Palo Verde 2
2Q/2005 Plant Inspection Findings

Initiating Events

Significance: G Apr 03, 2005
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
INADVERTENT SAFETY INJECTION DURING INTEGRATED SAFEGUARDS TESTING
A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for an inadequate surveillance procedure which resulted in an inadvertent safety injection and subsequent reactor coolant system level transient. Specifically, an integrated safeguards test procedure cautioned operations personnel to evaluate the pressure difference between the reactor coolant system and safety injection tanks prior to any actuation that opened the safety injection tank outlet isolation valves. The procedure was inadequate in that it failed to caution the operator to consider level differences which could potentially impact the total pressure head of the system. This issue involved human performance crosscutting aspects associated with inadequate operations procedures. This issue was entered into the corrective action program as Condition Report/Disposition Request 2786378.

The finding is determined to be greater than minor because it affected the procedure quality attribute of the initiating events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. Using Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process," this finding is determined to have very low safety significance because the event did not constitute a loss of level control and did not represent a finding requiring quantitative assessment. The finding did not increase the likelihood of loss or cause a degradation in the ability to restore decay heat removal, reactor coolant system inventory, offsite power, alternate core cooling, or containment
Inspection Report# : 2005003*(pdf)*

Significance: G Nov 11, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow the Operability Determination Process
A noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for not following the timeliness requirements noted in Procedure 40DP-9OP26, "Operability Determination," following the identification of a nonconforming condition associated with a pressurizer heater sleeve modification tolerances. Procedure 40DP-9OP26 requires that the shift manager or shift technical advisor be immediately notified of indications of a potential non-conformances. A condition report/disposition request was initiated on November 9, 2004, but neither the shift manager, nor the shift technical advisor were notified until Wednesday, November 10, 2004. This issue also had problem identification and resolution crosscutting aspects associated with engineering personnel not informing the control room in a timely manner and is similar to issues noted in adverse Condition Report/Disposition Requests 2733983 and 2734037, issued on August 26, 2004. The issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2754848.

This finding is greater than minor since the failure to follow the operability determination process, if left uncorrected, would become a more significant safety concern. Using the Phase 1 Worksheet in Manual Chapter 0609, "Significance Determination Process," the finding is determined to have very low safety significance because it only affected the initiating events cornerstone and did not result in actual degradation of the reactor coolant system boundary.

Inspection Report# : 2004005*(pdf)*

Mitigating Systems

Significance: G May 17, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO CORRECT A CONDITION ADVERSE TO QUALITY
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to identify and correct a deficiency in the method of testing the auxiliary feedwater pump discharge check valves. Specifically, in 1998 the licensee identified the need to test the auxiliary feedwater pump Train B discharge check valve for leak tightness, but failed to implement the appropriate corrective actions to incorporate testing into Procedure 73ST-9XI38, "AF Pumps Discharge Check Valves - Inservice Test." This

issue involved problem identification and resolution crosscutting aspects associated with the failure to implement timely corrective actions. This issue was entered into the corrective action program as Condition Report/Disposition Request 2800972.

The finding is greater than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone and affects the cornerstone objective to ensure the reliability and availability of systems that respond to initiating events. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because there was no actual loss of safety function
Inspection Report# : 2005003*(pdf)*

Significance: G Apr 29, 2005
Identified By: Self Disclosing
Item Type: FIN Finding
INADVERTENT ESFAS ACTUATION
A self-revealing finding was identified for the failure to properly sequence work to maintain power to engineered safety features system cabinet Train B. Specifically, operations personnel prematurely implemented a tagout permit prior to restoring the redundant power supply following maintenance. The work sequencing performance deficiency resulted in the loss of vital power to the cabinet; thereby, initiating an inadvertent engineered safety features actuation. This issue involved human performance crosscutting aspects associated with inadequate communications between work control groups and a poor awareness of the plant configuration. This issue was entered into the corrective action program as Condition Report/Disposition Request 2796508.

The finding is greater than minor since it was associated with the configuration control attribute of the mitigating systems cornerstone and affects the cornerstone objective to ensure the reliability and availability of systems that respond to initiating events. This finding cannot be evaluated by the significance determination process because Manual Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," do not apply when the reactor is defueled. This finding is determined to be of very low safety significance by NRC management review because it was a deficiency that did not result in actual safety consequences since the reactor was defueled and a majority of the Train B equipment was tagged out for maintenance.
Inspection Report# : 2005003*(pdf)*

Significance: G Apr 19, 2005
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO TAKE ADEQUATE CORRECTIVE ACTIONS TO PREVENT BOLT FAILURES
A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to implement corrective actions to preclude repetition of a significant condition adverse to quality. Specifically, in 1988 the licensee identified that the gasket retaining bolts on several 16 inch butterfly valves were susceptible to stress corrosion cracking. The licensee only replaced bolts on the 16 inch valves with the identified failures and did not consider the need to replace bolts on similarly designed 10 inch and 24 inch valves. Consequently, in April 2005, the safety injection inboard and outboard containment sump isolation valves were discovered to have missing or degraded bolts and the 10 inch containment spray to shut down cooling heat exchanger valves were determined to have suspect bolts. This issue involved problem identification and resolution crosscutting aspects associated with the failure to perform an adequate transportability review. This issue was entered into the corrective action program as Condition Report/Disposition Request 2791716.

