

Palo Verde 2 2Q/2013 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Untimely Corrective Action for Condition Adverse to Fire Protection

The inspectors identified a Green non-cited violation of License Conditions 2.C.7, 2.C.6, and 2.F for Palo Verde Units 1, 2, and 3 for the licensee's failure to take timely corrective actions for a condition adverse to fire protection. Specifically, in 2004, the licensee identified that line thermal detection for 13.8 Kilo Volt cabling in three fire areas were not in conformance with vendor technical documents. Since then, corrective actions for the condition failed to be implemented as scheduled. After several spurious actuations of the fire protection system, the licensee installed the appropriately rated wire in Unit 1 and will install the appropriate detection in Units 2 and 3, respectively, at the next available outage. The licensee entered this issue into the licensee's corrective action program as Palo Verde Action Request (PVAR) 4201472.

The failure to take timely corrective actions for a condition adverse to fire protection was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the protection against external factors of the Initiating Events Cornerstone and its objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors evaluated the significance of the issue under the Significance Determination Process, as defined in Inspection Manual Chapter 0609.04, "Initial Characterization of Findings," and Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process." The finding was determined to be a low degradation of the fixed fire protection system and screens to green using step 1.3.1. The inspectors determined this finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to prioritize corrective actions for conditions adverse to fire protection [P.1(c)].

Inspection Report# : [2012004](#) (*pdf*)

Mitigating Systems

Significance: G Jun 30, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Prevent Recurrence of a Significant Condition Adverse to Quality

A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," occurred because the licensee failed to correct and prevent recurrence of a significant condition adverse to quality associated with the emergency diesel generator automatic voltage regulator circuitry. Specifically, from February 2011 to January 2013, the licensee failed to correct the cause of an induced voltage transient in the automatic voltage regulator circuitry, resulting in the Unit 2 train B diesel generator not reaching rated voltage during a surveillance test. The licensee entered the issue into their corrective action program as CRDR 4329997 and replaced and retested electrical components that could allow a voltage transient on the instantaneous pre-positioning circuit board.

The performance deficiency associated with this finding is the failure of the licensee to correct and prevent recurrence of a significant condition adverse to quality. 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 of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The senior resident inspector performed the initial significance determination for the train B emergency diesel generator (EDG) failure. The inspector evaluated the significance of the issue under the SDP, as defined in Inspection Manual Chapter 0609.04, "Initial Characterization of Findings," and IMC 0609, Appendix A, "The Significance Determination Process (SDP) for Findings at-Power." The finding screened to a detailed risk evaluation because it involved a potential loss of one train of safety related equipment for longer than the technical specification allowed outage time. A Region IV senior reactor analyst performed the detailed risk evaluation. The exposure period was 43 days. The change to the CDF was $7.2E-7$ /year (Green). The finding was not significant to the large early release frequency. The dominant core damage sequences included loss of offsite power events that lead to station blackout conditions. The gas turbine generators, train A emergency diesel generator, and the DC battery life extension to six hours helped to limit the risk. The finding has a cross-cutting aspect in the area of Problem Identification and Resolution associated with the corrective action program component because the licensee failed to thoroughly evaluate problems such that the resolutions address causes and extent of condition, as necessary [P.1(c)].

Inspection Report# : [2013003](#) (pdf)

Significance: G Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Multiple Failures to Identify Conditions Adverse to Quality

The inspectors identified two examples of a Green NCV of 10 CFR Part 50, Appendix B, Criterion XVI "Corrective Action," for the failure of the licensee to promptly identify and correct conditions adverse to quality. Specifically, on July 19, 2012, personnel failed to follow Procedure 01DP-0AP12, "Palo Verde Action Request Processing," and enter into the corrective action process a failure to comply with technical specifications to enter limiting condition for operation 3.0.3 when maintenance activities rendered safety related inverters inoperable. In addition, on May 2, 2011, the licensee also failed to enter an unanalyzed diversion of emergency core cooling system flow into the corrective action process, despite procedural guidance to the contrary. The licensee entered the issues into the corrective action program as Palo Verde Action Request (PVAR) 4347283 and PVAR 4389514 and is assessing corrective actions.

