Palo Verde 1
2Q/2004 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FIRE THAT OCCURRED DURING WELDING ACTIVITIES ON THE MAIN FEEDWATER PUMP TURBINE TRAIN A
A self-revealing noncited violation of Technical Specification 5.4.1.d was identified for the failure to ensure that hot work activities were not performed in the presence of flammable compounds. Specifically, work instructions did not require that maintenance personnel remove residual isopropyl alcohol from the main feedwater pump Train A turbine casing prior to commencing hot work activities. Consequently, a flash fire occurred when an oxygen-acetylene torch, used to preheat the metal for welding, ignited the flammable material. The issue involved human performance cross-cutting aspects associated with inattention to detail by maintenance personnel. This issue was entered into the corrective action program as CRDR 2699943.

The finding is greater than minor because it could become a more significant safety concern if left uncorrected, in that, a fire could ignite in a area with risk important equipment. This finding cannot be evaluated by the significance determination process because Manual Chapter 0609, "Significance Determination Process," Appendix F, "Determining Potential Risk Significance of Fire Protection and Post-Fire Safe Shutdown Inspection Findings," does not address the potential risk significance of shutdown fire protection findings. Additionally, Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process," does not address fire protection findings. However, the finding is determined to be of very low safety significance by management review because the finding occurred while the unit was already in a cold shutdown condition, and the finding involved equipment not necessary to maintain safe shutdown.
Inspection Report# : 2004003*(pdf)*

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO HAVE INSTRUCTIONS FOR TESTING A SUBMERSIBLE IN THE UNIT 1 SPENT FUEL POOL
A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for the failure of the licensee to have written instructions for testing a remotely controlled submersible vehicle in the Unit 1 spent fuel pool. The vehicle became entrained in the common suction line for the spent fuel pool cooling system. At the time of the event, the unit was in refueling operations with 164 of the 241 spent fuel assemblies unloaded into the spent fuel pool. The issue involved human performance cross-cutting aspects associated with poor decision making and a lack of questioning attitude by radiation protection personnel. This issue was entered into the corrective action program as CRDR 2697384.

The finding is greater than minor because it affected the configuration control and human performance attributes of the initiating events cornerstone objective. This finding cannot be evaluated by the significance determination process because Manual Chapter 0609, "Significance Determination Process," Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and Appendix G, "Shutdown Operations Significance Determination Process," do not apply to the spent fuel pool. This finding is determined to be of very low safety significance by management review because 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# : 2004003*(pdf)*

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PREVENT LOSS OF SPENT FUEL POOL INVENTORY EVENTS THROUGH TIMELY CORRECTIVE ACTIONS
A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to identify the root cause of spent fuel pool inventory loss events and implement corrective actions to preclude recurrence. Specifically, the improper positioning of a fuel pool cleanup suction valve and inadequate level monitoring resulted in three losses of spent fuel pool inventory events. This finding involves problem identification and resolution cross-cutting aspects associated with the failure to identify root causes and implement corrective actions. The issue also involved human performance cross-cutting aspects associated with mispositioned valves and awareness of plant conditions by operations personnel. This issue was entered into the corrective action program as CRDR 2599869.

The finding is greater than minor because it affected the configuration control and human performance attributes of the initiating events cornerstone objective. This finding cannot be evaluated by the significance determination process because Manual Chapter 0609, "Significance Determination Process," Appendix A, "Significance Determination of reactor Inspection Findings for At-Power Situations," and Appendix G, "Shutdown Operations Significance Determination Process," do not apply to the spent fuel pool. This finding is determined to be of very low safety significance by management review because 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# : 2004003*(pdf)*

Mitigating Systems

Significance: SL-IV Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PERFORM A COMPLETE SHUT DOWN COOLING HEAT EXCHANGER TEMPERATURE LOOP CHANNEL CALIBRATION
A Severity Level IV noncited violation of Technical Specification 3.3.11 was identified for the failure to include the resistance temperature detectors in the channel calibration for the shutdown cooling heat exchanger temperature instruments. Specifically, prior to the implementation of Improved Technical Specifications, the licensee did not perform testing of the resistance temperature detectors. Following the implementation of Improved Technical Specifications, the licensee did not perform an in-place qualitative assessment of the resistance temperature detectors' behavior. This issue was entered into the corrective action program as CRDR 280178.