The finding is greater than minor since it affects the equipment performance attribute of the mitigating systems cornerstone objective to ensure the reliability and availability of systems that respond to initiating events. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because there was no actual loss of safety function
Inspection Report# : 2005003*(pdf)*

Significance: SL-IV Mar 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO OBTAIN PRIOR NRC APPROVAL FOR A DESIGN CHANGE TO THE FACILITY
A Severity Level IV non-cited violation of 10 CFR 50.59 requirements was identified for the failure to obtain a license amendment for a permanent modification to all six station emergency diesel generators. The inspectors determined that there were two modifications performed on the jacket water system of each emergency diesel generator. Condition Report/Disposition Request (CRDR) 130208, in 1993, directed the abandonment of the jacket water surge tank makeup valves on both emergency diesel generators of all three units. A recent modification, Design Modification Work Order 220055 in 2003, removed the surge tank low level alarm on both emergency diesel generators of all three units. The licensee replaced these two automatic actions (automatic makeup and low level alarm) with a manual operator action to fill, as necessary, every 12 hours during rounds. The inspectors reviewed the updated final safety analysis report (UFSAR) and design basis documents, and found that the automatic jacket water surge tank makeup, and the low level alarm, were both shown in UFSAR descriptions, drawings, and design value tables.

The issue was determined to be more than minor, through Inspection Manual Chapter 0612, Appendix B, in that it affected the mitigating systems cornerstone attribute of equipment performance, and was repeated for all of the station emergency diesel generators. The issue was determined to result in more than a minimal increase in the consequences of a malfunction of an structure, system, or component important to safety evaluated in the UFSAR, since jacket water leakage could go undetected for up to 12 hours and affect diesel operability. Thus, a license

amendment was required. In accordance with the NRC Enforcement Manual, violations of 10 CFR 50.59 are not processed through the significance determination process. Therefore, this issue was considered applicable to traditional enforcement. Although the significance determination process is not designed to assess significance of violations that potentially impact or impede the regulatory process, the result of a 10 CFR 50.59 violation can be assessed significance through the significance determination process. The lead inspector and the Region IV senior reactor analyst discussed the significance of this finding. An SDP Phase 1 screening was performed and the finding was determined to have very low safety significance because there was no actual loss of the mitigating system safety function. The licensee entered this issue into its corrective action program as CRDR 2711244.
Inspection Report# : 2005002*(pdf)*

Significance: G Mar 17, 2005
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO IDENTIFY AN OPERATOR CHALLENGE FOR A BROKEN SWITCH
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure to follow procedures to implement compensatory measures and properly track an operator work around for a breaker handswitch with a broken operating knob. When questioned by the inspectors, operations personnel were not able to immediately locate the tools needed to operate the defective handswitch. This issue was entered into the corrective action program as Condition Report/Disposition Request 2807501.

The finding is determined to be greater than minor because if left uncorrected, it could become a more significant safety concern in that operators may not be able to operate equipment necessary to respond to initiating events. Using the Phase 1 Worksheet in Manual Chapter 0609, "Significance Determination Process," the finding is determined to have very low safety significance because it only affects the mitigating systems cornerstone and did not result in the actual loss of a safety function
Inspection Report# : 2005003*(pdf)*

Significance: G Mar 16, 2005
Identified By: NRC
Item Type: FIN Finding
FAILURE TO TRACK CONTROL ROOM DISCREPANCIES
The inspectors identified a finding for the failure to follow administrative guidelines provided to operations personnel for identifying, documenting, and tracking main control room deficiencies. Specifically, approximately 75 control room instrument and control room meter face plates in Units 1, 2, and 3 were degraded and were not individually tracked in the control room discrepancy log. Furthermore, discrepancy labels containing the control room discrepancy log number and description of the discrepancy were not placed adjacent to or as close as possible to each affected device. This issue was entered into the corrective action program as Condition Report/Disposition Request 2782501.

The finding is determined to be greater than minor because if left uncorrected, it could become a more significant safety concern in that the condition could cause an operator to take an inappropriate action based on expected plant response or conversely cause an operator not to take action when action is required. The senior reactor analyst determined that this finding was not appropriate to be evaluated using the significance determination process since this finding was associated with multiple human performance actions. Based on management review, the finding is determined to have very low safety significance because it only affected the mitigating systems cornerstone, and there was no adverse impact to plant equipment.

Inspection Report# : 2005002*(pdf)*

Significance: G Feb 25, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
SCAFFOLDING ERECTED WITH INADEQUATE CLEARANCES AND NO ENGINEERING EVALUATION
The inspectors identified a noncited violation of Technical Specification 5.4.1.a for failing to follow a maintenance procedure and associated engineering specification governing scaffold erection near safety-related components. Specifically, the licensee built approximately 85 scaffolds within the 2-inch clearance requirement and did not obtain engineering approval for the scaffolding installed in close proximity to safety-related equipment, as specified in Engineering Design Change 2000-00463. This issue involved human performance crosscutting aspects (personnel) associated with not following work instructions. This issue was entered into the corrective action program as Condition Report/Disposition Request 2779469.