The inspectors concluded that the failure to promptly identify and correct conditions adverse to quality was a performance deficiency. The inspectors determined the performance deficiency is more than minor, and therefore a finding, because it adversely affected the equipment performance attribute of the Mitigating Systems Cornerstone and its objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors determined the two issues had similar causal factors and should be documented as one NCV in accordance with NRC enforcement guidance. The inspectors evaluated the significance of each issue under the SDP, as defined in Inspection Manual Chapter 0609.04, "Initial Characterization of Findings," and IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." For the issue associated with inoperable safety related inverters, the inspectors determined the finding to be of very low safety significance (Green) because all questions in Exhibit 2.A could be answered no. For the issue associated with an unanalyzed condition of the high pressure safety injection system, the inspectors determined that the finding represented a loss of system function and needed a detailed evaluation. The inspectors used the Palo Verde Standardized Plant Analysis Risk model, Revision 8.20, with a truncation limit of E-11 and performed a bounding significance determination and found the finding to be of very low safety significance (Green). The bounding change to the core damage frequency was $2.4E-9$ /year. The dominant core damage sequences included: medium break loss of coolant accident, system transient, and steam generator tube rupture. The very short exposure period minimized the significance. A Region IV senior reactor analyst reviewed the results and agreed with the conclusions. This finding

has a cross-cutting aspect in the area of human performance associated with the decision making component because the licensee failed to use a systematic process for dealing uncertain conditions adverse to quality [H.1(a)].

Inspection Report# : [2013002](#) (*pdf*)

Significance: G Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Comply with Technical Specifications

A self-revealing, Green NCV of Technical Specification (TS) Limiting Condition for Operation (LCO) 3.0.4 was identified after Unit 2 operators entered a mode with a limiting condition for operation not met. Specifically, following maintenance on auxiliary feedwater pump steam supply valve, SGA-UV-138, plant personnel did not ensure the requirements of TS 3.7.5, "Auxiliary Feedwater System," were met prior to entering Mode 3. During subsequent testing, a bonnet steam leak was discovered on the valve, resulting in the valve being declared inoperable and the plant returned to Mode 5 for repairs. The licensee restored the valve to operable status before re-entering Mode 3. The licensee entered the issue into the corrective action program (CAP) as CRDR 4284491 and is evaluating further corrective actions.

The inspectors concluded that the failure of plant personnel to comply with technical specifications was a performance deficiency. The inspectors concluded the performance deficiency is more than minor because it 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 to prevent undesirable consequences. The inspectors evaluated the significance of the issue under the SDP, as defined in Inspection Manual Chapter 0609.04, "Initial Characterization of Findings," and 0609 Appendix A, "The SDP for Findings at-Power." Inspectors concluded that the finding was of very low safety significance (Green) because the finding is not a design or qualification issue, 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 a seismic, flooding, or severe weather initiating event. The inspectors determined this finding has a cross-cutting aspect in the area of human performance associated with the component of resources because the licensee failed to provide an adequate work package to ensure the valve was operable prior to entering Mode 3 [H.2(c)].

Inspection Report# : [2013002](#) (*pdf*)

Significance: G Mar 31, 2013

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Shutdown Cooling Piping Failure

A self-revealing, Green NCV of 10 CFR Part 50, Appendix B, Criterion III "Design Control," was identified for the failure of the licensee to assure that applicable regulatory requirements and the design basis are correctly translated into specifications, drawings, procedures, and instructions. Specifically, operations personnel altered the piping configuration with an added fitting to a low pressure safety injection drain line. As a result the pipe failed during shutdown cooling operations, rendering that train inoperable. The licensee repaired the weld in accordance with ASME Code, entered the issue into the licensee's CAP as CRDR 4263357, and revised procedural guidance to return components to their design configuration.

