Palo Verde 1
2Q/2006 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PRECLUDE A SIGNIFICANT CONDITION ADVERSE TO QUALITY
A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," was identified for the failure of licensee personnel to preclude repetition of a significant condition adverse to quality. Specifically, on April 17, 2006, and for the second time in two years, a submersible vehicle was suctioned into a system providing cooling to nuclear fuel, rendering the system inoperable. Following the April 11, 2004, event, the licensee's corrective actions concentrated on a lack of instructions and a lack of communications with the control room. While it was recognized that the event was transportable to other systems, and that the consequences could have been more severe, the corrective actions were limited in scope and were not adequate to preclude repetition. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2885213.

The finding is greater than minor because it is associated with the configuration control and human performance cornerstone attributes of the initiating events cornerstone and affects the associated cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using the Manual Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," Checklist 4, the finding is determined to have very low safety significance because the finding did not increase the likelihood of a loss of reactor coolant system inventory. Additionally, the finding did not degrade the licensee's ability to terminate a leak path or add reactor coolant system inventory, neither did it degrade the licensee's ability to recover decay heat removal once it is lost. The cause of the finding is related to the crosscutting element of problem identification and resolution in that licensee personnel did not implement corrective actions to preclude repetition of a significant condition adverse to quality. Additionally, the cause of the finding is related to the crosscutting element of human performance in that licensee personnel did not stop movement of the submersible upon becoming disoriented.
Inspection Report# : 2006003*(pdf)*

Significance: G Sep 30, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
FAILURE TO MONITOR TELLTALE DRAINS RESULTED IN SPEND FUEL POOL LEAKAGE TO THE ENVIORNMENT
A self-revealing noncited violation of Technical Specification 5.4.1.a was identified as a result of the licensee’s failure to properly monitor leakage using the spent fuel pool (SFP) leak detection surveillance as required by Procedure 40DP-9OPA3, "Area 3 Operator Logs, Modes 1-4." This resulted in leakage of SFP water through two adjacent concrete walls. Specifically, operations personnel did not monitor the SFP telltale drains for evidence of leakage for a period of five and a half months, and failed to take the necessary action to reschedule the task. This issue involved human performance crosscutting aspects associated with operations personnel following procedures and questioning attitude. This issue also involved problem identification and resolution crosscutting aspects associated with operations and engineering personnel implementing timely corrective actions. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2814209.

The finding is greater than minor because it affects the equipment performance and human performance attributes of the initiating events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. 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 SFP. This finding is determined to be of very low safety significance by NRC management review because radiation shielding was provided by the SFP water level, the SFP cooling and fuel building ventilation systems were available, and there were multiple sources of makeup water (Section1R14)
Inspection Report# : 2005004*(pdf)*

Significance: G Sep 30, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
IMPROPER CONTROL OF STEAM GENERATOR FEEDWATER SYSTEM RESULTED IN A REACTOR TRIP AND MAIN STEAM ISOLATION
A self-revealing noncited violation of Technical Specification5.4.1.a was identified as a result of the licensee’s failure to follow Procedure 40OP-9ZZ04, "Plant Startup Mode 2 to Mode 1," and Procedure 40OP-9FT01, "Feedwater Pump Turbine A," which resulted in an automatic reactor trip and main steam isolation signal due to a high steam generator water level. Specifically, the secondary reactor operator failed to: (1) ensure downcomer feed flow to both steam generators, (2) properly set-up the controller, and (3) establish a stable steam generator level between 30 to 40

percent prior to placing the feedwater controller in automatic. Additionally, the secondary reactor operator failed to inform the control room supervisor and other control room personnel when he made numerous transfers into and out of automatic valve control to make manual feedwater adjustments when attempting to recover steam generator water level. This issue involved human performance crosscutting aspects associated with operations personnel following procedures and attention to detail. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2814209.

The finding is greater than minor because it affects the human performance attribute of the initiating events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. A Phase 2 analysis was required because the Phase1 Worksheet in Manual Chapter 0609, "Significance Determination Process," determined that the finding affected the initiating events cornerstone and contributed to the likelihood that mitigation equipment or functions would not be available. Using the Phase 2 worksheets associated with transients and transients without the power conversion system, the finding is determined to have very low safety significance since all remaining mitigation capability was available or recoverable (Section1R14).
Inspection Report# : 2005004*(pdf)*

Mitigating Systems

Significance: G Jun 30, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
FAILED UNIT 1 CS TRAIN B PUMP ROOM FLOOD LEVEL SWITCH DUE TO NONCONFORMING DRAIN HOSE MANIFOLD BOXES
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure of operations personnel to verify or check the adequacy of the design of drain hose manifold boxes. Specifically, between 1997 and June 16, 2006, operations personnel failed to verify or check the adequacy of design of drain hose manifold boxes when the decision was made to leave the boxes permanently attached to the emergency core cooling system pump vents. The failure to evaluate the drain hose manifold boxes resulted in the degradation of the Unit 2 low pressure safety injection Train A pump room level switch, and the failure of the Unit 1 containment spray Train B pump room level switch. On June 16, 2006, the drain hose manifold boxes were removed from the emergency core cooling system pump rooms in all three units. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2903515.

