

San Onofre 2

3Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Aug 25, 2009

Identified By: NRC

Item Type: VIO Violation

Failure to Assess and Manage Risk for Maintenance That Could Impact Offsite Power Components

The inspectors identified a cited violation of 10 CFR 50.65(a)(4) for the failure of work control and operations personnel to adequately assess and manage the increase in risk associated with maintenance activities. Specifically, on August 25-27, 2009, work control and operations personnel failed to adequately assess and manage the increase in risk associated with maintenance activities in or near the electrical switchyard and offsite power components. Due to the licensee's failure to restore compliance from the previous NCV 05000361; 05000362/2009003-04 within a reasonable time after the violation was identified, this violation is being cited in a Notice of Violation consistent with Section VI.A of the NRC Enforcement Policy. This finding was entered into the licensee's corrective action program as Nuclear Notifications NNs 200556120 and 200559128.

The failure to include maintenance activities in or near the electrical switchyard and offsite power components in the on-line risk assessment was a performance deficiency. This finding is greater than minor because the licensee's risk assessment failed to consider maintenance activities that could increase the likelihood of initiating events such as work in or associated with offsite power sources and the electrical switchyard, associated with the initiating events cornerstone. In accordance with Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," Step 4.1.1, the inspectors had the licensee re-perform the assessment, correcting the errors that rendered the original risk assessment inadequate. The finding is determined to have very low safety significance because the incremental core damage probability deficit and the incremental large early release probability deficit, used to evaluate the magnitude of the error in the licensee's inadequate risk assessment, were less than 1×10^{-6} and 1×10^{-7} , respectively. This finding has a crosscutting aspect in the area of problem identification and resolution associated with corrective action program because the licensee did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity [P.1(d)].

Inspection Report# : [2009004](#) (pdf)

Significance:  Apr 16, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Assess and Manage Risk for Electrical Switchyard Impacting Maintenance

The inspectors identified a noncited violation of 10 CFR 50.65(a)(4) for the failure of work control and operations personnel to include maintenance activities in or near the electrical switchyard and offsite power components in the on-line risk assessment. This finding was entered into the licensee's corrective action program as Nuclear Notification 200402733.

This finding is greater than minor because the licensee's risk assessment failed to consider maintenance activities that could increase the likelihood of initiating events such as work in or associated with offsite power sources and the electrical switchyard. This finding is associated with the Initiating Events Cornerstone. In accordance with Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," step 4.1.1, the inspectors had the licensee reperform the assessment, correcting the errors that rendered the original risk assessment inadequate. The finding is determined to have very low safety significance because the incremental core damage probability deficit and the incremental large early release probability deficit, used to evaluate the magnitude of the error in the licensee's inadequate risk assessment, were less than $1E-6$ and $1E-7$, respectively. This finding has a crosscutting aspect in the area of human performance associated with resources because the licensee did not ensure that procedures and processes were adequate to properly assess and manage the risk associated with on-line maintenance [H.2(c)]

Inspection Report# : [2009003](#) (pdf)

Significance:  Feb 12, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure for Reactivity Manipulations

The inspectors identified a non-cited violation of Technical Specification 5.5.1.1 for the failure of operations personnel to follow procedures for performing reactivity manipulations. Specifically, a procedure modification performed to Procedure SO23-3-2.19.2, "Control Element Assembly Exercise and Troubleshooting," was inaccurate and incomplete to appropriately control reactivity manipulations, and thus, an adequate procedure was not in hand as required by Procedure SO123-O-A1, "Conduct of Operations," to appropriately control the control element assembly manipulations by a licensed operator. This finding was entered into the licensee's corrective action program as Nuclear Notification 200339686.

The finding is greater than minor because it is associated with procedure quality attribute of the Initiating Events Cornerstone and affects the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using 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, degrade the ability to terminate a leak path, or degrade the ability to recover decay heat removal. This finding has crosscutting aspect in the area human performance associated with work control because the licensee did not appropriately plan a work activity [H.3.(a)] (Section 1R19).