The failure to perform a complete shutdown cooling heat exchanger temperature loop channel calibration is determined to have greater than minor significance because the licensee's failure to report the condition impacted the NRC's ability to perform it's regulatory function. Therefore, this finding was considered applicable to traditional enforcement. Although the significance determination process is not designed to assess the significance of violations that potentially impact or impede the regulatory process, the finding can be assessed using the significance determination process. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process," this finding is determined to be of very low safety significance because it only affected the mitigating system cornerstone and the resistance temperature detectors were found to be within calibration.
Inspection Report# : 2004003*(pdf)*

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PERFORM MONTHLY REVIEWS TO ENSURE EXCESS HOURS HAVE NOT BEEN ASSIGNED
The inspectors identified a noncited violation of Technical Specification 5.2.2.d for the failure of authorized individuals to review monthly overtime reports to ensure that excessive hours have not been assigned. Specifically, following the implementation of an electronic reporting system in 2001, the licensee did not ensure that all managers continued to receive and approve the Excess Hours Report.

The finding is greater than minor because if left uncorrected it could become a more significant safety concern in that exceeding the NRC Generic Letter 82-02, "Nuclear Power Plant Staff Working Hours," guidelines for overtime limits is a contributor to worker fatigue. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process," this finding is determined to be of very low safety significance because there were no known actual adverse plant or equipment conditions that could be attributed to worker fatigue.
Inspection Report# : 2004003*(pdf)*

Significance: G Mar 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IDENTIFY DEGRADATION OF POLYETHYLENE CHANNELS ON CLASS 1E BATTERIES
Green. The inspectors identified a noncited violation for the failure to comply with 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Actions. Specifically, the licensee did not identify the degradation of polyethylene insulating channels on Class 1E station batteries. Missing insulating channels could affect the seismic qualification of the batteries.

This finding is greater than minor because it affects the reactor safety mitigating system cornerstone objective to ensure the capability of systems that respond to initiating events. Using the Significance Determination Process Phase 1 Worksheet, the finding was determined to have a very low safety significance, since there was no case where enough insulating channels had slipped to affect the seismic analyses, and the batteries remained in their design configuration.

Inspection Report# : 2004002*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Surveillance Requirement 3.5.3.8
Green. The inspectors identified a noncited violation for the licensee's failure to implement Surveillance Requirement 3.5.3.8 for all three units. The licensee failed to identify and remove debris in Trains A and B emergency core cooling system sumps during their last performance of Procedure 31ST-SI01, "Cleaning/Inspection of ECCS Sumps," Revision 7. Specifically, the licensee failed to identify unqualified tie-wraps that were attached to the stem of the containment sump suction valves inside the emergency core cooling system sumps.

This finding is greater than minor, since it affected the mitigating system cornerstone objective of equipment reliability because the debris could have affected containment spray pump flow by clogging spray nozzles. The finding is of very low safety significance because the amount of debris would have only degraded containment spray pump flow during a potential large break loss of coolant accident, but the safety function would have been fulfilled based on the small amount of debris.

Inspection Report# : 2003005*(pdf)*

Barrier Integrity

Significance: G Jun 30, 2004
Identified By: Self Disclosing
Item Type: FIN Finding
PRESSURIZER LEVEL TRANSIENT ABOVE TECHNICAL SPECIFICATION LIMITS
A self-revealing finding was identified when a pressurizer level transient above Technical Specification limits occurred. Specifically, simultaneous testing of the atmospheric dump valve and boron injection systems resulted in a loss of letdown event on high regenerative heat exchanger temperature. The letdown event occurred because operations personnel were using a single charging pump for the boron injection test and using excess letdown to accommodate a plant heat-up following atmospheric dump valve testing. The combination of activities resulted in pressurizer level exceeding the Technical Specification limit of 56 percent. The issue involved human performance cross-cutting aspects associated with operator decision making, questioning attitude, awareness of plant conditions, and communications between personnel performing concurrent evolutions. This issue was entered into the corrective action program as CRDR 2707290.