The finding is greater than minor because it is associated with the design control cornerstone attribute of the mitigating systems cornerstone and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because the condition only affected the mitigating systems cornerstone, and using the flooding criteria, would not cause a plant trip or any of the initiating events used by Phase 2, and would not degrade two or more trains of a multi-train safety system. The cause of the finding is related to the crosscutting element of problem identification and resolution in that operations personnel failed to adequately evaluate the impact of degraded level switches on the ability to detect and respond to an emergency core cooling system pump room flooding event.
Inspection Report# : 2006003*(pdf)*

Significance: G Jun 30, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO EVALUATE DEGRADED CONDITIONS TO ENSURE OPERABILITY
The inspectors identified two examples of a noncited violation of Technical Specification 5.4.1.a for the failure of engineering personnel to follow procedures. On April 17, 2006, engineering personnel failed to follow Procedure 81DP-0DC13, "Deficiency Work Order," resulting in shutdown cooling Train B being declared operable without fully addressing a potential degraded condition associated with the potential for missing parts from a submersible remaining in plant systems. On May 10, 2006, engineering personnel did not perform evaluations and dispositions required by Procedure 81DP-0DC13 to justify a degraded condition for continued use of a pipe support associated with shutdown cooling line Train A. These issues were entered into the licensee's corrective action program as Condition Report/Disposition Requests 2902258 and 2892737.

The finding is greater than minor because it would become a more significant concern if left uncorrected in that Technical Specification required structures, systems, and components (SSCs) may not be operable as required for applicable plant conditions. The performance deficiency associated with this finding was representative of a broader concern related to how the licensee ensures the operability of SSCs required to comply with Technical Specifications. Specifically, the licensee's programs and processes for assessing degraded conditions have not been implemented with the rigor and thoroughness necessary to ensure compliance with regulatory requirements. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because the condition only affected the mitigating systems cornerstone and did not represent an actual loss of safety function. The cause of the finding is related to the crosscutting element of human performance in that engineering personnel did not follow procedures, resulting in the failure to perform required evaluations and dispositions for deficient conditions.
Inspection Report# : 2006003*(pdf)*

Significance: G Jun 30, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
THREE EXAMPLES OF A TECHNICAL SPECIFICATION 3.0.4 VIOLATION
The inspectors identified three examples of a Green noncited violation of Technical Specification 3.0.4 for the failure of operations personnel to ensure the operability of required equipment prior to entry into a mode or other specified condition in the limiting condition for operations applicability. Specifically, on March 20, 2006, Mode 4 was entered with reactor coolant system pressure at 386 psia and only one operable train of containment spray. Unaware that any Technical Specification requirements were violated, operations personnel lowered reactor coolant system pressure below 385 psia and controlled pressure at this level as they proceeded towards Mode 3. A short time later, on March 20, 2006, the control room supervisor incorrectly concluded that both trains of containment spray were operable and raised reactor coolant system pressure above 385 psia. On March 20, 2006, the class pressurizer heater Train B supply circuit breaker tripped due to a grounded condition on Heater A05, rendering the equipment inoperable. This equipment condition was not recognized by operations personnel until March 22. As a result of the equipment condition, on March 21, 2006, Unit 1 changed from Mode 4 to Mode 3 without two trains of pressurizer heaters operable. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Requests 2877648, 2877591, and 2878030.

The finding is greater than minor because it is associated with the configuration control cornerstone attribute of the mitigating systems cornerstone and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. For the examples of this finding related to the containment spray system, a Phase 2 analysis was required since they impacted both the mitigating systems and barrier integrity cornerstones as determined by the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet. Using the Phase 2 Worksheets associated with loss of coolant accidents, the finding is determined to have very low safety significance since all remaining mitigation capability was available. The example of this finding related to pressurizer heaters 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 consider the pressurizer heaters as a risk significant function as defined in the risk informed notebook. This finding is determined to be of very low safety significance by NRC management review. The cause of the finding is related to the crosscutting element of human performance in that operations personnel did not follow procedures and apply the necessary rigor and questioning attitude to requirements and associated decisions because of self-imposed schedule pressures.
Inspection Report# : 2006003*(pdf)*

Significance: G Jun 30, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
INOPERABLE INVERTER DUE TO DEGRADED CAPACITORS
A self-revealing noncited violation of Technical Specification 3.8.7, "Inverters - Operating," was identified for the failure to maintain two operable trains of inverters. On October 20, 2005, Inverter 1EPNBN12 failed. The licensee's evaluation determined that procurement engineering personnel did not identify the lack of oil in the output filter capacitors for the inverter. The capacitors were installed in the inverter between October 1999 and October 20, 2005. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2845317.