Inspection Report# : [2009002](#) (pdf)

Significance:  Feb 07, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Procedure for Aligning a Reactor Coolant System Ion Exchanger

A self-revealing non-cited violation of Technical Specification 5.5.1.1 was identified for the failure of operations personnel to follow procedures to place Ion Exchanger ME074 in service which resulted in an interruption of letdown flow and diversion of approximately 160 gallons of reactor coolant to the radiological waste system. This finding was entered into the licensee's corrective action program as Nuclear Notification 200319240.

The finding is greater than minor because it is associated with the configuration control attribute of the Initiating Events Cornerstone and affects the cornerstone objective of limiting 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," Phase 1 Worksheets, the finding is determined to have very low safety significance because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The finding has a crosscutting aspect in the area of human performance associated with work practices because the licensee did not properly use human error prevention techniques [H.4(a)] (Section 4OA3).

Inspection Report# : [2009002](#) (pdf)

Significance:  Dec 31, 2008

Identified By: Self-Revealing

Item Type: FIN Finding

Inadequate Inspection of Stator Water Discharge Check Valve

A self-revealing finding was identified for the failure to perform an adequate inspection of a main generator stator water pump discharge check valve in accordance with maintenance procedures. The inadequate inspection allowed an unrecognized degraded condition to exist that resulted in the main generator tripping from a "Rectifier Low Flow," signal and a subsequent reactor trip. This finding was entered into the licensee's corrective action program as Nuclear Notification 200006446.

This finding is more than minor because it is associated with the human performance attribute of the initiating events

cornerstone and affects the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Using Phase 1 of Manual Chapter 0609, Attachment 4, "Initial Screening and Characterization of Findings," the finding is determined to have very low safety significance because the issue did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The finding has a crosscutting aspect in the area of problem identification and resolution associated with corrective action program because maintenance personnel did not perform the required inspections with a low enough threshold for identifying issues. Consequently, the licensee did not identify a degraded condition completely, accurately, and in a timely manner commensurate with the safety significance of the issue [P.1(a)].

Inspection Report# : [2008005](#) (*pdf*)

Mitigating Systems

Significance: SL-IV Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Submit Complete Revisions to Updated Final Safety Analysis Report for Penetration Seal Changes

The inspectors identified a noncited violation of 10 CFR 50.71(e)(4) for the failure of licensing personnel to submit revisions to the Updated Final Safety Analysis Report reflecting changes to the Unit 2 safety equipment building emergency core cooling pump room piping penetration that were in place for more than 24 months. Specifically, for the reporting periods between (1) July 2005 and June 2007; and (2) July 2007 and June 2009, licensing personnel failed to submit complete revisions to the Updated Final Safety Analysis Report reflecting the removal of the boot seal from the Unit 2 emergency core cooling system train B pump room penetration. This seal was removed in July 2005 and was left in this condition as discovered by the inspectors in August 2009. This finding was entered into the licensee's corrective action program as Nuclear Notification NN 200550985.

The failure of licensing personnel to submit revisions to the Updated Final Safety Analysis Report to describe changes to the Unit 2 safety equipment building emergency core cooling pump room piping penetration that were in place for more than 24 months was a performance deficiency. The finding was determined to be applicable to traditional enforcement because the NRC's ability to perform its regulatory function was potentially impacted by the licensee's failure to update the Updated Final Safety Analysis Report in a timely manner. The finding was determined to be a Severity Level IV violation in accordance with Section D.6 of Supplement I of the NRC Enforcement Policy. The finding is more than minor because the degraded flood barrier is associated with the external events attribute of the mitigating systems cornerstone and adversely 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 Worksheets, the finding is determined to have very low safety significance because the finding did not result in a loss of operability or functionality. This finding has a crosscutting aspect in the area of problem identification and resolution because the licensee failed to take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity [P.1(d)]

Inspection Report# : [2009004](#) (*pdf*)

Significance:  Jun 05, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain Written Procedures Covered in Regulatory Guide 1.33

The inspectors identified 54 examples of a noncited violation of Technical Specification 5.5.1, "Procedures," for the failure of operations and maintenance personnel to maintain written procedures covered in Regulatory Guide 1.33. Specifically, from plant startup to June 2009, no process requirement or procedure existed to suspend or put an administrative hold on a procedure or work order when a technical change is required for the procedure. This resulted in 54 uncontrolled procedures and work instructions available to use on safety related systems without flagging the required changes. This finding was entered into the licensee's corrective action program as Nuclear Notification 200453351.

