Calvert Cliffs 2
4Q/2005 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Establish Adequate Clearance Order Boundaries
The inspectors identified a non-cited violation of Technical Specification 5.4.1.a. "..., written procedures shall be established, implemented,.." because plant procedural requirements were not implemented while performing maintenance on the Unit 2, 21A reactor coolant pump (RCP) drain line valve replacement activity during reduced inventory. Specifically, on March 7, 2005, while in reduced Reactor Coolant System (RCS) inventory, the 21A RCP drain line was opened to support a maintenance activity which inadvertently drained the reactor coolant system (RCS) into the normal containment sump. The RCS level dropped one-half inch before operators diagnosed the draindown and closed the drain valve. A lack of knowledge and understanding regarding the height of the drain line penetrating into the RCS piping, as compared to the reduced inventory level of the RCS, resulted in the inadvertent draindown and loss of RCS inventory.

This finding is greater than minor because it was associated with the Initiating Events Cornerstone configuration control attribute and affected the cornerstone's objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. This finding did not involve an actual loss of shutdown cooling (SDC). As a result, this finding was determined to be of very low safety significance (Green) in accordance with a Phase 2 risk assessment performed using the NRC Inspection Manual, Chapter 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process." The inspectors identified that a contributing cause of this finding was related to the cross-cutting area of human performance. The relevant causal factor was personnel because licensed operators did not follow plant procedures and determine if boundaries specified in the clearance order were adequate for the maintenance activity. (Section 1R04)

Inspection Report# : 2005002*(pdf)*

Significance: G Jun 28, 2003
Identified By: Self-Revealing
Item Type: FIN Finding
Troubleshooting Human Performance Error Results in a Reactor Trip
The inspectors identified a finding because the work practices during a turbine governor valve control circuit troubleshooting activity were inadequate and resulted in a reactor trip.

This finding is greater than minor because it affected an attribute and the objective of the Initiating Events Cornerstone in that the work practices inadequacies resulted in a perturbation in plant stability by causing a reactor trip. The finding is of very low safety significant in accordance with Phase 1 of the reactor safety SDP because, although it caused a reactor trip, it did not increase the likelihood of a primary or secondary system loss of coolant accident initiator, did not contribute to a combination of a reactor trip and loss of mitigation equipment functions, and did not increase the likelihood of a fire or internal/external flood.
Inspection Report# : 2003003*(pdf)*

Mitigating Systems

Significance: G Nov 18, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to identify and correct unavailability problems for the turbine drive AFW pump.
The NRC identified a Green non-cited violation (NCV) of Technical Specification (TS) 5.4.1 due to an inadequate procedure for installation and adjustment of packing for the 22 turbine-driven auxiliary feedwater (TDAFW) pump, which led to premature pump shutdown during a quarterly surveillance test. During the test, operators secured the pump when they noticed a burning smell and observed smoke coming from the pump's inboard packing gland. Investigation found the inboard packing gland had lost adequate leak off flow along its inner diameter. The licensee entered the deficiency with the pump overhaul procedure into their corrective action (CA) program for resolution.

This finding was greater than minor because it adversely affected the availability of a safety-related TDAFW pump which affected the

equipment performance attribute of the Mitigating Systems Cornerstone because the pump was unavailable until the degraded packing had been replaced and the pump was satisfactorily retested. The finding was determined to be of very low safety significance (Green) in accordance with IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," because an engineering analysis determined that the pump would have remained operable, and was capable of performing its intended safety function. (Section 4OA2.2)

Inspection Report# : 2005007*(pdf)*

Significance: G Oct 16, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Maintenance Rule Failure to Monitor Safety-Related Power Supply System
The inspectors identified a non-cited violation (NCV) of 10 CFR 50.65(a)(2) for failure to establish adequate measures to demonstrate that performance of Unit 2 safety-related power supplies were effectively monitored in the maintenance rule program. The licensee failed to adequately identify, evaluate, and track the failures of these power supplies in accordance with the requirements of their maintenance rule program. Specifically, when reviewing relevant power supply failures, the inspectors identified that the power supply failure associated with the 22 feedwater steam generator level transmitter, which occurred on September 16, 2005, was not properly classified as a maintenance rule functional failure. The licensee's failure to classify this as a maintenance rule functional failure resulted in the system being placed in a 50.65 (a)(1) category on October 16, 2005, after this deficiency was identified by the inspectors, instead of on September 16, 2005, when the failure occurred. A condition report was generated by the licensee to document this as well as a condition report generated to place the safety-related power supplies in an (a)(1) status.

The finding is greater than minor because it is associated with the equipment performance attribute and affected the Mitigating Systems Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the licensee did not demonstrate effective control of the performance or condition of the safety-related power supplies by failing to put the affected structure, system, component (SSC) in a 50.65 (a)(1) category. The finding is of very low safety significance because no loss of safety-related equipment actually occurred, and the affected safety-related equipment was capable of performing its intended safety function. The inspectors identified that a contributing cause to the finding was related to the cross-cutting area of human performance. Plant personnel did not properly evaluate and classify the 22 feedwater steam generator level transmitter 2LT1124C power supply failure as a maintenance rule functional failure. This inadequate classification contributed to the system not being placed in a 50.65 (a)(1) category. (Section 1R12)
Inspection Report# : 2005005*(pdf)*

Significance: G Sep 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedures for Offsite Power Availability
The inspectors identified an NCV of Technical Specification 5.4.1.a. "..., written procedures shall be established, implemented,.." for the failure to provide an adequate procedure for the operation of the electrical system. Specifically, Operating Procedure OI-27-B, 13.8kV System, provides steps for placing voltage regulators under manual control which makes the associated offsite source to the affected 4 kV busses inoperable. The procedure did not state this, and as a result, when the voltage regulators were placed in manual the associated offsite source was not declared inoperable when it should have been.

This finding is greater than minor because it is associated with the cornerstone attribute Procedure Quality and affects the objective of the Mitigating Systems Cornerstone to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was determined to be a finding of very low safety significance because the finding did not represent an actual loss of a safety function and was not potentially risk significant due to an external initiating event. (Section 4OA2)

Inspection Report# : 2005004*(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Nov 18, 2005
Identified By: NRC
Item Type: FIN Finding
Identification and Resolution of Problems
The team determined that Constellation's Calvert Cliffs (CC) Units 1 and 2 Nuclear Power Plants were effective at identifying problems and entering them into the corrective action program (CAP). Relatively few deficiencies were identified by external organizations (including NRC) that had not been previously identified by the licensee. Audits and self-assessments were generally thorough. Once entered into the CAP, issues were screened and prioritized in a timely manner using established criteria. Items entered into the CAP were also properly evaluated commensurate with their safety significance. The causal evaluations for equipment and performance issues were complete, and proposed corrective actions that addressed the identified causes. Corrective actions were generally effective and typically implemented in a timely manner. On the basis of interviews conducted during the inspection, workers at the station felt free to raise safety issues and were willing to enter them into the corrective action program. However, an ineffective maintenance procedure adversely impacted the availability of an auxiliary feedwater pump.
Inspection Report# : 2005007*(pdf)*

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