Calvert Cliffs 1
2Q/2004 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to assess and manage risk associated with Unit 1 RPS power supply replacement activities during reduced inventory. (Section 1R13)
The inspectors identified a non-cited violation of 10 CFR 50.65(a)(4) which requires that before performing maintenance activities (including but not limited to surveillance, post-maintenance testing, and corrective and preventive maintenance), the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities. Specifically, the licensee failed to identify and therefore assess and manage the risks associated with performing maintenance on the 'B' channel of the reactor protection system (RPS) while operating in a reduced inventory condition. This maintenance activity resulted in the loss of one of the two shutdown cooling (SDC) operating trains for about 18 minutes with a corresponding heatup of the reactor coolant system (RCS) of 2 degrees Fahrenheit (F).

This finding is greater than minor because it affected an attribute and objective of the Initiating Event Cornerstone in that human performance inadequacies resulted in an event that upset plant stability during shutdown operations. This issue was evaluated in accordance with NRC Inspection Manual Chapter (IMC) 0609, Appendix G, Shutdown Operations SDP, and was determined to be of very low safety significance. The inspectors identified that a contributing cause of this finding was related to the cross-cutting area of Human Performance. (Section 1R13)

Inspection Report# : 2004005*(pdf)*

Significance: G Jun 18, 2004
Identified By: Self Disclosing
Item Type: FIN Finding
Failure to comply with station work control procedures. (Section 3.4)
A self-revealing event identified a finding in that CCNPP did not follow procedural requirements in their risk assessment and control of the work on March 20, 2004, which resulted in an unanticipated reactor trip. Specifically, the provisions and controls of procedures NO-1-100, "Conduct of Operations," NO-1-117, "Integrated Risk Management," and MN-1-100, "Conduct of Maintenance," were not followed.

This finding was more than minor because the failures to follow station procedures affected the Initiating Events cornerstone in that the failure to properly risk-classify and control the work in the control room on March 20 lead to the reactor trip. This finding had 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.

A contributing cause of the finding was related to the Human Performance cross-cutting area because CCNPP managers and staff did not properly implement station operations, risk management, and maintenance procedures. (Section 3.4)
Inspection Report# : 2004008*(pdf)*

Significance: G Jun 18, 2004
Identified By: Self Disclosing
Item Type: FIN Finding
Failure to adequately implement a modification design review of the digital feedwater control system. (Section 2.4)
A self-revealing finding of very low safety significance was identified because CCNPP failed to perform an adequate design review which resulted in reduced reliability of the digital feedwater system during a plant event on March 20, 2004.

This finding was more than minor because it effected the design control attributes of the Initiating Events cornerstone. Incorrectly specifying the design voltage resulted in reduced reliability of the digital feedwater control system which increased the likelihood of an event that upset plant stability during power operation. This finding was of very low safety significance, because one of two turbine driven feedwater pumps and one of three condensate and condensate booster pumps remained operable during the Unit 1 March 20, 2004, event. (Section 2.4)

Inspection Report# : 2004008*(pdf)*

Significance: G May 28, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Combustible Material Control in Unit 1 69' West Electrical Room
The team identified a non-cited violation of License Condtion 3.E, because Calvert Cliffs Nuclear Power Plant was not maintaining control of

combustible materials in the Unit 1 69' West Electrical Room as described and approved in the safety evaluation report issued September 14, 1979.

Since the finding affected the initiating events cornerstone objective the finding is more than minor. The finding is of very low safety significance because the material was not located below cable trays carrying safety related cables and the material had been evaluated in the combustible loading calculations. (Section 1RO5.4)
Inspection Report# : 2004003*(pdf)*

Mitigating Systems

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to implement planned, scheduled maintenance. (Section 4OA2)
The inspector identified a non-cited violation for failure to implement procedures to control maintenance activities required by Technical Specification 5.4.1.a. and Regulatory Guide 1.33. The licensee failed to implement procedures to ensure that planned, scheduled maintenance was actually being performed. Maintenance personnel, by procedure, are permitted to decide whether or not to clean and lubricate 480v breakers. If the maintenance personnel decide not to perform the scheduled clean and lubricate, no method is specified or available to report this situation to maintenance and engineering management.