The finding is greater than minor because, if left uncorrected, the failure to maintain and control operations and

maintenance procedures could lead to a more significant safety concern by having technically inaccurate procedures being used on safety-related systems. Using Manual Chapter 0609.04, "Phase 1 Initial Screening and Characterization of Findings," the finding was determined to have a very low safety significance because the finding did not result in a loss of system safety function, an actual loss of safety function of a single train for greater than its technical specification allowed outage time, or screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because problems were not thoroughly evaluated such that the resolutions addressed the causes and extent of conditions. This includes properly classifying and prioritizing conditions adverse to quality [P.1(c)].

Inspection Report# : [2009003](#) (pdf)

Significance:  Jun 02, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate the Impact of Temporary Scaffolding on Installed Fire Protection Systems

The inspectors identified a noncited violation of License Condition 2.C.(14), "Fire Protection," for the failure of licensee personnel to evaluate scaffolding for its impact on fire protection systems. Specifically, the licensee failed either (1) to demonstrate that obstructed sprinkler heads in the Unit 2 emergency diesel generator building train B, the Unit 3 emergency diesel generator building train A, and the Unit 2 saltwater cooling pump room were operable; or (2) to generate a fire protection impairment and establish an hourly firewatch for inoperable sprinkler heads in the Unit 2 emergency diesel generator building train B, the Unit 3 emergency diesel generator building train A, and the Unit 2 saltwater cooling pump room. This finding was entered into the licensee's corrective action program as Nuclear Notification 200449046.

This finding is greater than minor because the identified programmatic deficiencies could lead to a more significant safety concern if left uncorrected. This finding is associated with the Mitigating Systems Cornerstone. Using Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process," Attachment 2, this finding was determined to have a LOW degradation rating because fewer than 10 percent of the sprinkler heads were nonfunctional, there was a functional sprinkler head within 10 feet of the combustibles of concern, and the system was nominally code compliant. Therefore, this finding was determined to be of very low safety significance. This finding has a crosscutting aspect in area of human performance associated with work practices because the licensee failed to ensure personnel work practices support human performance. Specifically, the licensee failed to effectively communicate human error prevention techniques such as proper documentation of activities and failed to ensure personnel do not proceed in the face of uncertainty [H.4(a)].

Inspection Report# : [2009003](#) (pdf)

Significance:  May 14, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Corrective Action Process for an Inadequate Postmaintenance Test

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to follow corrective action program procedures to address deficiencies associated with postmaintenance testing. Specifically, between April 20 and May 14, 2009, the licensee failed to follow Procedure SO123 XX 1 ISS2, "Notification Initiation and Processing," Revision 23, to report a problem associated with the adequacy of postmaintenance testing until prompted by the inspectors. Emergency chiller ME336 was restored to operable on April 19, following a maintenance evolution, then declared inoperable on April 20, approximately 8 hours later when operations personnel identified an operability issue associated with the equipment configuration. However, licensee personnel failed to recognize that the postmaintenance testing may have been inadequate, in that, emergency chiller ME336 was returned to service in an inoperable condition, until prompted by the inspectors on several occasions between April 20 and May 13. This finding was entered into the licensee's corrective action program as Nuclear Notification NN 200427700.

The failure to follow corrective action program procedures to identify and correct a condition adverse to quality was a performance deficiency. The finding is greater than minor because the failure to identify and correct deficiencies associated with postmaintenance testing would have the potential to lead to a more significant safety concern if left uncorrected. The finding is associated with the mitigating systems cornerstone. Using the Manual Chapter 0609,

"Significance Determination Process," Phase 1 Worksheets, the finding is determined to have very low safety significance because the finding did not affect both trains of any single mitigating system or represent an actual loss of a safety function of a single train for greater than its technical specification allowed outage time. The finding has a crosscutting aspect in the area of problem identification and resolution associated with corrective action program because the licensee failed to identify and correct deficiencies associated with inadequate postmaintenance testing at a threshold commensurate with the safety significance [P.1(a)].