The inspectors concluded that the failure of the licensee to correctly translate the design basis into specifications, drawings, procedures and instructions was a performance deficiency. The performance deficiency was more than minor, therefore a finding, because it adversely affected the equipment performance attribute of the Mitigating Systems Cornerstone and its objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the significance of the issue under the

SDP, as defined in Inspection Manual Chapter 0609.04, “Initial Characterization of Findings,” and IMC 0609, Appendix G, “Shut Down Operations Significance Determination Process.” The inspectors determined that because there was an injection path available, the leak could be isolated prior to depletion of the reactor water tank, and the steam generators were available for heat removal. As a result, the issue was found to be of very low safety significance (Green). The inspectors determined the finding had no cross-cutting issues because it is not indicative of current performance.

Inspection Report# : [2013002](#) (*pdf*)

Significance: G Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify and Correct a Condition Adverse to Fire Protection

The inspectors identified a Green non-cited violation of License Conditions 2.C.7, 2.C.6, and 2.F for Palo Verde Units 1, 2, and 3 for the licensee’s failure to identify and correct a condition adverse to fire protection. Specifically, on November 19, 2012, inspectors questioned operations personnel and identified that operators did not know the locations of sound powered telephone equipment, were unfamiliar with their use, and unfamiliar with procedural guidance for their use. This is a communications device used for post-fire safe shutdown credited in the fire protection program and emergency plan. The lack of familiarity with location and use of these communication devices would have adversely affected operations personnel response to an emergency. The licensee completed a self-assessment of emergency preparedness communication on October 31, 2012, and did not identify these weaknesses. The licensee immediately issued a night order and informed operations personnel of the location of the sound powered phones and procedural guidance. The licensee entered this issue into the licensee’s corrective action program as Palo Verde Action Request 4294407.

The failure to identify and correct a condition adverse to fire protection was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it adversely affected the human performance attribute of the Mitigating Systems Cornerstone and its objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the significance of the issue under the Significance Determination Process, as defined in Inspection Manual Chapter 0609.04, “Initial Characterization of Findings,” and Inspection Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process.” The finding was determined to be a low degradation of the post-fire safe shutdown program element and screens to Green using Step 1.3.1. The inspectors determined this finding has a crosscutting aspect in the area of problem identification and resolution associated with the self and independent assessments component because the licensee failed to conduct a self-assessment of sufficient depth, that was comprehensive and self-critical, which failed to recognize that operator knowledge was lacking for the use of some communication device [P.3(a)].

Inspection Report# : [2012005](#) (*pdf*)

Significance: G Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Licensed Operator Examination Integrity

The inspectors identified a non-cited violation of 10 CFR 55.49, “Integrity of Examinations and Tests,” for the failure of the licensee to ensure the integrity of the licensed operator biennial written examinations. During the 2012 biennial written examination cycle, the exams were administered in a simulator environment that lacked positive controls to ensure that operators could not observe the reference material or examinations of other operators. Operators were allowed to review engineering schematics while standing at a table which allowed an angle to observe the computer screen and desk of another examinee approximately 5 feet away. Having the ability to view exam reference material being displayed on the computer screen during exam administration is considered an exam integrity compromise.

However, an evaluation of the written exam results and interviews with the licensed operators signed in on an exam security agreement 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 Action Request PVAR-4238204.

The failure of the licensee's training staff to maintain the integrity of examinations administered to licensed operations personnel 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 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 biennial written examinations could be a precursor to a more significant event. Using NRC Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 4, Table 1 and 2 worksheets; and the corresponding Appendix I, "Licensed Operator Requalification Significance Determination Process," the finding was determined to have very low safety significance (Green). Although the 2012 finding resulted in a compromise of the integrity of biennial written examinations, compensatory actions were immediately taken, and the equitable and consistent administration of the biennial written examination was not actually affected by this compromise. This finding has a cross-cutting aspect in the area of human performance associated with the work control component because the licensee failed to adequately plan work activities that incorporated job site conditions, including environmental conditions [H.3(a)].