The finding is greater than minor because it is associated with the equipment performance cornerstone attribute of the mitigating systems cornerstone and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because the condition only affected the mitigating systems cornerstone and did not represent an actual loss of safety function.
Inspection Report# : 2006003*(pdf)*

Significance: G Mar 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE DIESEL FIRE PUMP BATTERY SURVEILLANCE
The inspectors identified a noncited violation of Technical Specification 5.4.1.d for an inadequate surveillance test for the diesel fire pump batteries. Specifically, since 1995, the method described in Procedure 38FT-9FP02, "Fire Protection System Monthly Diesel Fire Battery Test," Revision 4, to verify the specific gravity of the diesel fire pump batteries was inadequate in that the specific gravity was not directly measured, but was verified by a correlation to open circuit voltage. This methodology could result in a measured battery voltage that would be higher than the true specific gravity would provide. The cause was due to an inadequate engineering evaluation to develop the correlation used in the surveillance procedure. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2875906.

The finding is greater than minor because it is associated with the procedure quality cornerstone attribute of mitigating systems cornerstone and affects the associated cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet and Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," the finding is determined to have very low safety significance because the fire pump battery performance and reliability is minimally affected since the batteries were replaced every two years, and the required capacity of the batteries is approximately 60 percent of a newly installed battery.
Inspection Report# : 2006002*(pdf)*

Significance: G Feb 03, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROMPTLY CORRECT AN ADVERSE TREND OF CONTAMINATED OIL SAMPLES
A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to correct an adverse trend of contaminated oil samples in a timely manner. Specifically, on April 1, 2005, the licensee identified an increasing trend of incorrect lubricant oil additions and contaminated oil samples and entered the deficiency in their corrective action program. As of January 2006, the inspectors concluded that the corrective actions taken as a result of the identified oil control deficiency were untimely, in that, 9 months later the frequency of new instances of oil control problems documented in the corrective action program remained unchanged. The licensee entered the deficiency into their corrective action program as Condition Report Disposition Request 2785915 for resolution.

The finding is more than minor because it is associated with the equipment performance attribute of the mitigating systems cornerstone and affects the associated 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 was determined to have very low safety significance because it only affected the mitigating systems cornerstone and did not result in the loss-of-safety function of a single train or system. The cause of the finding is related to the cross-cutting element of problem identification and resolution, in that, poor work practices resulted in multiple oil contamination events and the corrective actions taken were ineffective in promptly correcting the condition. (Section 4OA2e(2)(ii))

Inspection Report# : 2006008*(pdf)*

Significance: G Feb 03, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MEET MAINTENANCE TEST REQUIREMENTS
A noncited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," was identified for failure to perform required testing of the Unit 3 essential cooling water system Pump EWP01 breaker in accordance with requirements and acceptance limits. Pump EWP01 breaker test procedure established tolerances and acceptance criteria for the breaker sub-component clearances that were documented as not being met. The licensee entered the deficiency into their corrective action program as Condition Report Disposition Request 2865792 for resolution.

This finding was more than minor since 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 failure to meet recommended tolerances and acceptance limits specified was similar to Manual Chapter 0612, Appendix E, more than minor example 2.c., in that, the issue was repetitive and affected multiple breakers tested. Using Manual Chapter 0609, “Significance Determination Process,” Phase 1 Worksheet, the finding was determined to have very low safety significance because the condition was a qualification deficiency confirmed not to result in loss of function. The cause of the finding is related to the cross-cutting element of human performance in that maintenance personnel failed to properly implement maintenance procedures, and the deficient conditions were not identified by supervisory review of the completed procedures. (Section 4OA2e(2)(iii))
Inspection Report# : 2006008*(pdf)*

Significance: G Feb 03, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IDENTIFY AND CORRECT AN ADVERSE CONDITION ASSOCIATED WITH THE BOP-ESFAS SEQUENCER
A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for failure to identify and correct the adverse impact of auto-testing on safety-related relays. Specifically, for approximately 100 days, between May 5 and July 14, 2004, and again between May 2 and June 3, 2005, the Unit 1 “A” Balance Of Plant Engineered Safety Feature Actuation System sequencer was placed in continuous auto-test, resulting in degradation of the associated relays. Approximately 3 months later, on October 10, 2005, during testing, the sequencer failed to shed one of the loads as required. The long-term continuous auto-testing was determined to be the most likely cause of the relay failure. The licensee entered the deficiency into their corrective action program as Condition Report Disposition Request 2865792 for resolution.

