the licensee's maintenance rule program for greater than 24

hours. The finding has a human performance cross-cutting aspect associated with conservative bias because individuals failed to use decision making practices that emphasize prudent choices over those that are simply allowable [H.14]. (Section 4OA2.5a)

Inspection Report# : 2015008 *(pdf)*

Barrier Integrity

Significance: G Jun 30, 2017
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 and implement required risk management actions associated with disabling a hazard barrier and breeching the control room envelope when blocking open door E-40A. This issue did not represent an immediate safety concern because, at the time of identification, the licensee stopped the activity and secured the door. The licensee entered this issue into the corrective action program for resolution as Condition Report CR-2017-006019.

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 configuration control attribute of the Barrier Integrity Cornerstone and affected the associated objective to ensure physical design barriers protect the public from radionuclide releases caused by accidents or events. 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. A senior reactor analyst determined the finding to have very low safety significance (Green) based on combining the effects of the degradation of the radiological barrier and tornado missile barrier functions. The analyst performed a qualitative review of the screening criteria in Manual Chapter 0609, Appendix A, "The Significance Determination Process for Findings At-Power," for the degradation of the radiological barrier function for the control room and considered the short exposure time (2.9E-5 years) and the Comanche Peak specific high winds frequency (3.0E-4/year) for the tornado missile barrier function of the control room to determine that the incremental core damage probability deficit and the incremental large early release probability deficit were less than 1E-6 and 1E-7, respectively. The finding has a human performance cross-cutting aspect associated with procedure adherence, in that operations personnel failed to follow procedures when allowing door E-40A to be opened.
Inspection Report# : 2017002 *(pdf)*

Emergency Preparedness
Occupational Radiation Safety
Public Radiation Safety
Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security

inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Current data as of : February 01, 2018

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