Inspection Report# : [2012005](#) (pdf)

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correct Scupper Obstruction

The inspectors identified a Green non-cited violation of 10 CFR Part 50 Appendix B, Criterion XVI, "Corrective Action," for the failure of the licensee to correct a condition adverse to quality. Specifically, on November 7, 2011, after the inspectors notified the licensee about scupper obstruction on safety related building roofs, the licensee failed to enter this issue into the corrective action program and take appropriate corrective actions to remove the obstructions. The licensee rediscovered this condition during post Fukushima walkdowns in response to a Request for Information pursuant to 10 CRF 50.54(f), removed the obstructions and established walkdowns to ensure the scuppers remained unobstructed. The licensee has entered the issue into the corrective action program as PVAR 4255561.

The inspectors concluded that the failure of the licensee to correct a condition adverse to quality was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the protection against external events of the Mitigating Systems Cornerstone and its objective to ensure the availability, reliability, and capability of systems that respond to initialing events to prevent undesirable consequences. The inspectors evaluated the significance of the issue under the Significance Determination Process, as defined in Inspection Manual Chapter 0609.04, "Initial Characterization of Findings," and 0609 Appendix A, "The Significance Determination Process (SDP) for Findings at-Power." The inspectors concluded the finding was of very low safety-significance (Green) because the finding did not result in the complete loss of a safety function due to an external event. The inspectors determined this finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program component because the licensee failed to have a low threshold for entering issues into the corrective action program [P.1(a)].

Inspection Report# : [2012004](#) (pdf)

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Operability Determination for ARD Relay Failures

The inspectors identified a Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure of operations and engineering personnel to follow station procedures to provide an adequate technical justification for continued operation of a degraded structure, system, or component. After a ventilation damper failed to close during a functional stroke test, plant personnel did not consider previous operability determinations and failed to provide supporting analysis to confirm there was no reduction in reliability of ARD relays. This issue is captured in the corrective action program as PVAR 4255816. The licensee has successfully cycled all ARD relays which could be performed during at-power operations, scheduled testing for remaining relays, and initiated a design change document that will determine a permanent substitute for the ARD660UR DC relays.

The failure of the operations and engineering personnel to follow Procedure 40DP-9OP26 to evaluate the operability of a structure, system, or component was a performance deficiency. The inspectors concluded the performance deficiency was more than minor because it 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 to prevent undesirable consequences. The inspectors evaluated the significance of the issue under the Significance Determination Process, as defined in Inspection Manual Chapter 0609.04, “Initial Characterization of Findings,” and 0609 Appendix A, “The Significance Determination Process (SDP) for Findings at-Power.” Inspectors concluded that the finding was of very low safety-significance (Green) because the finding is not a design or qualification issue, 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 a seismic, flooding, or severe weather initiating event. The inspectors determined that the finding has a cross-cutting aspect in the area of human performance associated with decision making. Specifically, the licensee did not communicate the results of the apparent cause evaluation for the first three ARD relay failures to the appropriate operations personnel [H.1(c)].

Inspection Report# : [2012004](#) (*pdf*)

Barrier Integrity

Significance:  Jun 30, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Operability Determination Procedure for Maintaining Administrative Limits

The inspectors identified a Green noncited violation of 10 CFR Part 50 Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure of operations and engineering personnel to follow station procedures to perform operability determinations and functional assessments. Specifically, plant personnel did not maintain appropriate controls to ensure that the temperature limit established in the operability determination for the spent fuel pool criticality analysis was maintained. The licensee entered the issue into their corrective action program as PVAR 4380424, began taking more frequent readings of spent fuel pool temperature indicators, and lowered the spent fuel pool temperature alarm setpoint.