The finding is determined to be greater than minor because if left uncorrected, the finding would become a more significant safety concern in that improperly installed scaffolding could impact the availability of mitigating equipment. Using Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because it only affected the mitigating systems cornerstone, and all subsequent engineering evaluations determined that there was no adverse affect to the mitigating equipment.

Inspection Report# : 2005002*(pdf)*

Significance: Y Dec 09, 2004
Identified By: NRC
Item Type: VIO Violation
FAILURE TO MAINTAIN DESIGN CONTROL OF CONTAINMENT SUMP RECIRCULATION PIPING
The team identified an apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to establish measures to assure design basis information was translated into specifications, drawings, procedures, and instructions. Specifically, the licensee failed to maintain the safety injection sump suction piping full of water in accordance with the Updated Final Safety Analysis Report. This nonconformance had the potential to significantly affect the available net positive suction head described in the Updated Final Safety Analysis Report for the high pressure safety injection and containment spray pumps, since the analysis assumed the piping would be maintained full of water.

This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. The NRC assessed this finding through Phase 3 of the Significance Determination Process and made a preliminary determination that the issue had substantial safety significance (Yellow). After considering the information developed during the inspection and the results of testing sponsored by the licensee, the NRC has concluded that this inspection finding is appropriately characterized as Yellow. The final Significance Determination Process letter was issued on April 8, 2005. This issue will be inspected within the scope of a supplemental 95002 inspection in August - September, 2005.
Inspection Report# : 2004014*(pdf)*

Significance: G Dec 09, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW PROCEDURE
The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," involving the failure of engineering and operations personnel to implement requirements in the station's condition reporting and operability determination procedures following identification of a degraded condition. Specifically, engineering personnel did not promptly notify operations personnel of a condition that impacted the safety function of the high pressure safety injection and containment spray systems. In addition, operations personnel did not complete an immediate assessment of operability once they were informed of the degraded condition. This finding had crosscutting aspects associated with problem identification and resolution, since engineering personnel did not forward corrective action program documents regarding the degraded condition to the control room in a timely manner and operations personnel did not complete a prompt operability assessment. This finding also involved crosscutting aspects associated human performance, since engineering and operations personnel did not adequately communicate the status of the engineering department's efforts to review the degraded condition.

This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. This finding has very low safety significance based on the results of a Significance Determination Process, Phase 3 analysis.

Inspection Report# : 2004014*(pdf)*

Significance: SL-III Dec 09, 2004
Identified By: NRC
Item Type: VIO Violation
FAILURE TO OBTAIN PRIOR NRC APPROVAL FOR A CHANGE TO THE FACILITY INVOLVING MAINTAINING A SIGNIFICANT SEGMENT OF CONTAINMENT SUMP SAFETY INJECTION RECIRCULATION PIPING VOID OF WATER
The team identified an apparent violation of 10 CFR 50.59 requirements for the licensee's failure to perform a written safety evaluation and receive NRC approval prior to implementing changes to the facility in 1992 which involved draining, and maintaining drained, a significant segment of containment sump safety injection recirculation piping during normal plant operations. This change resulted in the failure to maintain the safety injection piping full of water in accordance with the Updated Final Safety Analysis Report. This represented an unreviewed safety question since it increased the probability of a malfunction of equipment important to safety previously evaluated in the safety analysis report.

In accordance with Inspection Manual Chapter 0612, Appendix B, "Issue Disposition Screening," the team determined that traditional enforcement applied because this finding may have impacted the NRC's ability to perform its regulatory function. This is an apparent violation pending the results of a predecisional enforcement conference.
Inspection Report# : 2004014*(pdf)*

Significance: G Sep 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
UNTIMELY LUBRICATION OF REACH RODS FOR SAFETY-RELATED MANUAL VALVES
Green. A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to promptly correct degraded conditions associated with reach rods on safety-related manual valves. The issue involved problem identification and

resolution cross-cutting aspects associated with untimely prioritization of work necessary to correct degraded equipment conditions. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2328588.

The finding was greater than minor safety significance because if left uncorrected, it could become a more significant safety concern in that the failure to perform maintenance on reach rod assemblies could result in an inability to operate safety-related manual valves. This finding is associated with the equipment performance attribute of the mitigating systems cornerstone and affects the cornerstone objective of ensuring the reliability of systems that respond to initiating events. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process," the finding is determined to have very low safety significance because it only affected the mitigating systems cornerstone and there was not a loss of safety function.
Inspection Report# : 2004004*(pdf)*

Significance: G Sep 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
TURBINE DRIVEN AUXILIARY FEEDWATER PUMP GOVERNOR POWER SUPPLY RESISTOR FAILURES
Green. A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to correct a significant condition adverse to quality. The adverse condition involved failed resistors in the power supply to the turbine driven auxiliary feedwater pump governor control circuits in Units 2 and 3 that had transportability to Unit 1. The finding involved problem identification and resolution cross-cutting aspects associated with engineering personnel not performing an adequate extent of condition review. The finding also involved human performance cross-cutting aspects associated with engineering and maintenance personnel not communicating correct technical information. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2746954.