Inspection Report# : [2009004](#) (pdf)

Significance:  Apr 13, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Risk Assessment Performed Using Risk Assessment Tools with Known Errors

The inspectors identified a noncited violation of 10 CFR 50.65(a)(4) involving the failure of work control and operations personnel to assess and manage the increase in risk associated with planned maintenance activities. Specifically, the risk assessment for planned maintenance on emergency chiller ME336 was performed using risk assessment tools that had known errors that had the potential to change the outcome of the assessment. This finding was entered into the licensee's corrective action program as Nuclear Notification 200389219.

This finding is greater than minor because the risk assessment had known errors that had the potential to change the outcome of the assessment. This finding is associated with the Mitigating Systems Cornerstone. In accordance with Inspection Manual Chapter 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," step 4.1.1, the inspectors had the licensee reperform the assessment, correcting the errors that rendered the original risk assessment inadequate. The finding is determined to have very low safety significance because the incremental core damage probability deficit and the incremental large early release probability deficit, used to evaluate the magnitude of the error in the licensee's inadequate risk assessment, were less than 1E-6 and 1E-7, respectively. The finding has a crosscutting aspect in the area of problem identification and resolution associated with the corrective action program because engineering personnel failed to take appropriate corrective actions to address identified errors in the risk assessment tools in a timely manner [P.1(d)].

Inspection Report# : [2009003](#) (pdf)

Significance:  Mar 28, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Establish Adequate Scaffolding Erection Procedures

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of engineering personnel to establish adequate procedures for scaffolding erection in safety-related areas. Specifically, Procedure SO123-I-1.34 required a minimum separation distance of 1 inch from safety-related equipment which only considered the seismic displacements of scaffolding and not other movements, such as thermal expansion of piping, equipment vibrations, or component operation. Insufficient scaffolding to component separation could result in interactions that adversely affect the safety functions of safety-related equipment. This finding was entered into the licensee's corrective action program as Nuclear Notification 200366460.

The finding is greater than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern. The inspectors concluded this finding was associated with the Mitigating Systems Cornerstone. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheets, the finding is determined to have very low safety significance because the finding did not affect both trains of any single mitigating system or represent an actual loss of a safety function. A crosscutting aspect is not assigned since the cause of the performance deficiency is not indicative of current performance.

Inspection Report# : [2009003](#) (pdf)

Significance:  Mar 17, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Inspect Scaffolding in Safety-Related Areas

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of maintenance personnel to properly install and inspect scaffolding in safety-related areas in accordance with written procedural requirements. Four instances were found where the minimum separation distance between a scaffold and safety-related components was less than the minimum allowed by procedure and an approved engineering evaluation to justify the deviation was not performed. The licensee evaluated the scaffolds and modified them as necessary. This finding was entered into the licensee's corrective action program as Nuclear Notification 200356209.

The finding is greater than minor because if left uncorrected, it would have the potential to lead to a more significant safety concern. The inspectors concluded this finding was associated with the Mitigation Systems Cornerstone. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheets, the finding is determined to have very low safety significance because the finding did not affect both trains of any single mitigating system or represent an actual loss of a safety function. This finding has a crosscutting aspect in the area of human performance associated with work practices because the licensee did not utilize appropriate human performance techniques to ensure that scaffold construction was performed safely [H.4(a)] (Section 1R18).

Inspection Report# : [2009002](#) (pdf)

Significance:  Mar 11, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Implement Corrective Actions to Prevent Repeat Safety-Related 480V Breaker Failures

A self-revealing noncited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the failure to implement timely corrective actions to preclude repetition of a significant condition adverse to quality involving the failure of a safety-related 480 volt circuit breaker. Specifically, the licensee did not properly evaluate the extent of condition for other risk significant breakers and promptly implement corrective actions following a previous failure of a safety-related 480 volt circuit breaker in March 2005 to preclude repetition of another safety-related 480 volt circuit breaker failure on March 28, 2009. This finding was entered into the licensee's corrective action program as Nuclear Notification 200378783.