The failure to follow Procedure 40DP-9OP26 for performing operability determinations is a performance deficiency. This performance deficiency is more than minor, and therefore a finding, because it is associated with the Barrier Integrity Cornerstone attribute of procedure quality and it adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accident or events. The inspectors evaluated the significance of the finding using Inspection Manual Chapter 0609.04, “Initial Characterization of Findings,” and IMC 0609, Appendix A, “The Significance Determination Process (SDP) for

Findings At-Power.” The inspectors reviewed all Barrier Integrity screening questions in IMC 0609, Appendix A, Exhibit 3 Section D, and all questions were answered “No.” Therefore, the finding was determined to be of very low safety significance. The inspectors determined that the finding has a cross-cutting aspect in the area of human performance associated with decision making. Specifically, the licensee did not communicate the administrative limits established in the spent fuel pool criticality operability determination to appropriate operations personnel [H.1(c)].

Inspection Report# : [2013003](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Pressure Testing of the Reactor Vessel Flange Leak-Off Lines

Inspectors identified a non-cited violation of 10 CFR 50.55a(g)(4) involving the licensee’s failure to perform a system pressure test of the reactor vessel flange leak off-line of Units 1, 2, and 3 in accordance with the applicable edition of Section XI of the ASME Code. Contrary to the above, prior to October 10, 2012, the licensee failed to perform the required pressure test of the reactor vessel flange seal leak-off line for all three units. Specifically, the licensee failed to implement the ASME Code, Section XI, Class 2 requirements for pressure retaining components as provided by Article IWC-5220, “System Leakage Test.” The licensee entered the finding into their corrective action program as Palo Verde Action Request 4269674.

The inspectors determined that the licensee’s failure to perform a pressure test of the reactor vessel flange leak-off line was a performance deficiency. The performance deficiency was more than minor because it is associated with the Barrier Integrity Cornerstone attribute of systems, structures and components and barrier performance, and adversely affects the cornerstone objective to provide a reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Manual Chapter 0609, Attachment A, “The Significant Determination Process (SDP) for Findings At-Power,” the finding was determined to be of very low safety significance (Green) because the finding did not result in exceeding the reactor coolant system leak rate for a small loss-of-coolant accident, and did not affect other systems used to mitigate a loss-of-coolant accident resulting in a total loss of their function. This issue did not have a cross-cutting aspect associated with it because it is not indicative of current performance.

Inspection Report# : [2012005](#) (*pdf*)

Significance:  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Tracking of a Functional Assessment for Spent Fuel Pool Heat Load

The inspectors identified a Green non-cited violation of 10 CFR Part 50 Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” for the failure of operations and engineering personnel to follow station procedures to perform operability determinations and functional assessments. Specifically, plant personnel did not maintain appropriate controls to ensure that the heat load and temperature limits established in the functional assessment for the spent fuel pools were monitored. This issue is captured in Palo Verde Action Request 4251108. To restore compliance, the licensee issued a technical specification component condition record to prohibit entry into Mode 4 following a refueling outage, until decay heat load in the spent fuel pool is verified to be less than the more restrictive limit established in the functional assessment.

The failure to follow Procedure 40DP-9OP26 for performing functional assessments is a performance deficiency. This performance deficiency was more than minor because it is associated with the Barrier Integrity Cornerstone attribute of design control and it adversely affected the cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accident or events. Using Inspection Manual Chapter 0609.04, “Initial Characterization of Findings,” and Manual Chapter 0609 Appendix A, “The Significance

Determination Process (SDP) for Findings At-Power,” the inspectors determined that the finding had very low safety significance (Green) because the finding was confirmed not to adversely affect decay heat removal capabilities from the spent fuel pool causing the pool temperature to exceed the maximum analyzed temperature limit specified in the site-specific licensing basis. The inspectors determined that the finding had a cross-cutting aspect in the area of human performance associated with decision making. Specifically, Palo Verde did not communicate the procedural limits established in the spent fuel pool functional assessment to appropriate operations personnel [H.1(c)].

Inspection Report# : [2012005](#) (*pdf*)

Emergency Preparedness

Significance: G Mar 31, 2013

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to identify weak performance during an exercise

The inspectors identified a Green NCV of 10 CFR 50.47(b)(14) for the licensee’s failure to identify and correct a performance deficiency during an evaluated exercise. Specifically, the licensee failed to identify that the Emergency Director in the Simulator Control Room did not evaluate emergency action level RS-1 when information was available indicating a need to upgrade the emergency classification because of offsite radiation dose.