The finding is greater than minor because it affects 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. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheet, the finding is determined to have very low safety significance because the finding did not result in the loss of safety function of any component, train, or system. The cause of the finding is related to the cross-cutting element of problem identification and resolution in that the licensee failed to adequately evaluate and correct a condition adverse to quality. (Section 4OA2e(2)(iv))

Inspection Report# : 2006008*(pdf)*

Significance: G Feb 03, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IDENTIFY A MAINTENANCE RULE FUNCTIONAL FAILURE

A noncited violation of 10 CFR 50.65(a)(2) was identified for the failure to demonstrate that the performance or condition of the low pressure safety injection/shutdown cooling Pump 2A was adequate. Specifically, in May 2005, the licensee failed to accurately account for 15 hours of unavailability time for the low pressure safety injection/shutdown cooling Pump 2A, which when re-evaluated, exceeded the performance trigger to enter (a)(1) monitoring. The licensee entered this deficiency into their corrective action program as Condition Report Disposition Request 2865315 for resolution.

The finding is more than minor because it affects the equipment performance attribute of the mitigating systems cornerstone objective to maintain availability and reliability of structures systems and components needed to respond to initiating events and had a credible impact on safety. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheet, the finding is determined to have very low safety significance because there was no design deficiency and the low pressure safety injection/shutdown cooling Pump 2A failure did not exceed the allowed technical specification outage time. The cause of the finding is related to the cross-cutting element of human performance in that the initial evaluation and subsequent supervisory reviews failed to identify the need for additional monitoring of the low pressure safety injection/shutdown cooling Pump 2A. (Section 4OA2e(2)(v))

Inspection Report# : 2006008*(pdf)*

Significance: N/A Feb 03, 2006
Identified By: NRC
Item Type: FIN Finding
PERFORMANCE DECLINE IN PROBLEM IDENTIFICATION AND RESOLUTION
The inspectors reviewed approximately 175 condition reports, 65 work orders, associated root and apparent cause evaluations, and other supporting documentation to assess problem identification and resolution activities. Overall, performance declined when compared to the previous problem identification and resolution assessment. Significant delays in evaluation of the significance of an identified problem, as well as identification of appropriate corrective actions, resulted in large corrective action backlogs, some repeat events, and examples of continued noncompliance. The delays in completion of corrective actions continued to result in a significant number of self-disclosing and NRC-identified violations and findings. While the licensee initiated actions to address the substantive cross-cutting issues in human performance and problem identification and resolution, the majority of the corrective actions were not complete and some of the initial completed actions were not effective. Also, competing priorities between resources and the backlog of corrective actions created a condition where many corrective actions were significantly delayed in their completion, contributing to failures to adequately implement the corrective action process.

The team concluded that while a safety-conscious work environment exists at your facility, isolated concerns were raised by your staff during the interviews. These concerns were associated with not having sufficient personnel to accomplish long-term improvements, a loss of trust that management would not subject the staff to negative consequences for raising issues, some confusion about when to place an adverse condition into your corrective action program, and a decrease in confidence that the corrective action program will adequately address problems. (Section 4OA2).
Inspection Report# : 2006008*(pdf)*

Significance: G Dec 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROMPTLY CORRECT AN ADVERSE CONDITION WITH THE REFUELING WATER TANK INSTRUMENT PIT
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to correct a condition adverse to quality involving the refueling water tank instrument pit. Specifically, in August 2003, the licensee inadvertently cancelled the work orders to correct deficiencies associated with flooding of the refueling water tank instrument pit. This error was identified by the licensee in October 2004; however, corrective actions were inadequate to ensure timely correction of the adverse condition. Additionally, two of the three work orders were inappropriately closed with no work performed following the inspectors' identification of the issue in August 2005. After identification by the inspectors, the licensee installed temporary modifications to prevent water intrusion into the pit. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2838845.

The finding is greater than minor because it is associated with the protection against external factors cornerstone attribute of the mitigating systems cornerstone and affects the associated cornerstone objective to ensure the reliability and availability of systems that respond to initiating events. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding required a Phase 3 analysis by a senior reactor analyst, since the finding was potentially risk significant due to external initiating event core damage sequences. A senior reactor analyst performed a qualitative assessment and concluded that the finding had very low safety significance. The cause of the finding is related to the crosscutting element of problem identification and resolution in that corrective actions lacked timeliness, adequacy, and thoroughness.