This finding is greater than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone and affects the associated cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Significance Determination Process Phase 1 Screening Worksheet for the Initiating Events, Mitigating Systems, and Barriers Cornerstones provided in Manual Chapter 0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," the inspectors determined that this finding represented a loss of safety function of a single train for greater than its technical specification allowed outage time. This required that a Phase 2 estimate be completed using Manual Chapter 0609, "Significance Determination Process," Appendix A, "Determining the Significance of Reactor Inspection Findings for At Power Situations," and the Phase 2 Worksheets for San Onofre Nuclear Generation Station. The inspectors assumed that the performance deficiency affected the risk of operating the plant from March 11, 2009, when the last successful surveillance was completed through April 1, 2009, when the breaker was restored to a functional status. As a result, in accordance with Appendix A, Attachment 1, step 2.1.2, "Determine the Appropriate Exposure Time," the inspectors selected an exposure period of 3-30 days. Using the Risk Informed Inspection Notebook for SONGS Units 2 and 3, Revision 2.1a, the inspectors selected "One Containment Fan Cooling Unit," as the appropriate target for the subject finding in the presolved table. Based on the results of the Phase 2 analysis, the finding is determined to have very low safety significance. This finding has a crosscutting aspect in the area of human performance associated with decision-making because safety-significant decisions were not reviewed to verify the validity of the underlying assumptions and identify possible unintended consequences [H.1(b)].

Inspection Report# : [2009003](#) (pdf)

Significance:  Jan 21, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Implement the Operability Determination Process

The inspectors identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures

and Drawings,” for the failure of operations and engineering personnel to follow procedures and adequately evaluate degraded conditions to support operability decision-making. Specifically, operations and engineering personnel failed to adequately evaluate the operability of the Unit 2 component cooling water system Train B, when a tube leak was identified, and subsequently, when the tube exhibited a degrading trend. This finding was entered into the licensee’s corrective action program as Nuclear Notification 200289984.

The finding is greater than minor because the degraded component cooling water heat exchanger is associated with the equipment performance 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 Worksheets, the finding is determined to have very low safety significance because the finding did not result in a loss of safety function of component cooling water Train B for greater than the technical specification allowed outage time. The finding has a crosscutting aspect in the area of human performance associated with decision-making because the licensee did not review past operability decisions to verify the validity of the underlying assumptions [H.1 (b)] (Section 1R15).

Inspection Report# : [2009002](#) (*pdf*)

Significance: **W** Dec 11, 2008

Identified By: NRC

Item Type: VIO Violation

Failure to Establish Appropriate Instructions

The team identified a White violation of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” involving the failure to establish appropriate instructions for performing maintenance activities on safety-related 125 Vdc station battery Breaker 2D201. As a result, during replacement of the breaker in March 2004 electrical connection integrity was not adequate to ensure that the equipment would be able to perform its safety function. This condition existed for approximately four years. This issue was entered into the licensee’s corrective action program as Root Cause Evaluation 800121216.

The finding is greater 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 availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The final significance determination performed by the senior reactor analyst and approved by the NRC significance and enforcement review panel determined the finding was of low to moderate safety significance (White). This finding has a crosscutting aspect in the area of human performance associated with resources because the licensee failed to establish adequate procedures and programs related to electrical connection integrity [H.2(c)] (Sections 2.1.5 and 3.5)

Inspection Report# : [2008013](#) (*pdf*)

Inspection Report# : [2009003](#) (*pdf*)

Significance: **G** Oct 22, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Maintenance Procedures Results in a Ground on the Safety-Related 125 VDC Distribution System

A self-revealing noncited violation of Technical Specification 5.5.1, "Procedures," was identified for the failure of maintenance personnel to have adequate procedures. Specifically, on January 24, 2008, during maintenance on a flood detector switch, an inadequate procedure resulted in an inadvertent electrical ground on the safety-related Unit 2 electrical distribution Bus 2D2. This issue was entered into the licensee’s corrective action program as Nuclear Notification 200177574. The licensee plans to revise the maintenance procedure and train maintenance personnel.