The finding is greater than minor because it is associated with the equipment performance attribute of the barrier integrity cornerstone and affects the cornerstone objective of protecting the reactor coolant system barrier from radionuclide releases caused by accidents or events. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process," the finding is determined to have very low safety significance because it only affects the barrier integrity cornerstone and was a deficiency that did not result in the actual degradation of the reactor coolant system barrier.
Inspection Report# : 2004003*(pdf)*

Significance: SL-IV Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
CONTAINMENT PURGE PENETRATION NONCONFORMANCE
A Severity Level IV noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to correct a nonconforming condition in a timely manner. Specifically, since June 2001, the licensee discontinued implementation of required Technical Specification surveillance testing for the containment purge valves by declaring the valves inoperable and installing blind flanges. This issue was entered into the corrective action program as CRDR 2711167.

The finding is greater than minor because the licensee's failure to submit a license amendment to correct the nonconforming condition impacted the NRC's ability to perform its regulatory function. Therefore, this finding was considered applicable to traditional enforcement. Although the significance determination process is not designed to assess the significance of violations that potentially impact or impede the regulatory process, the finding can be assessed using the significance determination process. Using the Phase 1 worksheet in Manual Chapter 0609, "Significance Determination Process," the finding is determined to have very low safety significance because it only affected the barrier integrity cornerstone and the installation of blind flanges adequately maintained containment integrity.
Inspection Report# : 2004003*(pdf)*

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
CORE ALTERATIONS WITH DEGRADED REFUELING MACHINE
A noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to correct a degraded refueling machine equipment condition that could have impacted the ability to safely handle fuel. Specifically, refueling personnel continued to move spent fuel even though they had determined that the refueling machine sprag brake had failed. The issue involved human performance cross-cutting aspects associated with poor decision making and a lack of questioning attitude by refueling personnel. This issue was entered into the corrective action program as CRDR 2704331.

The finding is greater than minor since it could become a more significant safety concern if left uncorrected in that continuing core alterations using degraded equipment impacts the ability to safely handle spent fuel and increases the likelihood of a fuel handling accident. Using the Phase 1 worksheets in Manual Chapter 0609, "Significance Determination Process," this finding is determined to have very low safety significance because it only affects the barrier integrity cornerstone and was a deficiency that did not result in the actual degradation of spent fuel.
Inspection Report# : 2004003*(pdf)*

Significance: SL-IV May 21, 2004
Identified By: NRC

Item Type: NCV NonCited Violation
FAILURE TO PROVIDE AN EVALUATION OF A CHANGE TO THE FACILITY AS DESCRIBED IN THE UFSAR, UNDER 10 CFR 50.59 REQUIREMENTS
The team identified a Severity Level IV violation of 10 CFR 50.59 requirements for failing to evaluate a modification to spent fuel storage in the spent fuel pools. The team reviewed CRDR 2524176, regarding the lack of a criticality analysis to support the use of rod capture tubes, which hold individual harvested fuel pins, in the spent fuel rack. The team reviewed the licensee's process of storing individual fuel pins, removed from a parent fuel assembly, and placed in rod capture tubes to be located in guide tubes of another host assembly. This resulted in a component that had nuclear fuel pins, of varying enrichment and depletion, stored as a regular fuel assembly in the spent fuel pools. The team noted that Section 9.1 of the UFSAR specifically described the storage of spent fuel in regions based upon fuel assembly initial enrichment, actual burnup, and actual decay time. The UFSAR does not describe the storage of individual pins in these regions. The licensee previously interpreted this as meaning the UFSAR did not prohibit such storage, and would not require consideration of enrichment, burnup, and decay of individual pins. The licensee failed to provide an evaluation of a change to the facility as described in the UFSAR, under 10 CFR 50.59 requirements. The licensee subsequently performed an evaluation of the criticality under station procedure 72DP-9NF01, "Control of SNM Transfer and Inventory," which was found acceptable.