The finding was greater than minor because if left uncorrected, it could have become a more significant safety concern in that the Unit 1 turbine driven auxiliary feedwater pump could have experienced an unnecessary failure. This finding is associated with the equipment performance attribute of the mitigating systems cornerstone and affects the cornerstone objective of ensuring the reliability of systems that respond to initiating events. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process," the finding is determined to have very low safety significance because it only affected the mitigating systems cornerstone and did not result in an actual loss of safety function for the auxiliary feedwater system.
Inspection Report# : 2004004*(pdf)*

Significance: G Sep 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROMPTLY IDENTIFY AND CORRECT A CONDITION ADVERSE TO QUALITY
Green. A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to assure that significant conditions adverse to quality were promptly identified and corrected. Specifically, maintenance personnel failed to promptly identify that retaining ring slots were not adequately sized to allow the use of the standard lock pins, contributing to the damage to the steam generator nozzle dam diaphragms. Subsequent to the identification, maintenance personnel failed to correct the condition by not implementing the actions recommended by plant engineers. The finding involved problem identification and resolution cross-cutting aspects associated with engineering personnel not performing an adequate extent of condition review. That is, this finding was the direct result of licensee personnel's failure to promptly identify and correct a condition adverse to quality. This issue was entered into the licensee's corrective action program as Condition Report/Discrepancy Requests 2686201 and 2686271.

This finding was greater than minor because it is associated with the mitigating systems cornerstone and affects reactor coolant system boundary performance. Specifically, the plant operated for an extended period in reduced inventory as a result of not correcting the incompatibility between the nozzle dams and the locking ring. Using Manual Chapter 0609, "Significance Determination Process," this finding is determined to have very low safety significance because the senior reactor analysts' Phase 2 and 3 analyses determined that the increase in core damage frequency was approximately 3X10-7.
Inspection Report# : 2004004*(pdf)*

Significance: G Sep 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
INEFFECTIVE CORRECTIVE ACTIONS TO ADDRESS AN INADEQUATE SERVICE WATER PIPING INSPECTION PROGRAM
Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to promptly correct the lack of an adequate routine inspection and maintenance program for essential spray pond system piping and components. The finding has been entered into the licensee's corrective action program as Condition Report/Disposition Request 2732683. The finding had problem identification and resolution crosscutting aspects associated with engineering personnel not entering deficiencies into their licensee commitment tracking system and not generating a condition report/disposition request.

This finding is greater than minor because it affected the reactor safety mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. If left uncorrected the finding could

become a more significant safety concern in that inspections of spray pond piping was not performed as committed to in the licensee's Generic Letter 89-13 response. The finding is of very low safety significance because the issue constituted 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.
Inspection Report# : 2004004*(pdf)*

Significance: G Sep 24, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ADDRESS EMERGENCY DIESEL GENERATOR CIRCUIT FAILURE
A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified because the licensee failed to implement their corrective action program when an emergency diesel-generator excitation circuit failed. The failure precluded the emergency diesel generator from achieving rated voltage within the required time.

The finding was greater than minor because it was associated with the equipment performance attributes of the mitigating systems cornerstone and affected the associated cornerstone objective of equipment availability. The finding had very low significance because it only affected the mitigating systems cornerstone and did not result in the actual loss of a safety function at the time.
Inspection Report# : 2004013*(pdf)*

Significance: G Sep 24, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW INADEQUATE EMERGENCY OPERATING PROCEDURE
A noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Procedures," with two examples, was identified because the licensee failed to implement contingency actions when two circuit breakers failed to operate during recovery operations in Units 1 and 3. Specifically, operators deviated from the Emergency Operating Procedure for Loss of Offsite Power/Loss of Forced Circulation when they initiated maintenance on the two failed breakers instead of performing the contingency actions prescribed by the procedure. In addition, for Unit 1, the procedure was inadequate because it did not list all available contingency actions available to operators for restoring power to the electrical bus.

The finding was greater than minor because it was associated with the equipment performance attributes of the mitigating systems cornerstone and affected the associated cornerstone objective of equipment availability. The finding had very low significance because it only affected the mitigating systems cornerstone and redundancy existed in other electrical buses.
Inspection Report# : 2004013*(pdf)*

Significance: G Sep 24, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IMPLEMENT CORRECTIVE ACTIONS FOR AUXILIARY FEEDWATER
A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the team because the licensee failed to implement timely corrective actions to ensure that the feedwater system was operated in a manner that would minimize the possibility of thermally induced vibration that could affect auxiliary feedwater system operability.

The finding was greater than minor because it was associated with the equipment performance attributes of the mitigating systems cornerstone and affected the associated cornerstone objective of equipment availability. The finding had very low significance because it only affected the mitigating systems cornerstone and because no transient occurred that necessitated implementation of the needed corrective actions.
Inspection Report# : 2004013*(pdf)*

Significance: G Sep 24, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE EMERGENCY OPERATING PROCEDURE FOR AUXILIARY FEEDWATER OPERATION
A noncited violation of Technical Specification 5.4.1 was identified because the licensee implemented an inadequate Emergency Operating Procedure. Specifically, the procedure failed to provide direction to maintain turbine-driven auxiliary feedwater pumps operable following a main steam isolation signal.

