

San Onofre 3

3Q/2012 Plant Inspection Findings

Initiating Events

Significance:  Mar 24, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Control Work Activities and Prevent RCS Perturbations

The inspectors reviewed a self-revealing non-cited violation of Technical Specification 5.5.1.1 for the failure of operations personnel to follow Procedure SO23-3-1.8, "Draining the Reactor Coolant System to a Reduced Inventory Condition," Revision 32, Attachment 13, "Reduced Inventory Condition RCS Perturbation Control." Specifically, on February 8, 2012, operations personnel failed to document potential reactor coolant system perturbations and the measures, controls, and enhanced monitoring used to prevent perturbations. Consequently, work activities performed by health physics personnel were not appropriately documented and controlled which resulted in a reactor coolant system perturbation while in reduced inventory conditions. The issue was entered into licensee's corrective action program as Nuclear Notification NN 201848706.

The performance deficiency is more than minor, and therefore a finding, because it was associated with the Initiating Events Cornerstone attribute of configuration control and affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Additionally, the failure to appropriately control work activities that could impact reactor coolant system inventory while in reduced inventory conditions, if left uncorrected, would have the potential to lead to a more significant safety concern. Using the Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process," Phase 1 guidance, a Phase 2 analysis is required because the finding increased the likelihood of a loss of reactor coolant system inventory during reduced inventory conditions as a result of inadequate controls implemented to avoid operations that could lead to perturbations in reactor coolant system level control. The finding was evaluated using the Phase 2 guidance in IMC 0609, Appendix G, as applied to Worksheet 2. Using the applicable tables and accounting for the availability of mitigating equipment, two sequences of value 8 and 9, respectively, were identified. This resulted in a determination of very low significance (Green). This finding has a cross-cutting aspect in the area of human performance associated with the work control component because health physics personnel failed to appropriately communicate and coordinate work activities with operations personnel to ensure there would be no impact to plant operations [H.3(b)](Section 1R20).

Inspection Report# : [2012002](#) (*pdf*)

Mitigating Systems

Significance:  Dec 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Implement Required Compensatory Measures Resulted in Inoperable Condensate Storage Tank

A self-revealing non-cited violation of Technical Specification 5.5.1.1, "Procedures," was identified for the failure of operations personnel to adequately implement the appropriate compensatory measures per alarm response procedure

to ensure equipment was maintained as required by technical specifications. Specifically, on September 13, 2011, operations personnel failed to implement the compensatory measures required by alarm response Procedure SO23-15-53.B, to maintain the safety-related condensate storage tank water level within limits required by technical specifications. The issue was entered into the licensee's corrective action program as Nuclear Notification NN 201644782.

The performance deficiency is more than minor, and therefore a finding, because it was associated with Mitigating Systems Cornerstone attribute of human performance and affected 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 it was not a design or qualification deficiency confirmed not to result in loss of operability or functionality; did not result in a loss of system safety function; did not represent an actual loss of safety function of a single train for greater than its technical specification allowed outage time; was not an actual loss of safety function of one or more non-technical specification trains of equipment designated as risk significant per 10 CFR 50.65 for greater than 24 hours; and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. This finding has a cross-cutting aspect in the area of human performance associated with the decision-making component because operations personnel failed to use a systematic process to effectively communicate and formally establish required compensatory measures to ensure that condensate storage tank water inventory remained within technical specification limits [H.1(a)](Section 4OA3.1)
Inspection Report# : [2011005](#) (*pdf*)

Significance: G Dec 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Correct Degraded Plant Equipment Results in Ammonia Spill

A self-revealing finding was identified for the failure to take adequate corrective actions for degraded equipment associated with the Unit 3 full flow condensate polishing demineralizer system. Specifically, on October 27, 2011, operations personnel failed to take adequate corrective actions for an unexpected rise in ammonia day tank level and annunciation of an ammonia day tank high level, which eventually resulted in an ammonia leak from the ammonia day tank on November 1, 2011, that caused areas of the turbine building to become inaccessible requiring an emergency declaration at the ALERT level. The issue was entered into the licensee's corrective action program as Nuclear Notification NN 201713841.

The performance deficiency is more than minor because the performance deficiency was a precursor to a significant event (Emergency Declaration), and is therefore a finding. 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 for greater than the technical specification allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event. The finding has a cross-cutting aspect in the area of human performance associated with resources because the licensee failed to provide adequate procedural guidance to operations personnel for responding to full flow condensate polishing demineralizer system degrading conditions [H.2(c)](Section 4OA3.2)
Inspection Report# : [2011005](#) (*pdf*)

Significance: G Aug 16, 2010

Identified By: NRC

Item Type: VIO Violation

Failure to Ensure At Least One Train of Equipment Necessary to Achieve Hot Shutdown Conditions Is Free of Fire Damage

The team identified a cited violation of License Condition 2.C(14), "Fire Protection," for failure to correct a noncompliance. Specifically, Inspection Report 05000361;362/2007008 documented a noncompliance involving the failure to ensure that at least one train of safe shutdown equipment would remain free from fire damage in each fire

area. The NRC exercised discretion not to cite this violation at that time because the licensee met the criteria described in Enforcement Guidance Memorandum 98-002, Revision 2, and Supplement 2 to that revision. Enforcement Guidance Memorandum 07-004 superseded Enforcement Guidance Memorandum 98-002 and required licensees to complete corrective actions for noncompliances related to post-fire operator manual actions by March 6, 2009. This violation is being cited due to the failure to complete corrective actions and restore compliance within the required time. This finding was entered into the licensee's corrective action program as Notification NN 200940265.

The failure to promptly restore adequate fire protection and/or separation of required safe shutdown systems was a performance deficiency. This performance deficiency was more than minor because it was associated with the protection against external factors (fire) attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events in order to prevent undesirable consequences. Because the violation involved multiple fire areas, the team could not evaluate this issue using Phase 2 of Inspection Manual Chapter 0609, Appendix F, and a Phase 3 significance determination process risk assessment was performed by a senior reactor analyst. The finding was determined to have very low risk significance (Green), with a delta-CDF of $3.2E-8$ /yr, because of a combination of the availability of long recovery times for feasible operator manual actions and low-probability fire damage scenarios in the nine fire areas with fire sources which could potentially damage cables of required safe shutdown components. This finding involved a cross-cutting aspect in the decision-making component in the human performance area because the licensee failed to make a risk-significant decision using a systematic process when considering the scheduling of corrective actions. Inspection Report# : [2010007](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Dec 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Control Work in a High Radiation Area

The inspectors reviewed a self-revealing non-cited violation of Technical Specification 5.8.1 for the failure to control work in a high radiation area. On August 25, 2011, diving was performed in a high radiation area using stay time calculations instead of the radiation protection coverage described in the Technical Specifications. The licensee suspended further diving operations until interim corrective actions were put in place. The licensee placed this issue into their corrective action program as Nuclear Notification NN 201620253.

The failure to adequately control work in a high radiation area was a performance deficiency. The performance deficiency was more than minor, and therefore a finding, because it negatively impacted the Occupational Radiation Safety cornerstone attribute of program and process and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that a worker received unplanned, unintended radiation dose. Using NRC Manual Chapter 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the finding was determined to be of very low safety significance because: (1) it was not

associated with ALARA planning or work controls, (2) there was no overexposure, (3) there was no substantial potential for an overexposure, and (4) the ability to assess dose was not compromised. This finding has a cross-cutting aspect in the area of human performance related to resources. Specifically, the licensee did not have a diving procedure to control this evolution [H.2.(c)] (Section 2RS01)
Inspection Report# : [2011005](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

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