The issue was determined to be more than minor, through Inspection Manual Chapter 0612, Appendix B, in that it affected the barrier integrity cornerstone attribute of human performance, and could have represented a more significant issue if left uncorrected. In accordance with the NRC Enforcement Manual, violations of 10 CFR 50.59 are not processed through the significance determination process. Therefore, this issue was considered applicable to traditional enforcement. Although the significance determination process is not designed to assess significance of violations that potentially impact or impede the regulatory process, the result of a 10 CFR 50.59 violation can be assessed significance through the significance determination process. The team leader and the Region IV senior reactor analyst discussed the significance of this finding. An SDP Phase 1 screening was performed and the finding was determined to have very low safety significance because there was no actual loss of the barrier integrity function. The licensee entered this issue into its corrective action program as CRDR 2711241.

Inspection Report# : 2004006*(pdf)*

Significance: TBD Mar 31, 2004
Identified By: NRC
Item Type: AV Apparent Violation
FAILURE TO REMOVE PIPE SUPPORT LEADS TO RCS PRESSURE BOUNDARY LEAK
TBD. A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion III, Design Control, was identified when an incorrect design configuration, combined with high vibrations, caused high cycle fatigue in a socket weld upstream of high pressure safety injection header drain Valve 1-P-SIA-V056, resulting in a reactor coolant system pressure boundary leak.

The finding is greater than minor since it had an actual impact to the reactor coolant system boundary. Using the Significance Determination Process Phase 1 and Phase 2 Worksheets, the finding was determined to affect both the barrier integrity and initiating events cornerstones. The finding was determined to have potential safety significance of greater than very low significance because of the possible failure mode of the piping and the duration of the degraded condition.

Inspection Report# : 2004002*(pdf)*

Emergency Preparedness

Significance: G Mar 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
IMPLEMENTATION OF A CHANGE TO TABLE 1 WHICH WAS A DECREASE IN EFFECTIVENESS OF THE EMERGENCY PLAN
Green. On February 16, 2003, and February 4, 2004, the licensee implemented an emergency plan change, which decreased the required number of onshift emergency responders. This change constituted a decrease in effectiveness of the emergency plan because it could have resulted in a dedicated onshift communicator being replaced by a shift technical advisor, with a loss of one onshift position. Implementation of changes to the emergency plan, which constitute a reduction in the effectiveness of the plan without prior NRC approval, was a noncited violation of 10 CFR 50.54(q).

The finding was evaluated using NUREG-1600, "General Statement of Policy and Procedure for NRC Enforcement Actions," Section IV, because licensee reductions in the effectiveness of its emergency plan impact the regulatory process. The finding had greater than minor significance because reducing the required number of onshift emergency responders had the potential to impact the ability to perform all necessary emergency functions. The finding was determined to be a noncited Severity Level IV violation because the emergency plan change constituted a failure to implement a regulatory requirement, but did not constitute a failure to meet an emergency planning standard as defined by 10 CFR 50.47(b) because actual staffing levels remained above the emergency plan minimum. This finding has been entered into the licensee's corrective action program as Condition Report Disposition Request 2670023.

Inspection Report# : 2004002*(pdf)*

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A May 21, 2004
Identified By: NRC
Item Type: FIN Finding
IDENTIFICATION AND RESOLUTION OF PROBLEMS
The team concluded that the licensee was generally effective at identifying problems and processing them through the corrective action program. The licensee effectively prioritized and evaluated issues with a few exceptions. The team identified examples where the licensee had not evaluated identified issues for proper compliance with 10 CFR 50.59 requirements. Additionally, in some cases, corrective actions were not timely or fully documented. Licensee audits and assessments were found to be effective except for one example involving maintenance rule application to radiation monitors. On the basis of interviews conducted during this inspection, workers at the site felt free to input safety findings into the corrective action program.
Inspection Report# : 2004006*(pdf)*

Last modified : September 08, 2004