The finding was greater than minor because it was associated with the equipment performance attributes of the mitigating systems cornerstone and affected the associated cornerstone objective of equipment availability. The finding had very low significance because it only affected the mitigating systems cornerstone and because the turbine-driven auxiliary feedwater pumps did not become inoperable.
Inspection Report# : 2004013*(pdf)*

Significance: G Sep 24, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MANAGE STATION RISK
A noncited violation of 10 CFR 50.65, "Maintenance Rule," was identified because the licensee failed to perform a risk assessment. Specifically, the licensee inappropriately decided to begin draining the Unit 1 turbine-driven auxiliary feedwater pump steam traps first, without addressing the higher risk profile in Unit 2 which resulted from having an inoperable emergency diesel generator.

The finding was greater than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone and affected the cornerstone objective of equipment availability. The finding had very low significance because it only affected the mitigating systems cornerstone and because the turbine-driven auxiliary feedwater pumps were not needed.
Inspection Report# : 2004013*(pdf)*

Significance: G Sep 24, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROPERLY IMPLEMENT LOOP EMERGENCY OPEARTING PROCEDRE
A noncited violation of Technical Specification 5.4.1 was identified because the licensee failed to follow emergency operating procedures. Specifically, the control room operator and an auxiliary operator performed the incorrect steps in Emergency Operating Procedure 40EP-9EO07, "Loss of Offsite Power/Loss of Forced Circulation," Revision 10. The Unit 2, Positive Displacement Charging Pump "E" was temporarily lost due to these human performance errors and resulted in a total loss of Unit 2 charging flow for a short period.

The finding was greater than minor because it was associated with the equipment performance attribute of the mitigating systems cornerstone and affected the cornerstone objective of equipment availability. The finding had very low significance because it only affected the mitigating systems cornerstone and did not result in the actual loss of a safety function and no significant delays occurred that adversely impacted operator response to the event.
Inspection Report# : 2004013*(pdf)*

Barrier Integrity

Significance: G Jun 30, 2005
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO IMPLEMENT PROCEDURES FOR HANDLING SPENT FUEL
Three examples of a self-revealing noncited violation of 10 CFR Part 50, Criterion V, "Instructions Procedures, and Drawings," was identified for failing to properly implement procedures for refueling equipment. Specifically, refueling personnel did not: (1) complete a functional retest following maintenance on the spent fuel handling machine as required by Work Order 2781146, (2) ensure that spent fuel was in a safe condition, stop fuel handling operations, or contact the shift manager to determine the need to complete an event recovery checklist when a deficiency was identified with fuel handling equipment as required by Procedure 40DP-9OP02, "Conduct of Shift Operations," and (3) ensure the material balance area short form was present on the spent fuel handling machine to perform proper independent verification or verify that the bridge and trolley were over the correct fuel assembly as required by Procedure 78OP-9FX03, "Spent Fuel Handling Machine." This issue involved human performance crosscutting aspects associated with operator decision making and not following procedures. This issue also involved problem identification and resolution crosscutting aspects associated with the failure to correct a condition adverse to quality since there have been similar occurrences where operators failed to recognize the need to perform the event recovery checklist. This issue was entered into the corrective action program as Condition Report/Disposition Requests 2791974 and 2792326.

The finding is greater than minor since it could become a more significant safety concern if left uncorrected in that handling spent fuel with degraded equipment impacts the ability to safely handle spent fuel and increases the likelihood of a fuel handling accident. 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 affects the barrier integrity cornerstone and is determined to be of very low safety significance by NRC management review because it was a deficiency that did not result in the actual degradation of spent fuel
Inspection Report# : 2005003*(pdf)*

Significance: G Nov 23, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
CORE ALTERATIONS WITH LESS THAN TWO OPERABLE SRMs

A self-revealing violation of Technical Specification 3.9.2 was identified for performing core alterations with less than the required number of startup range monitors. The licensee did not identify that startup monitor Channel 2 was failed low through troubleshooting activities prior to commencing core reload. The licensee only determined that startup monitor Channel 2 was inoperable after core alterations had commenced. The issue was entered into the licensee's corrective action program as Condition Report/Disposition Requests 2654704 and 2654642.

The finding is greater than minor because it is associated with the configuration control attribute of the barrier integrity cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radio nuclide releases caused by accidents or events. Using Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process," this finding is determined to have very low safety significance because the event did not constitute a loss of control and did not represent a finding requiring quantitative assessment. The finding did not increase the likelihood of loss or cause a degradation in the ability to restore decay heat removal, reactor coolant system inventory, offsite power, alternate core cooling, or containment.
Inspection Report# : 2004005*(pdf)*

Significance: G Nov 09, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO INCLUDE VENTS AND DRAINS INTO LOCKED VALVE PROGRAM
A noncited violation of Technical Specification Surveillance Requirement 3.6.3.3 was identified for failure to perform the required position verification for vent and drain valves associated with eight safety injection system penetrations per unit. The issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2753335.

This finding is greater than minor since it is associated with the configuration control attribute of the barrier integrity cornerstone and affects the cornerstone objective to provide reasonable assurance that the containment physical design barrier is preserved to protect the public from radio nuclide releases caused by accidents or events. Using the Phase 1 Worksheet in Manual Chapter 0609, "Significance Determination Process," the finding is determined to have very low safety significance because it only affected the barrier integrity cornerstone, all the valves were found closed, and did not result in an actual open pathway out of the reactor containment.
Inspection Report# : 2004005*(pdf)*

Significance: G Sep 24, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO EVALUATE MAIN GENERATOR EXCITATION LIMITER CIRCUIT PROBLEMS
A noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Procedures," was identified because the licensee failed to follow the procedure for dispositioning a degraded condition for continued use. Specifically, the licensee failed to place a degraded main generator excitation limiter circuit into the work control process via the appropriate procedure to ensure that it was appropriately evaluated and processed.