Inspection Report# : 2005005*(pdf)*

Significance: G Dec 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO CORRECT AN IDENTIFIED ADVERSE CONDITION ASSOCIATED WITH MAINTENANCE DEPARTMENT GUIDELINES
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to correct a condition adverse to quality involving the use of Maintenance Department Guidelines. Specifically, instrumentation and controls personnel did not complete actions used as a basis for closure for Condition Report/Disposition Request 2715129. In addition, the extent of condition review did not

identify the continued active use of Maintenance Department Guidelines to perform quality related activities. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2830633.

The finding is greater than minor because it is associated with the procedure quality cornerstone attribute of the mitigating systems cornerstone and affects the associated cornerstone objective to ensure the reliability and availability of systems that respond to initiating events. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because the finding did not result in the loss of safety function of any component, train, or system. The cause of the finding is related to the crosscutting element of problem identification and resolution in that maintenance personnel did not implement timely corrective actions and performed a poor extent of condition review.
Inspection Report# : 2005005*(pdf)*

Significance: SL-IV Dec 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO SUBMIT LER TO REPORT SHUTDOWN REQUIRED BY TECHNICAL SPECIFICATIONS
The inspectors identified a noncited Severity Level IV violation of 10 CFR 50.73 for the failure to submit a licensee event report within 60 days to report the completion of a plant shutdown required by the Technical Specifications. A second similar example of a violation of the same regulation was identified by the licensee. Specifically, the licensee was required to submit a licensee event report by May 17, 2005, to report the completion of a plant shutdown required by the Technical Specifications that occurred on March 18, 2005. This licensee event report was submitted on November 7, 2005. Additionally, the licensee was required to submit a licensee event report by April 10, 2005, to report the completion of a plant shutdown that occurred on February 9, 2005. A revised licensee event report was submitted on January 6, 2006. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Requests 2829976 and 2844019.

The finding was determined to be applicable to traditional enforcement because the NRC's ability to perform this regulatory function was potentially impacted by the licensee's failure to report the event. The finding was determined to be a Severity Level IV violation in accordance with Section D.4 of Supplement I of the NRC Enforcement Policy. The finding is not suitable for evaluation using the significance determination process, but has been reviewed by NRC management and is determined to be a finding of very low safety significance. The cause of the finding is related to the crosscutting element of problem identification and resolution in that the transportability review, conducted by regulatory affairs personnel, failed to identify an additional example of a missed reportable event that was subsequently identified by the NRC.

Inspection Report# : 2005005*(pdf)*

Significance: G Dec 16, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
IMPROPER DESIGN CONTROL FOR EMERGENCY CORE COOLING SYSTEM SUMP AND REFUELING WATER TANK SWAPOVER
The inspectors identified a noncited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," related to potential air entrainment into the emergency core cooling system suction header from the refueling water tank. Specifically, the inspectors determined that the water level in the refueling water tank could fall below the level of the tank discharge pipe and associated vortex breaker during the transfer from the refueling water tank to the containment sump during design basis accidents. As a result, air could be drawn into the emergency core cooling system piping under accident conditions. This issue was applicable to both trains of all three units. Contrary to proper design control, engineering personnel failed to effectively implement design requirements to prevent potential air entrainment into the emergency core cooling system.

The inspectors considered this finding to be more than minor, in accordance with NRC Manual Chapter 0612, "Power Reactor Inspection Reports," since it potentially affected the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and it affected the attributes of design and configuration control. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheet, the inspectors determined that the issue was of very low safety significance (Green) because there was no actual loss of safety function. Because the violation was determined to be of very low safety significance and has been entered into the corrective action program as condition report/disposition request (CRDR 2835132), this violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy. The inspectors also determined this issue had cross-cutting aspects of human performance. Specifically, the licensee's attention to detail was lacking and there was poor inter- and intra-group coordination.
Inspection Report# : 2005012*(pdf)*

Significance: G Dec 16, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
IMPROPER DESIGN CONTROL FOR REFUELING WATER TANK LEVEL INSTRUMENT CALIBRATION
The inspectors identified a noncited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," for failure to translate design basis information into the calibration of refueling water tank level instruments. Without this information, operators were unaware that a Technical Specification listed minimum level in this tank may not provide sufficient usable volume of water for emergency core cooling system operation. Specifically, engineers failed to density compensate these instruments for allowable ranges of both temperature and boric acid concentration of the tank. Contrary to proper design control, the licensee failed to effectively implement design requirements to ensure operability of the refueling water tank.