The performance deficiency associated with this finding involved the failure of maintenance personnel to ensure written guidance was provided in documented instructions to ensure nicked wires did not cause electrical grounds during maintenance activities. The finding was more than minor because it affected the procedure quality attribute of the mitigating systems cornerstone, and affected the cornerstone objective to ensure the reliability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to have a very low safety significance

because it did not result in an actual loss of system safety function, did not result in a loss of a single train of safety equipment for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. The finding had a cross-cutting aspect in the area of human performance associated with work control because the work instruction was not planned appropriately to address the human-system interface and ensure grounds were not caused by maintenance activities [H.3(a)].

Inspection Report# : [2008012](#) (pdf)

Significance:  Oct 22, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Auxiliary Feedwater Pump Room Heat Load Analysis

The team identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure of engineering personnel to ensure the auxiliary feedwater pump room heat load calculation was adequate. Specifically, since initial plant construction, engineering personnel failed to consider the impact to the auxiliary feedwater pump room's heat load design basis calculation for the most limiting scenario, in which all auxiliary feedwater pumps in the room have started and are running with only one emergency room cooler available. This issue was entered into the licensee's corrective action program as Nuclear Notification 200149442. The licensee plans to perform a revised auxiliary feedwater pump room heat load analysis.

The performance deficiency associated with this finding was the failure of engineering personnel to include the proper heat load scenarios and use of realistic assumptions for a design basis calculation. The finding was more than minor because it affected the design control attribute of the mitigating systems cornerstone and affected the objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Manual Chapter 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," the finding was determined to have a very low safety significance because it did not result in an actual loss of system safety function, did not result in a loss of a single train of safety equipment for greater than its technical specification allowed outage time, and did not screen as potentially risk significant due to seismic, flooding, or severe weather initiating events. This finding was evaluated as not having a cross-cutting aspect because the performance deficiency was not indicative of current performance.

Inspection Report# : [2008012](#) (pdf)

Barrier Integrity

Significance:  May 06, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform Operability Determination in a Timely Manner on Safety-Related Equipment

The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the failure of operations personnel to follow procedures to evaluate the operability of an identified nonconforming condition associated with containment structural tendon H-14. Specifically, contaminated grease was placed in the tendon sheathing for containment structural tendon H 14, which constituted a nonconforming condition. However, operations personnel and notification screening processes failed to identify the nonconforming condition as a condition that needed to be evaluated in accordance with Procedure SO123-XV-52, "Functionality Assessments and Operability Determinations," Revision 11. This finding was entered into the licensee's corrective action program as Nuclear Notification 200417206.

The finding is greater than minor because the failure to perform timely evaluations of nonconforming conditions for operability, if left uncorrected, would have a potential to lead to a more significant safety concern. The finding is associated with the design control attribute of the Containment Barrier Integrity Cornerstone and affects the associated cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radio nuclide releases caused by accidents or events. Using the Manual Chapter 0609, "Significance Determination Process," Phase 1 Worksheets, the finding is determined to have very low safety significance because the finding did

not represent a degradation of the radiological barrier function provided for the control room or auxiliary building, and did not represent an actual open pathway in the physical integrity of reactor containment and heat removal components. This finding has a crosscutting aspect in the area of problem identification and resolution associated with corrective action program because licensee personnel failed to properly classify, prioritize, and evaluate for operability conditions adverse to quality [P.1(c)].

Inspection Report# : [2009003](#) (pdf)

Significance: **G** Feb 07, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Procedures to Reassemble a Reactor Coolant System Pressure Retaining Component

A self-revealing non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified for the failure of work control and maintenance personnel to follow the procedure requirements for work on a reactor coolant system pressure retaining component. Specifically, work control and maintenance personnel did not use work documents and procedures to reassemble the vent valve for the control element drive mechanism associated with control element Assembly 22, which resulted in a reactor coolant system leak during the fill and vent process. This finding was entered into the licensee's corrective action program as Nuclear Notification 200323460.

