Palo Verde 1
1Q/2006 Plant Inspection Findings

Initiating Events

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)*

Significance: G Apr 23, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
FAILURE TO FOLLOW PROCEDURES RESULTING IN SPENT FUEL POOL DRAINDOWN
A self-revealing noncited violation of Technical Specification 5.4.1.a was identified for the failure to follow procedures which resulted in an inadvertent reduction of spent fuel pool water level. Specifically, approximately 1800 gallons of water was unknowingly directed to the transfer canal when operations personnel failed to follow Procedure 40OP-9PC06, "Fuel Pool Clean Up and Transfer." The initial auxiliary operator opened a valve when the step required the valve to be closed and did not open another valve as required by the procedure. A second auxiliary

operator performed an inadequate independent verification of the position of the valves. This issue involved human performance crosscutting aspects associated with procedure implementation and operator attention to detail. This issue was entered into the corrective action program as Condition Report/Disposition Request 2793816.

The finding is greater than minor because it affects the configuration control 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 spent fuel pool. This finding is determined to be of very low safety significance by NRC management review because radiation shielding was provided by the spent fuel pool water level, the spent fuel pool cooling and fuel building ventilation systems were available, and there were multiple sources of makeup water.
Inspection Report# : 2005003*(pdf)*

Mitigating Systems

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 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 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 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 failure to set goals and monitor the performance of the low pressure safety injection/shutdown cooling Pump 2A. 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 its corrective action program 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. Performance had declined significantly 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, created a condition of large corrective action backlogs, repeat events, and continued non-compliances. The delays in completion of corrective actions continued to result in a significant number of self-disclosing and NRC identified violations and findings. Further, the licensee initiated actions to address the substantive cross-cutting issues in human performance and problem identification and resolution, however, the majority of the corrective actions are not completed and some of the initial completed actions were not fully effective. The corrective action program processes and procedures were generally adequate, but weaknesses in those processes were significantly challenged with an increased backlog of corrective actions. 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.

Based on interviews conducted, the inspectors concluded that a positive safety conscious work environment exists at the Palo Verde Nuclear Station. Employees felt free to raise safety concerns to their supervision, to the employee concerns program, and to the NRC. The interviewees indicated their assurance that potential safety significant problems would be identified and addressed, although challenges existed in timely completion of identified actions. The interviewees did not have the same level of assurance that less significant problems would be adequately addressed
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: G 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 ineffective and inaccurate technical communications between organizations to support equipment operability decision making during maintenance on the Unit 1 high pressure safety injection long-term recirculation check Valve SIAV522. 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, (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, and (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. 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 (Section 1R15).

Inspection Report# : 2005004*(pdf)*

Significance: G Sep 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PERFORM LICENSING DOCUMENT CHANGE REQUET 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 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 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

Significance: G Jun 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
MAINTENANCE PERFORMED ON FUEL HANDLING EQUIPMENT WITHOUT PROPER QUALIFICATIONS
The inspectors identified a noncited violation of Technical Specification 5.4.1.a for failing to ensure maintenance on safety-related fuel handling equipment was performed by personnel with the correct qualifications. Specifically, the licensee failed to follow the requirements of Procedure 30DP-9MP01, "Conduct of Maintenance," which required that Task Qualified Independent Workers (qualified workers) be assigned to perform work or direct work by Dependent Workers (unqualified workers). Consequently, maintenance on refueling equipment by unqualified workers had not been properly supervised on at least five work orders in 2003 and 2004. This issue was entered into the corrective action program as Condition Report/Disposition Request 2797536.

The finding is determined to be greater than minor because if left uncorrected it could become a more significant safety concern in that improperly performed maintenance on fuel handling equipment could impact the safe movement of nuclear fuel and increase the probability 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)*

Emergency Preparedness

Significance: SL-III Mar 20, 2005
Identified By: NRC
Item Type: VIO 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.

The NRC informed Arizona Public Service Company of an apparent violation of emergency planning requirements by letter dated April 5, 2005. A predecisional Enforcement Conference was conducted with the licensee June 1, 2006. The licensee was subsequently informed of a Severity Level III Notice of Violation for a decrease in effectiveness of their emergency plan by a letter dated, June 27, 2005. An IP95001 supplemental inspection will be conducted during January 2006 to evaluate the licensee's root cause analysis and corrective actions.
Inspection Report# : 2005011*(pdf)*

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : May 25, 2006