This issue was determined to affect the Mitigating Systems cornerstone and was more than minor based upon review of Example 3.j of Manual Chapter 0612, Appendix E. The errors were considered more than a minor calculation error because the deficiencies required re-performance of the calculations, significantly reduced the overall margin, and could be applicable to other such instrumentation calculations. However, engineering personnel demonstrated that while there was a loss of margin, there was no actual loss of function because of the inaccuracies in the RWT level instrument calibrations. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 worksheet, the inspectors determined that the issue was of very low safety significance (Green) because there was no actual loss of safety function. Because the violation was determined to be of very low safety significance and has been entered into the corrective action program as condition report/disposition request (CRDR 2840920), this violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy.
Inspection Report# : 2005012*(pdf)*

Significance:  Dec 16, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROPERLY IMPLEMENT STATION PROCEDURE FOR EQUIPMENT OPERABILITY (TECHNICAL SPECIFICATION 5.4.1.a)
The inspectors identified three examples of a (Green) noncited violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." Specifically, these examples involved the licensee's failure to follow a procedure and to provide appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished, consistent with the facility's administrative procedure for the operability determination process. In the first case an engineer evaluated a concern in a condition report/disposition request without notifying the control room so an operability assessment could be performed. In the other cases, there was inadequate guidance given to operators to address when an operability assessment would be required.

The inspectors considered this finding to be more than minor, in accordance with Manual Chapter 0612, since it potentially affected the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and it affected the attributes of procedure quality and human performance. However, subsequent evaluations completed by the licensee verified that actual safety functions were not lost in any of these examples. The inspectors performed a Phase 1 significance determination, using NRC Manual Chapter 0609, and determined this issue screens out as having very low safety significance (Green) because a safety function was not lost. Because the violation was determined to be of very low safety significance and has been entered into the corrective action program as Condition Report/Disposition Request 2838626, this violation is being treated as a noncited violation, consistent with Section VI.A of the NRC Enforcement Policy. The inspectors also determined this issue had cross-cutting aspects of human performance. Specifically, the licensee's attention to detail was lacking and there was poor inter- and intra-group coordination.

The inspectors identified an additional example of the Green noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," described in NRC Supplemental Inspection Report 05000528; 05000529; 05000530/2005012, for the failure to establish an adequate procedure and implement existing procedures involving implementation of the operability determination process. The inspectors also identified examples where information provided to operations from engineering was not sufficiently accurate or complete to support operational decision making with respect to capacitor service life and the overall impact of the identified degraded or non-conforming capacitors. On November 1, 2005, the licensee inappropriately determined that the operability determination process was not applicable for a degraded capacitor condition that had the potential to impact Class 1E inverter operability. Consequently, the degraded condition was evaluated outside the operability determination process. Because the finding is of very low safety significance and has been entered into the corrective action program as Condition Report/Disposition Request 2838626. The cause of the finding is related to the crosscutting element of human performance in that communications between the engineering and operations organizations was inadequate.

Inspection Report# : 2005012*(pdf)*

Significance: N/A Dec 16, 2005
Identified By: NRC
Item Type: FIN Finding
SUMMARY FINDING. 95002 INSPECTORS ASSESSMENT OF IR2004-14 SEVERITY LEVEL III VIOLATION FOR 50.59 ISSUE
The U.S. Nuclear Regulatory Commission (NRC) performed this supplemental inspection, in part, to assess the licensee's evaluation and corrective actions associated with an inappropriate change to an emergency core cooling system procedure without prior NRC approval. This procedure change rendered portions of the system inoperable because of voiding. This performance issue was previously characterized as a Severity Level III violation of 10 CFR 50.59 and was originally identified in NRC Inspection Report 05000528; 529; 530/2004014. During this supplemental inspection, performed in accordance with Inspection Procedure 95002, the inspectors determined that the licensee's evaluation identified the primary root causes of the performance issue to be: (1) The site procedure revision process (01AC-0AP02) was inadequate, in that, the procedure allowed ‘pre-screening' of changes that could potentially bypass performing a 10 CFR 50.59 screening for changes to the facility as described in the licensing basis; and (2) The corrective action program implementation was ineffective. The licensee also identified overlap and interface problems between the corrective action program, the engineering evaluation request program, and the instruction change request program. These issues, in conjunction with inadequate training to recognize a corrective action condition, contributed to the failure of station personnel to initiate a corrective action program input document in 1992 for the potential pipe voiding concern. The inspectors concluded that the licensee's evaluation and implemented corrective actions were appropriate to reasonably prevent repetition of the 10 CFR 50.59 violation.