The failure to identify a deficiency occurring during a drill and ensure correction is a performance deficiency within the licensee’s control. The finding is more than minor because the failure to identify a deficiency and ensure correction impacts the Emergency Preparedness cornerstone objective associated with the emergency response organization performance cornerstone attribute. The finding is a non-cited violation of 10 CFR 50.47(b)(14). The finding was evaluated using the Emergency Preparedness SDP and identified as having very low safety significance because it was a failure to comply with NRC requirements and was not a loss of the planning standard function because the classification deficiency was associated with a successful performance indicator opportunity. The Emergency Director declared the correct emergency classification within fifteen minutes of performing the dose assessment report using an emergency action level for which conditions currently existed, although this was not the first emergency action level that applied. This issue was entered into the CAP as PVAR 4365021. The finding was assigned a cross-cutting aspect of ‘Low Threshold,’ because the licensee failed to completely and accurately recognize a performance deficiency [P.1.a]

Inspection Report# : [2013002](#) (*pdf*)

Significance: G Dec 31, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Technical Support Center Diesel Generator Not Restored Following Maintenance

A self revealing Green non-cited violation of 10 CFR 50.47(b)(8) was identified for the failure to maintain adequate facilities to support emergency response. Specifically, the licensee found the technical support center battery disconnect switch had not been restored following maintenance activities. This configuration would have rendered the diesel generator unable to start automatically as designed in the event of a loss of off-site power. The licensee initiated immediate corrective actions to restore the technical support center diesel generator to a functional configuration and has begun implementation of a more formal process for component configuration verification of critical technical support center equipment. The licensee has entered this issue into their corrective action program as Palo Verde Action Request 4165625.

The failure to follow Procedure 40OP-9NG01 for performing a functional test of 480V switchgear following

maintenance activities is a performance deficiency. This performance deficiency was more than minor because it is associated with the Emergency Preparedness Cornerstone attribute of facilities and equipment and it adversely affected 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. The inspectors evaluated the significance of the issue under the Significance Determination Process, as defined in Inspection Manual Chapter 0609.04, "Initial Characterization of Findings," and Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process." The finding was determined to be of very low safety significance (Green) because the degraded planning standard function did not result in the loss of technical support center functionality for longer than 7 days. The inspectors determined that the finding had a cross-cutting aspect in the area of human performance associated with resources. Specifically, the licensee's work control procedures did not include critical technical support center systems to ensure that technical support center configuration control was maintained commensurate with its significance [H.2(c)].

Inspection Report# : [2012005](#) (pdf)

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform 50.54(q) Evaluation

Inspectors identified a Severity Level IV, non-cited violation of 10 CFR 50.54 (q), "Conditions of licenses," and an associated Green finding for the licensee's failure to perform an appropriate design scope change, which resulted in the reduction in effectiveness of the emergency plan. Specifically, on May 19, 2011, the licensee completed a modification to revise protective area lightning power sources and removed ground fault protections on a circuit breaker attached to the bus, which powers the technical support center. This change created a condition that would remove power to the technical support center and prevent emergency plan required back up power from being able to power the bus. On August 10, 2012, a lighting fault caused a complete loss of power to the technical support center, demonstrating that this change decreased the effectiveness of the emergency plan. On September 26, 2012, the licensee reactivated the ground fault protection for the circuit breaker and established compensatory measures to restore power to ensure technical support center staffing will not be challenged. The licensee entered this into their corrective action program as condition report disposition request 4230209.