The finding was greater than minor because it was associated with the human performance attribute of the barrier integrity cornerstone and impacted the cornerstone objective to provide reasonable assurance that physical design barriers, in this case the fuel cladding, protect the public from radio nuclide releases caused by accidents or events.
Inspection Report# : 2004013*(pdf)*

Significance: G Aug 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW PROCEDURS FOR OPERATION OF THE SPENT FUEL HANDLING MACHINE
The inspectors identified a noncited violation of Technical Specification 5.4.1 associated with a failure to operate the spent fuel handling machine in accordance with Procedure 78OP-9FX03, "Spent Fuel Handling Machine," Revision 16. There were three instances of this: (1) On October 4, 2002, the spent fuel handling machine operator moved fuel assemblies of two differing weights and was not cognizant of design differences of the fuel assemblies and did not stop fuel movement when the load was greater than 50 lbs. different from expected; (2) On October 4, 2002, the spent fuel handling machine operator failed to verify that the hoist was in its full up position prior to moving a spent fuel assembly, and (3) later on October 4, 2002, another spent fuel handling operator failed to verify that the hoist was in its full up position prior to moving a spent fuel assembly. In both Examples (2) and (3), the operators failed to verify the "UP LIMIT" light was on and failed to verify the hoist indicator was at the "UPLIMIT." As a result, in Example (3), the one fuel assembly was damaged. These issues were contrary to Procedure 78OP-9FX03 and resulted in damage to the lower grid assembly of Fuel Assembly P1M316.

This finding is greater than minor because it had an actual impact of damage to an irradiated fuel assembly and, therefore, could be reasonably viewed as a precursor to a significant event. If the fuel cladding had failed, it could have caused a release of fission products to the environment. The finding is of very low safety significance because all mitigation systems were available during the fuel movement operations and should have prevented an unplanned release of radioactive material to the environment above the limits of 10 CFR Part 100. This finding also had crosscutting aspects in the area of human performance.

Inspection Report# : 2004011*(pdf)*

Significance: G Aug 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PRESCRIBE ADEQUATE INSTRUCTIONS FOR ENTRY INTO ABNORMAL OPERATING PROCEDURE, PVNGS PROCEDURE 40AO-9ZZ22, "FUEL DAMAGE," REVISION 2 THROUGH 6
The inspectors identified a noncited violation of Technical Specification 5.4.1 associated with an inadequate abnormal operating procedure. Specifically, the inspectors determined that Palo Verde Nuclear Generating Station Procedure 40AO-9ZZ22, "Fuel Damage," Revisions 1 through 6, were not adequate in that the entry conditions never required operations personnel to enter the procedure and take actions to mitigate the event. Step 1.1 states, in part, "Section 3.0, Irradiated Fuel Damage may be entered when any of the following conditions exist . . . when equipment or component failures result in any of the following: irradiated fuel assembly contacting a solid structure; bubbles emerging from a spent fuel assembly; bent, twisted, or warped spent fuel assembly; or visual damage to spent fuel pin cladding." Since this abnormal operating procedure was never entered, applicable actions were never considered during the Fuel Assembly P1M316 event.

This finding is greater than minor because actions taken in response to fuel handling errors could result in significant fuel cladding damage and effect the barrier cornerstone. The finding is of very low safety significance because all mitigation systems were available and should have prevented an unplanned release of radioactive material to the environment above the limits of 10 CFR Part 100. This finding also had crosscutting aspects in the area of problem identification and resolution.
Inspection Report# : 2004011*(pdf)*

Significance: G Jul 08, 2004
Identified By: NRC
Item Type: FIN Finding
POOR MATERIAL CONDITION OF THE SPENT FUEL HANDLING MACHINE
The inspectors identified a self-revealing finding of very low safety significance (green) associated with the material condition of the spent fuel handling machine. A number of issues related to material condition, which affected spent fuel handling machine operations, was identified. These included intermittent overload and underload conditions with no identified cause, upender limit switches that often failed or required adjustments during fuel movement, an unreliable hydraulic power unit for the upender machine which occasionally resulted in the upender drifting from the vertical position, and the spent fuel handling machine trolley occasionally stopped for no apparent reason.

This finding is greater than minor because it had an actual impact resulting in damage to an irradiated fuel assembly and, therefore, could be reasonably viewed as a precursor to a significant event. If the fuel cladding had failed, it could have caused a release of fission products. The finding is of very low safety significance because all mitigation systems were available and should have prevented an unplanned release of radioactive material to the environment above the limits of 10 CFR Part 100.
Inspection Report# : 2004011*(pdf)*

Significance: G Jul 08, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE CORRECTIVE ACTIONS CONTRIBUTED TO DAMAGE TO FUEL ASSEMBLY
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failing to effectively correct conditions adverse to quality that contributed to the damage to irradiated Fuel Assembly P1M316. Specifically, Criterion XVI states, in part, that ". . . conditions adverse to quality, such as malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected." The licensee failed to effectively correct conditions adverse to quality, which included repeated violations of equipment operating procedures and conduct of operations procedures, as well as long-standing degraded material condition of the fuel handling equipment, that ultimately contributed to the damage of irradiated Fuel Assembly P1M316.