Given the licensee's acceptable performance in addressing the inappropriate procedure change and 10 CFR 50.59 program deficiencies, the Severity Level III violation is closed.
Inspection Report# : 2005012*(pdf)*

Significance: N/A Dec 16, 2005
Identified By: NRC
Item Type: FIN Finding
SUMMARY FINDING. 95002 INSPECTORS ASSESSMENT OF IR2004-14 (YELLOW) 10CFR50, APP B, CRITERION III VIOLATION
The NRC performed this supplemental inspection, in part, to assess the licensee's evaluation and corrective actions associated with potential air entrainment into the emergency core cooling system. The licensee failed to incorporate original design requirements into the plant to maintain piping between the containment sump isolation valves filled with water. This performance issue was previously characterized as a 10 CFR 50, Appendix B, Criterion III, violation having substantial safety significance (Yellow), and was originally identified in NRC Inspection Report 05000528; 529; 530/2004014. The inspectors determined that the licensee's evaluation identified a direct cause, nine root causes, and nine contributing causes of the performance issue. The evaluation was also used to develop an extensive list of corrective actions. The inspectors found the licensee's methods of evaluation to be appropriate.

The NRC concluded that, while the licensee performed an adequate root cause evaluation of the Design Control violation, certain corrective actions were incomplete at the time of this inspection. Specifically, the team determined that for each of the root and contributing causes, not all corrective actions were sufficiently developed to ensure that the identified performance deficiencies were adequately addressed. In addition, some of the corrective actions were narrowly focused, or the implementation of those actions was not fully effective. Also, the team concluded that criteria and reviews were not established, for auditing or followup, to ensure that corrective actions were effective in improving performance in the affected areas. Consequently, the team did not have assurance that the planned corrective actions were sufficient to address the causes for the performance deficiencies associated with the violation. Therefore, the (Yellow) violation (VIO 2004/014-01) will remain open for further NRC review.
Inspection Report# : 2005012*(pdf)*

Significance: G Sep 30, 2005
Identified By: NRC
Item Type: FIN Finding
COMMUNICATION DEFICIENCIES BETWEEN ORGANIZATIONS
The inspectors identified a finding involving poor work controls due to ineffective and inaccurate technical communications between organizations. During maintenance on the Unit 1 high pressure safety injection long-term recirculation check Valve SIAV522 operations, maintenance, and engineering personnel did not implement management expectations specified in Procedure 93DP-OLC07, "10 CFR 50.59 and 72.48 Screenings and Evaluations," The Nuclear Engineering Strategic Plan, and Procedure 40 DP-90P26, "Operability Determination." Specifically, (1) the licensee did not verify the accuracy of an engineer’s statement regarding 10 CFR 50.59 documents, and consequently, did not ensure that all documents used to support the work activity existed prior to the commencement of work. (2) Maintenance personnel changed the freeze seal location without consulting operations or engineering, even though the location was a key assumption that formed the basis for several conclusions in the operability evaluation. This change required a revision to the operability evaluation before work could start. (3) Engineering personnel incorrectly informed operations personnel that only 5 to 10 gpm was needed to full stroke Valve SIAV522 when approximately 100 gpm was needed. This issue required a change to the instructions provided to operations prior to testing the check valve. The issue involved human performance crosscutting aspects associated with inadequate communications between the engineering, maintenance, and operations organizations. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Requests 2822343 and 2831411.

The finding is greater than minor since it could become a more significant safety concern in that the failure to provide accurate information to support operational decision making could result in improper operability determinations. Using the 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 did not result in the loss of safety function of a single train or system for greater than the Technical Specification allowed outage time
Inspection Report# : 2005004*(pdf)*

Significance: G Sep 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PERFORM LICENSING DOCUMENT CHANGE REQUEST AND 10 CFR 50.59 SCREENING FOR ABANDONMENT OF THE BORONOMETER
The inspectors identified a noncited violation of 10 CFR Part50, AppendixB, CriterionXVI, "Corrective Action," for the failure to correct a discrepancy between the current condition of the boronometer and the required configuration described in the Updated Final Safety Analysis Report. Specifically, in April 2003 the licensee identified the need to perform a Licensing Document Change Request and a corresponding 10 CFR 50.59 screening due to the abandonment of the Updated Final Safety Analysis Report required boronometer, but failed to implement corrective actions to ensure that the Licensing Document Change Request and 10CFR 50.59 screening were performed. This issue involved problem identification and resolution crosscutting aspects associated with engineering personnel implementing timely corrective actions. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2823704.

The finding is greater than minor because it was associated with the design control 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 the Manual Chapter0609, "Significance Determination Process," Phase1 Worksheet, the finding is determined to have very low safety significance because there was no actual loss of safety function (Section 4OA2).
Inspection Report# : 2005004*(pdf)*

Significance: G Sep 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
IMPROPER CONTROL OF DESIGN PARAMETERS FOR THE EX-CORE SAFETY CHANNELS
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the improper control of design parameters for the ex-core nuclear instrument safety channels in that engineering personnel did not correctly translate design requirements, nor did they properly control design basis information regarding ex-core safety channels. Additionally, Technical Specification required values were maintained apart from design calculations and documents. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2612092.