The failure to perform an appropriate design scope change was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it affected the facilities and equipment attribute of the Emergency Preparedness Cornerstone and its 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. The inspectors evaluated the significance of the issue under the Significance Determination Process, as defined in Inspection Manual Chapter 0609.04, "Initial Characterization of Findings," and Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process." The finding was determined to be of very low safety significance (Green). Additionally, the violation of 10 CFR 50.54 (q) impacted the ability of the NRC to perform its regulatory oversight function and was dispositioned using traditional enforcement. This violation was determined to be a Severity Level IV violation per Section 6.6 of the NRC Enforcement Policy because the violation was not associated with licensee's ability to meet or implement any regulatory requirement related to assessment or notification. Although the regulatory requirement could be implemented during the response to an actual emergency, the implementation would be degraded. The inspectors determined this finding has a crosscutting aspect in the area of human performance associated with the work practices component because the licensee failed to ensure supervisory management and oversight of contractors such that nuclear safety is supported [H.4.(c)].

Inspection Report# : [2012004](#) (pdf)

Significance:  Sep 30, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Declare an Unusual Event

The inspectors identified a Green non-cited violation of 10 CFR 50.54(q) for the failure of operations personnel to adequately implement the emergency plan. Specifically, on August 26, 2012, auxiliary operators felt vibratory ground motion inside the protected area at 12:31pm and again at 1:58pm. The United States Geological Survey (USGS) confirmed that two earthquakes, of magnitude 5.3 and 5.5 respectively, occurred at those times in the area of the plant. Plant operators did not declare an Unusual Event in accordance with the emergency plan. The licensee entered the issue into the corrective action program as PVAR 4255819 and initiated an apparent cause evaluation to identify the cause and corrective actions.

The failure to implement the emergency plan and declare an Unusual Event was a performance deficiency. The performance deficiency was more than minor and therefore a finding, because it affected the Emergency Response Organization performance attribute of the Emergency Preparedness cornerstone and affected the cornerstone objective to ensure 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 Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," Attachment 1, the finding was determined to have very low safety - significance (Green) because the actual event implementation problem was associated with an Unusual Event. This finding has a crosscutting aspect in the area of human performance associated with the resources component because the licensee failed to ensure training of personnel was adequate to assure proper implementation of the emergency plan [H.2.(b)].
Inspection Report# : [2012004](#) (*pdf*)

Occupational Radiation Safety

Significance: N/A Mar 31, 2013

Identified By: NRC

Item Type: VIO Violation

Failure to Maintain the Updated Final Safety Analysis Report for Radwaste Systems and Processes

The inspectors identified a Severity Level IV violation of 10 CFR 50.71(e), "Maintenance of Records, Making of Reports," with two examples for the failure to restore compliance within a reasonable time after a previous Severity Level IV non-cited violation of 10 CFR 50.71(e) was identified. The violation was identified because the licensee failed to periodically update the Updated Final Safety Analysis Report (UFSAR) with all changes made in the facility or procedures. Specifically,

Example 1: From 1988 to 2013, the licensee did not update Chapter 11.2.2.3, "Liquid Radwaste System," with a description of the temporary adsorption tanks and their use. The licensee has entered this violation into their corrective action program as PVAR 3075089.

Example 2: From December 2003 to January 2013, the licensee made changes to the facility and procedures as described in the UFSAR, and performed safety analyses and evaluations in support of these changes, but failed to update the UFSAR to include these changes. Specifically, the licensee built the old steam generator storage facility used for long-term storage of radioactive waste (six replaced steam generators and three reactor vessel heads) on the owner controlled site until decommissioning. The licensee has entered this violation into their corrective action program as Condition Report (CR) 3398042 and PVAR 4330483.

This violation is more than minor because the NRC relies on licensees to identify and report conditions or events meeting the criteria specified in the regulations in order to perform its regulatory function. Because this issue affected the NRC's ability to perform its regulatory function, it was evaluated using the traditional enforcement process. The issue was characterized as a Severity Level IV violation in accordance with Section 6.1.d.3 of the NRC Enforcement Policy because the erroneous information in the UFSAR was not used to make an unacceptable change to the facility or procedures. A cross-cutting aspect was not assigned because the violation was handled through traditional

enforcement.

Inspection Report# : [2013002](#) (*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 03, 2013