This finding is greater than minor because it had an actual impact of damage to an irradiated fuel assembly and, therefore, could be reasonably viewed as a precursor to a significant event. If the fuel cladding had failed, it could have caused a release of fission products. The finding is of very low safety significance because all mitigation systems were available and should have prevented an unplanned release of radioactive material to the environment above the limits of 10 CFR Part 100. This finding also had crosscutting aspects in the area of problem identification and resolution.
Inspection Report# : 2004011*(pdf)*

Emergency Preparedness

Significance: SL-III Mar 20, 2005
Identified By: NRC
Item Type: AV Apparent Violation
CHANGE TO RADIOLOGICAL EMERGENCY ACTION LEVELS WHICH DECREASED THE EFFECTIVENESS OF THE EMERGENCY PLAN

The inspector identified an apparent violation of 10 CFR 50.54(q) for implementing a change to emergency action levels, which decreased the effectiveness of the emergency plan. Emergency Plan Implementing Procedure 99, "EPIP Standard Appendices," Revision 2, removed from two emergency action levels site boundary exposure rate as measured in the environment as a classifiable condition.

Implementation of changes to emergency action levels, which decreased the effectiveness of the emergency plan was a performance deficiency. The finding is more than minor because removal of a classifiable condition from licensee emergency action levels has the potential to impact safety, and licensee implementation of a change to their emergency plan, which decreases the effectiveness of the plan without prior NRC approval, impacts the regulatory process. This finding is an apparent violation of 10 CFR 50.54(q). The licensee has entered this issue into their corrective action system as Condition Report/Disposition Request 2774185.
Inspection Report# : 2005011*(pdf)*

Significance: G Mar 18, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO CORRECT THE DEVELOPMENT OF PROTECTIVE ACTION RECOMENDATIONS NOT IN ACCORDANCE WITH FEDERAL GUIDANCE
The inspectors identified a noncited violation of 10 CFR 50.54(q). The licensee failed to correct a practice which could result in an evacuation protective action recommendation for segments of the population that would not benefit from evacuation, contrary to federal guidance.

This finding is more than minor because it was associated with a cornerstone attribute and affected the emergency preparedness cornerstone objective to ensure the adequate protection of the public health and safety. This finding is of very low safety significance because this practice could result in an increased dose to the evacuating public by evacuating some areas unnecessarily, but would not prevent the notification of appropriate protective action recommendations to those members of the public who did require evacuation.

Inspection Report# : 2005002*(pdf)*

Significance: G Dec 15, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE PROCEDURES FOR IMPLEMENTATION OF AN EMERGENCY ACTION LEVEL
The examiners identified a noncited violation of 10 CFR Part 50, Appendix E, IV.B, for inadequate procedures for implementation of an emergency action level. Emergency Action Level 3-13 requires that an Alert be declared if "major damage to irradiated fuel" is accompanied by a "valid high radiation alarm on the associated radiation monitor." However, the phrase "major damage to irradiated fuel" is not defined in any site procedure, nor is it defined, clarified, or addressed through operator training such that operators would know when conditions meet the threshold for declaring an Alert as a result of damage to irradiated fuel. This deficiency was evidenced during the examination by the fact that the examination authors, examination reviewers, and five of the seven license applicants taking the examination did not recognize conditions that warranted declaring an Alert using Emergency Action Level 3-13. The licensee was evaluating a clarifying change to Emergency Action Level 3-13 and its bases documents and has documented this issue in Condition Report/Disposition Request 2761670.

The finding is a performance deficiency in that the licensee failed to identify that Emergency Action Level 3-13 would not be properly implemented without objectively defining the phrase "major damage to irradiated fuel" in either plant procedures or operator training. The finding is more than minor because it affects the Emergency Preparedness Cornerstone of procedural quality in that it could result in a failure to declare an Alert emergency classification when conditions warrant. The finding is of very low safety significance since it was a failure to comply with a regulatory requirement associated with a Risk-Significant Planning Standard that did not result in the loss or degradation of that Risk-Significant Planning Standard function.
Inspection Report# : 2004301*(pdf)*

Significance: G Sep 24, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
TECHNICAL SUPPORT CENTER UNAVAILABLE
A noncited violation of 10 CFR 50.54(q) was identified because the licensee failed to follow the emergency plan when they did not adequately maintain facilities required for emergency response. Specifically, the Technical Support Center (TSC) EDG failed because a test switch was not returned to its proper position following maintenance 6 days prior to the event. As a result, the emergency response organization assembled in the alternate TSC. This resulted in some confusion and posed some unique challenges to the emergency response organization.