This finding is greater than minor because if left uncorrected it could become a more significant safety concern in that failures to maintain design calculations could result in the incorrect setting of safety related devices. The finding is associated with the mitigating systems cornerstone. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheet, the finding is determined to have very low safety significance because there was not an actual loss of safety function.
Inspection Report# : 2005004*(pdf)*

Significance: SL-IV Sep 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
INCOMPLETE AND INACCURATE INFORMATION ASSOCIATED WITH THE EX-CORE SAFETY CHANNELS.
The inspectors identified a noncited Severity Level IV violation of 10 CFR 50.9 for providing incomplete or inaccurate information to the NRC. Specifically, the licensee provided incomplete and inaccurate information regarding the design control of ex-core safety channel log power instrument setpoints. This information was determined to be material in that it affected the NRC's ability to determine compliance with NRC requirements. This issue was entered into the licensee's corrective action program as Condition Report/Disposition Request 2829051.

This finding was not assessed via NRC Manual Chapter 0609, "Significance Determination Process," because the licensee's actions impeded the regulatory process. Therefore, this finding is associated with the mitigating systems cornerstone. The inspectors determined that engineering personnel had additional information, including the subsequently corrected revision of the calculation going through final verification, and additional explanatory setpoint procedures, which were not referenced or provided during the original correspondence by the licensee. Had the complete and accurate information been supplied at the time of the original request in 2003, the NRC would have identified a design control violation at that time. The safety consequence of this issue is of very low safety significance, in that there was no actual loss of a safety function.
Inspection Report# : 2005004*(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: 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.
{NOTE: Finding remains open - IP 95002 results pending 12/16/2005}

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)*

Barrier Integrity

Emergency Preparedness

Significance: G Mar 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO TRAIN EMERGENCY RESPONSE PERSONNEL
The inspector identified a noncited violation of 10 CFR 50.47(b)(15) and 10 CFR Part 50, Appendix E, IV(F)(1), for the failure to provide requalification training during 2005 to Arizona Public Service Corporate Public Information personnel as required by Procedure EPIP 59, "Emergency Planning Training Program Description." This failure resulted in none of the Corporate Spokespersons receiving requalification training, which could have impaired their ability to effectively communicate emergency information to the public.

This finding is greater than minor because it (1) had a credible impact on the Emergency Preparedness cornerstone objective, (2) involved the ability to implement adequate measures to protect the health and safety of the public during an emergency, and (3) impacted the cornerstone attributes of Emergency Response Organization readiness and performance. The finding is of very low safety significance because the Corporate Spokesperson is not a key emergency responder as defined by NEI 99-02, "Regulatory Assessment Indicator Guideline," and the untrained personnel would be relied upon to perform their response function during an emergency. This finding is a noncited violation of 10 CFR 50.47(b)(15). The licensee has entered this issue into their corrective action system as Condition Report Disposition Request 2863948. This finding has crosscutting aspects related to problem identification and resolution because if the licensee had properly evaluated Condition Report Disposition Request 2667913 the problems with the content and documentation of annual briefings conducted by the APS Corporate Public Information Department could have been identified and resolved prior to January 2006.
Inspection Report# : 2006002*(pdf)*

Occupational Radiation Safety

Significance: G Mar 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW RADIATION EXPOSURE PERMIT INSTRUCTIONS
The inspector reviewed a self-revealing, noncited violation of Technical Specification 5.4.1.a, resulting from two radiation workers' failure to follow radiation exposure permit instructions. On November 22, 2005, two radiation workers, without notifying radiation protection staff, used a pneumatic grinder with a wire wheel inside of the Unit-1 Steam Generator No. 2 cold leg pipe. As a result of the wire wheel grinding, both workers were contaminated. Radiation protection staff members were not made aware of the contamination event until the workers alarmed the PM-7 portal monitor upon attempting egress from the 140-foot radiological controlled area. One worker received unplanned and unintended internal dose of 6 millirem. The other worker did not receive an internal dose. As corrective action, the licensee counseled the two workers and their supervision, and informed the contractor's management.

The finding was greater than minor because it was associated with one of the cornerstone attributes (exposure control) and the finding affected the occupational radiation safety cornerstone objective, in that a failure to follow radiation exposure permit instructions resulted in additional radiation dose. The inspector determined that the finding had no more than very low safety significance because: (1) it did not involve an ALARA finding, (2) there was no personnel overexposure, (3) there was no substantial potential for personnel overexposure, and (4) the finding did not compromise the licensee's ability to assess dose. The finding also had crosscutting aspects related to human performance, in that, radiation workers failed to follow the radiation exposure permit instructions, which directly resulted in the finding.

Inspection Report# : 2006002*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : August 25, 2006