This finding is more than minor because it affects the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences and affects the availability and reliability of the 480v electrical distribution system. The finding is of very low safety significance because the finding did not represent an actual loss of safety function and did not screen as potentially risk significant due to a seismic, fire, flooding or severe weather initiating event. (Section 4OA2)
Inspection Report# : 2004005*(pdf)*

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate corrective actions for 480v breaker testing deficiency. (Section 4OA2)
The inspector identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI. The licensee failed to promptly correct a testing deficiency identified during a CX relay failure in 1998. When action was taken in October of 2001, it was not sufficient to prevent further CX relay failures in December 2003 and February 2004.

This finding is more than minor because it affects the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences and affects the availability and reliability of the 480 volt (v) electrical distribution system. The finding is of very low safety significance because the finding did not represent an actual loss of safety function and did not screen as potentially risk significant due to a seismic, fire, flooding or severe weather initiating event. The inspectors identified that a contributing cause of this finding was related to the cross-cutting area of Problem Identification and Resolution. (Section 4OA2)

Inspection Report# : 2004005*(pdf)*

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to implement design control measures for the 12 CC HX. (Section 1R15)
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, associated with a self-revealing finding, which requires that measures be established to assure that design basis are correctly translated into procedures. Specifically, the licensee failed to incorporate a design flow calculation into an operating procedure which allowed the licensee to operate the 12 component cooling water heat exchanger (CC HX) in excess of its maximum shell side flow versus time curves. This failure resulted in tube failures in the only available, and in-service CC HX which supported SDC operations of the RCS.

This finding is greater than minor because it affected an attribute and the objective of the Mitigating System Cornerstone in that inadequate procedure quality resulted in degraded availability, reliability and capability of a system that responds to initiating events to prevent undesirable consequences. In accordance with Inspection Manual Chapter (IMC) 0609, Appendix G, Shutdown Operations SDP, this finding was determined to be of very low safety significance (Green) since the safety function of the component cooling water system was not lost. (Section 1R15)

Inspection Report# : 2004005*(pdf)*

Significance: G May 28, 2004
Identified By: NRC

Item Type: NCV NonCited Violation
Failure to provide protection in accordance with 10 CFR Part 50, Appendix R, Section III.G.2
The team identified a non-cited violation of 10 CFR Part 50, Appendix R, Section III.G.2, because Calvert Cliffs Nuclear Power Plant utiilized manual actions to operate equipment necessary for achieving and maintaining hot shutdown in lieu of providing protection to the cables associated with that equipment, as required by the regulation.

In accordance with the guidance provided in inspection procedure 71111.05, "Fire Protection", (revision dated 3/6/03) this finding is greater than minor. The finding is of very low safety significance because the manual actions are reasonoable and are expected to meet the criteria outlined in the Enclosure 2 of inspection procedure 71111.05. (Section 1RO5.5)
Inspection Report# : 2004003*(pdf)*

Significance: G May 28, 2004
Identified By: NRC
Item Type: FIN Finding
Inadequate Breaker Coordination
The team identified a finding in that protective relay settings for the bustie circuit breakers for the 1A and OC emergency diesel generators were not adequately coordinated with the feeder breakers for the 4kV/480V service transformers supplying the 480VAC load centers.

Because the finding affected the design control attribute of the mitigating systems cornerstone, it was more than minor. Since the issue did not result in an actual loss of a safety function of a single train of equipment, the issue was determined to be of very low safety significance.
Inspection Report# : 2004003*(pdf)*

Significance: G Mar 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Effective Corrective Actions Associated with Component Mispositioning Events
The inspector selected seven issues identified in the Corrective Action Program (CAP) for detailed review (Issue Report Nos. IR4-008-987 and -988, IR4-009-607, -608, -642, and -680, and IR4-023-854). The issues were associated with site dose reduction, inadvertent release of radioactive material from the RCA, position qualifications,

completion and documentation of required training, negative trends in written communications identified by self-assessment review, and documentation of radioactive material storage locations. On February 5, the inspector met with the Health Physics Support Supervisor to discuss these Issue Reports. The documented reports for the issues were reviewed to ensure that the full extent of the issues was identified, an appropriate evaluation was performed, and appropriate corrective actions were specified and prioritized.