The finding was evaluated using Inspection Manual Chapter 0609, "Significance Determination Process," Appendix B, Sheet 2 - Actual Event Implementation Problem. Failure to implement the requirements of the Emergency plan associated with emergency planning standard 8 is considered a failure to comply with planning standard 8 during an actual event implementation. The event was a declared Alert, but was not a failure to implement a risk significant planning standard, as defined in Inspection Manual Chapter MC 0609 Appendix B, §2.0. Therefore, the finding is of very low safety significance.
Inspection Report# : 2004013*(pdf)*

Significance: G Sep 24, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROPERLY IMPLEMENT EMERGENCY PLAN
A noncited violation of 10 CFR 50.54(q) was identified because the licensee failed to follow the emergency plan when they did not ensure that adequate command and control was established during the event. Specifically, the licensee did not follow Emergency Plan Implementing Procedure 1, "Satellite Technical Support Center Actions," which requires that for multiple unit events, the Unit 1 shift manager is responsible for initially classifying and declaring the emergency and assuming the position of the on-shift emergency coordinator. As a result, each of the units' respective shift managers initially assumed the role of emergency coordinator and resulted in notification irregularities to state and local officials.

The finding is more than minor because it is related to the emergency preparedness cornerstone attribute of Response organization performance, and affects the cornerstone objective in that command and control challenges resulting in inaccurate communications to the offsite officials could potentially affect the ability to ensure that adequate measures would be taken to protect the public health and safety.
Inspection Report# : 2004013*(pdf)*

Significance: G Sep 24, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
UNTILMELY AUGMENTATION OF ERGENCY PERSONNEL
A noncited violation of 10 CFR 50.54(q) was identified because the licensee failed to follow the emergency plan. Specifically, the licensee failed to meet minimum staffing goals of Table 1, "Minimum Staffing Requirements for PVNGS for Nuclear Power Plant Emergencies" following the Alert declaration on June 14, 2004.

This finding was evaluated using Inspection Manual Chapter 0609, "Significance Determination Process," Appendix B, Sheet 2 - Actual Event Implementation Problem. Failure to implement the requirements of the Emergency plan associated with emergency planning standard 2 is considered a failure to comply with planning standard 2 during an actual event implementation. The event was a declared Alert, but was not a failure to implement a risk significant planning standard, as defined in Inspection Manual Chapter MC 0609 Appendix B, §2.0. Therefore, the finding is of very low safety significance.
Inspection Report# : 2004013*(pdf)*

Occupational Radiation Safety

Significance: G Oct 05, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO COMPLY WITH HIGH RADIATION AREA TECHNICAL SPECIFICATION REQUIREMENT
The inspector reviewed a self revealing non-cited violation of Technical Specification 5.7.1.b because a radiation worker could not hear the electronic dosimeter alarm. Specifically, on September 30, 2003, a radiation worker, in a high radiation area, could not hear the electronic dosimeter alarm for approximately thirty minutes. The individual did not respond to the alarm until after entering another area with lower ambient noise. The licensee determined that the individual had a hearing deficiency. This occurrence was entered into the licensee's Corrective Action Program as Condition Report/Disposition Request 2689876.

The failure to provide an effective alarming dosimeter to a worker entering a high radiation area 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 because the failure to hear an electronic dosimeter alarm could increase personnel dose. 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) ALARA planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose .

Inspection Report# : 2004005*(pdf)*

Public Radiation Safety

Significance: G Feb 04, 2005
Identified By: NRC

Item Type: NCV NonCited Violation
FAILURE TO SHIP RADIOACTIVE MATERIAL CORRECTLY
The team reviewed a self-revealing, non-cited 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 limitation of 0.5 millirem per hour because licensee personnel failed to ensure that the package contents could not shift during transportation. The package recipient identified dose rates of 0.8 millirems per hour on the exterior surface of the package and notified the licensee of the problem.

The finding is greater than minor because it was associated with a Public Radiation Safety cornerstone attribute (human performance) 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 does not involve radioactive shipments classified as Schedule 5 through 11, as described in NUREG-1660, and it does not fit traditional enforcement. Therefore, the finding was reviewed by NRC management and determined to be of very low safety significance. Additionally, this finding had cross-cutting aspects associated with human performance (personnel). The individual directly contributed to the finding when the licensee's shipper failed to ensure that the package contents could not shift. The finding was placed into the licensee's corrective action program.
Inspection Report# : 2005009*(pdf)*

Significance: G Feb 04, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO CONTROL RADIOACTIVE MATERIAL
The team reviewed a self-revealing, non-cited violation of Technical Specification 5.4.1, which occurred when the licensee failed to prevent radioactive material from leaving the radiological controlled area and the protected area. A tape measure worn on the lanyard of a radiation protection technician was not evaluated for the presence of radioactive material before its release from the radiological controlled area. The licensee discovered the radioactive material when the individual was whole body counted; however, the discovery was fortuitous because the licensee's procedural guidance did not specify that items, such as the lanyard, be worn consistently during the whole body counting process. The quantity of radioactive material on the tape measure would have been identified by the licensee's cabinet radiation detectors had the radiation protection technician used one as required.

The finding is greater than minor because it was associated with a Public Radiation Safety cornerstone attribute (human performance) and it affected the associated cornerstone objective because 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: (1) it was was a radioactive material control finding, (2) it was not a transportation finding, (3) it did not result in public dose greater than 0.005 rem, and (4) the number of occurrences was not greater than five. Additionally, this finding had cross-cutting aspects associated with human performance (personnel). The individual directly contributed to the finding when the radiation protection technician failed to use the established process to evaluate the tool for radioactive contamination. The finding was placed into the licensee's corrective action program.
Inspection Report# : 2005009*(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : August 24, 2005