The finding is greater than minor because it is associated with the reactor coolant system equipment and barrier performance attribute of the Barrier Integrity Cornerstone and affects the associated cornerstone objective to provide reasonable assurance that physical design barriers protect the public from radionuclide releases caused by accidents or events. Using Manual Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," Checklist 4, the finding was of very low safety significance because it did not increase the likelihood of a loss of reactor coolant system inventory by more than two feet when not in a mid loop operation. This finding has a crosscutting aspect in the area of human performance associated with work control because the licensee did not appropriately coordinate work activities by incorporating actions to address the impact of work on different job activities [H.3(b)] (Section 4OA3).

Inspection Report# : [2009002](#) (pdf)

Emergency Preparedness

Significance: SL-IV Jul 13, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Notify the NRC within Required Timeframe

A self-revealing noncited violation of 10 CFR 50.72 was identified for the failure to notify the NRC in the time required after computer engineering personnel discovered an event requiring an eight hour notification. Specifically, on July 13, 2009, Nuclear Regulatory Affairs personnel failed to notify the NRC, within 8 hours after the discovery of a loss of the ability to activate 10 Community Alert Sirens located on the Camp Pendleton Marine Corp Base. The NRC was notified of the loss of the ability to activate the Community Alert Sirens, approximately 24 hours late, on July 14, 2009. This finding was entered in the licensee's corrective action program as Nuclear Notification NN 200501125.

The failure to notify the NRC of an event in the time required by 10 CFR 50.72 was a performance deficiency. The finding was determined to be applicable to traditional enforcement because the NRC's ability to perform its regulatory function was potentially impacted by the licensee's failure to report the event. The finding is associated with the emergency preparedness cornerstone. The finding was determined to be a Severity Level IV violation in accordance with Section D 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 finding has a crosscutting aspect in the area of problem identification and resolution associated with corrective action program because computer engineering personnel failed implement the corrective action program at an appropriate threshold for identified issues [P.1(a)].

Inspection Report# : [2009004](#) (pdf)

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

Significance: N/A Oct 22, 2008

Identified By: NRC

Item Type: FIN Finding

PI&R Assessment

The team selected and reviewed approximately 400 risk-informed action requests and notifications, work orders, associated root and apparent cause evaluations, and other supporting documentation to assess problem identification and resolution activities. The inspectors verified that the licensee had taken actions to address previous NRC findings. The team performed a five year review of the auxiliary feedwater system to determine whether problems were being effectively addressed and that the corrective action program was effective in identifying problems. As a result of these reviews, the team concluded that when site personnel identified problems, they entered them into the corrective action program at a low threshold; however, the team identified several issues with the quality of cause evaluations and overall documentation of corrective action documents. Corrective actions were generally implemented in a timely manner, although the team identified several corrective actions associated with conditions adverse to quality that were not completed in a timely manner. The team also identified that operability assessments and reportability reviews were not being implemented consistent with procedural guidance, and many of these assessments did not demonstrate the appropriate level of technical rigor to support conclusions made for operability or reportability.

The team determined that the licensee identified, reviewed, and applied industry operating experience relevant to the facility, and had entered applicable items into the corrective action program. The team noted that the licensee was evaluating industry operating experience when performing root cause and apparent cause evaluations. The team also noted that Quality Assurance audits and other self-assessment activities were generally effective.

The team reviewed the corrective action plans to address substantive cross-cutting issues in the areas of procedural adequacy and evaluations, and noted that both had recently been re-assessed and revised. The team concluded that the licensee made minimal progress in implementing corrective actions for these plans. The team further concluded that while the identified corrective actions should address the cross-cutting issues, the team could not assess and evaluate these corrective action plans because they were in the early stages of implementation.

Based on 56 interviews and six focus groups (consisting of approximately 50 people) conducted during this inspection, observations of plant activities, and reviews of the corrective action and nuclear safety concerns programs, the team determined that site personnel were willing to raise safety issues and document them in the corrective action program. The team observed that workers at the site felt free to report problems to their management, and were willing to use the Nuclear Safety Concerns program.

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