Inspection Report# : 2004004*(pdf)*

Significance: G Jan 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
HPSI Design Support/Seismic Structural Records not Retrievable (Section 1R21.b.1)
The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVII, Quality Assurance Records, related to the licensee's inability to retrieve records required to furnish evidence of the adequate performance of activities affecting the quality of the high pressure safety injection (hPSI) system. Specifically, quality records, identifiable with both the design change details for a Unit 2 HPSI pipe support snubber installation and the design calculations for the seismic adequacy for structural platforms in the refueling water tank (RWT) rooms in Units 1 & 2, were not retrievable.

The finding was evaluated using Manual Chapter 0612, Appendix E, example 1.b and determined to be more then mainor because the records were irretrievable lost. The finding wa associated with the attribute of design control (initial design, plant modifications). This issue is considered a very low safety significance finding because, while the required records were not retrievable, an as-built design review was conducted by the licensee which demonstrated the structural adequacy of the existinig field configurations (Section 1R21.b.1)
Inspection Report# : 2004002*(pdf)*

Significance: G Jan 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
High Pressure Safety Injection System Operation Outside of Design Basis (Section 1R21.b.2)
The team identified a non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, Design Control, for constellation Energy Group's (CEG) failure to correctly translate the emergency core cooling system (ECCS) design basis into the HPSI system operating instructions and procedures. Specifically, for shot durations during surveillance test activities, the HPSI loop isolation valve was placed in a condtion that could impact core cooling if the redundant train of HPSI were to fail.

The finding was more than minor because it affected the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events (i.e., loss of coolant accidents) to prevent undersirable consequences (core damage). The finding was

associated with the attribute of configuration control (operating equipment lineup). The finding was of very low safety significance because it represented the loss of single train of HPSI for less than the TS 3.5.2.A allowed outage time (72 hours) during each occurrence. (Section 1R21.b.2)
Inspection Report# : 2004002*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to adequately evaluate suction stabilizer failures and perform repairs in a timely manner
The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Actions, which requires that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected. Specifically, the licensee failed to promptly correct a condition adverse to quality associated with suction stabilizer failures, which if left uncorrected could have resulted in the failure of a charging pump. These failures occurred on the Unit 1, 13 charging pump in October, 2002, and on the Unit 2, 23 charging pump in September, 2002. The associated repairs were not timely and did not occur until October, 2003, and December 2003, respectively.

This finding is greater than minor because it affects the Reactor Safety, Mitigating Systems attribute of equipment performance, and the availability, reliability, and capability objective of the mitigating systems cornerstone because if left uncorrected, this condition could have led to the failure of a charging pump. The issue was of very low safety significance because the finding was not a design or qualification deficiency, the finding did not represent an actual loss of safety function, and the finding did not screen as potentially risk significant due to a seismic, fire flooding, or severe weather initiating event. Additionally, the failure of a charging pump did not occur while its suction stabilizer was in a failed condition. The inspectors identified that a contributing cause of this finding was related to the cross-cutting area of Problem Identification and Resolution.
Inspection Report# : 2003006*(pdf)*

Significance: G Nov 07, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to identify and correct repeated failures of CCWHX saltwater flow verification.
The licensee failed to take appropriate corrective actions in a timely manner to address and corect repeat component cooling water heat exchanger (CCWHX) salterwater system test failures.
Inspection Report# : 2003009*(pdf)*

Significance: G Nov 07, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to prevent the recurrence of a significant condition adverse to quality involving mispositioning events
A significant condition adverse to quality involving several component mispositioning events associated with several safety-related systems occured between January 2002 and October 2003 and effective measures were not implemented to determine the cause of the problem and to preclude recurrence.
Inspection Report# : 2003009*(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Nov 07, 2003
Identified By: NRC
Item Type: FIN Finding
Problem Identification & Resolution Team Assessment
The team determined that the licensee was generally effective at identifying discrepant conditions at an appropriate threshold and entering them into the corrective action program. Once entered into the system, issues were usually prioritized appropriately and in a timely fashion, and were evaluated in adequate detail commensurate with the safety significance. Overall, the evaluations reasonably identified the causes of the problem, the extent of the condition, and provided for corrective actions to address the causes. However, in some cases, the corrective action program was not being used effectively and consistently to resolve and prevent problems. There were some instances where issue reports were characterized at a lower category than prescribed by the corrective action program. Further, the team identified some instances where issue evaluations, as well as the associated corrective actions, were not effective in resolving problems. On the basis of interviews conducted during the inspection, workers at the station felt free to input safety findings into the corrective action program.

Inspection Report# : 2003009*(pdf)*

Last modified : September 08, 2004