Clinton
2Q/2004 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: FIN Finding
AUTOMATIC SHUTDOWN SIGNAL GENERATED DUE TO PERSONNEL ERROR
The inspectors identified a finding of very low safety significance concerning poor operator performance following a reactor scram on December 2, 2003. The primary cause of this finding was related to the cross-cutting area of Human Performance, in that, poor performance by operations personnel resulted in a momentary loss of reactor pressure vessel level control. This loss of level resulted in a second reactor scram signal being generated. No violations of NRC requirements occurred.

This finding was more than minor because the finding affected the Reactor Safety/Initiating Event objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The finding did not contribute to the likelihood of a Primary or Secondary system loss of coolant accident initiator, did not contribute to both the likelihood of a reactor trip AND the likelihood that mitigation equipment or functions will not be available, and did not increase the likelihood of a fire or internal/external flood. Therefore, the finding was determined to be of very low safety significance.
Inspection Report# : 2003009*(pdf)*

Mitigating Systems

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IMPLEMENT A LOCKED VALVE PROCEDURE.
A finding of very low safety significance was identified by the inspectors for the licensee's failure to implement a procedure to control locked valves. Failing to have a locked valve procedure, combined with a shift supervisor marking the step which verified the position of the standby liquid control (SLC) tank air-sparging valve as "not applicable," based on the valve being a "locked valve" and no work having been done to the valve, allowed the air sparging valve to remain mispositioned while transitioning to Mode-2 and during Mode-1 operations. Once identified, the licensee placed the valve in the correct position. This issue was related to the Human Performance corsscutting area, in that, the failure to implement a procedure resulted in a mispositioned valve.

The finding was more than minor because the open air sparging valve created the potential for air-binding the pumps used to inject boron solution into the reactor, affecting the ability of the SLC system to shut the reactor down from a full power situation in the control rods failed to insert on a scram condition. The finding was of very low safety-significance because the deficiency, once evaluated, did not result in a loss of function per Generic Letter 91-18. The finding was a Non-Cited Violation of Technical Specification 5.4 which required the implementation of written procedures to control the locked valves in the plant.
Inspection Report# : 2004005*(pdf)*

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
SLC BORON CONCENTRATION OUTSIDE TS LIMITS FOR GREATER THAN ALLOWED OUTAGE TIME.
A finding of very low safety significance was identified by the inspectors for the licensee's failure to take timely corrective actions after discovering that the standby liquid control (SLC) tank air-aparging valve was in the wrong position for about 2 months. This resulted in the boron concentration in the tank being outside the Technical Specification allowed limits for greater than the Technical Specification allowed action time. Once identified, the licensee restored the concentration in the tank to within acceptable limits. This finding was related to the Problem Identification and Resolution crosscutting area, in that, the concentration in the tank remained outside limits due to the licensee's failure to identify the impact of evaporation on the solution.

The finding was more than minor because the boron concentration being ouside the Technical Specification allowed range affects the cross-cutting attribute of SLC system performance and also affected the SLC system's availability, reliability, and capability of responding to plant events. The finding was of very low safety significance because the as-found concentration, although above technical specification limits, did not impact the safety function of the pumps. The finding was a Non-Cited Violation of 10CFR50, Appendix B, Criterion XVI which requires condtions adverse to quality be promptly identified and corrected.

Inspection Report# : 2004005*(pdf)*

Significance: G Apr 07, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO IDENTIFY THE EXTENT OF CONDITION FOR INCORRECT FUSES IN THE REACTOR PROTECTION SYSTEM.
The inspectors identified a finding of very low safety significance concerning the licesnee's failure to determine the extent of condition for improper fuses installed in the reactor protection system (RPS) electronic circuit boards. This finding was determined to be a Non-Cited Violation of 10 CFR 50 Appendix B, Criterion XVI.

This finding is more than minor because it affects the design and reliability of the RPS to perform its protective function of protecting the reactor core and containment. The licensee determined that although the fuses were improperly sized, the reactor protection system remained operable and could perfrom it's safety function. Therefore, this finding was determined to be of very low safety significance.
Inspection Report# : 2004003*(pdf)*

Significance: G Apr 07, 2004
Identified By: NRC
Item Type: FIN Finding
FAILURE TO EVALUATE THE EXTENT OF CONDITION OF FOREIGN MATERIAL FOUND IN THE DIVISION 1 EMERGENCY DIESEL GENERATOR STARTING AIR SYSTEM.
The team identified a finding of very low safety significance when the licensee failed to take appropriate steps to evaluate the extent of condition of foreign material in the starting air system of an emergency diesel generator.

The finding is more than minor because it is associated with the Mitigating System (MS) cornerstone attribute of equipment reliability and capability of systems that respond to initiating events to prevent undesirable circumstances. This finding was of very low safety significance because once evaluated, it did not result in a loss of function per Generic Letter 91-18 (Rev 1). No vilations of NRC requirements were identified. The licensee documented this issue in condition report 213491. Additionally the licensee established action items to evaluate the source of the foregin material found in the 1A Diesel Generator air system following the March 2004 failure.
Inspection Report# : 2004003*(pdf)*

Significance: G Mar 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
INEFFECTIVE CORRECTIVE ACTION PIPE WALL THINNING
The inspectors identified a finding of very low safety-significance and an associated Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI. The licensee had replaced shutdown service water (SX) system piping following cavitation induced wall thinning and weld failure leading to a through wall leak in 1999. The corrective actions included periodic non-destructive examination (NDE) monitoring of the pipe-wall for cavitation induced wall-thinning. Following an inquiry by the inspectors about heavy cavitation effects on the piping, the licensee discovered that the NDE monitoring had been performed in the wrong section of the piping. When the correct section was examined, the piping was found below manufacture's minimum allowable wall thickness. The finding affected the cross-cutting area of Human-Performance because the system manager and others had failed to identify that the corrective actions for a previous failed pipe had not been correctly implemented since 1999 and had also subsequently failed to expand the extent of condition to include verifying that all 10 predefined NDE activities established by the 1999 corrective actions were being performed in the correct location immediately downstream of SX system flow orifices.

The finding was more than minor because it affects the Reactor Safety/Mitigating System Cornerstone and if left uncorrected, it would become a more significant safety concern. The finding was of very low safety-significance because the SX system remained operable, both for function and for seismic considerations. The finding involved the attributes of availability and reliability of the shutdown service water system, internal flooding, and loss of heat sink as well as human performance and could have affected the mitigating systems objective of ensuring the availiability of systems that respond to initiating events to prevent undersirable consequences. The licensee entered the event into its corrective action system, performed an operability determination allowing continued use of the pipe, and replaced the piping in March 2004.
Inspection Report# : 2004002*(pdf)*

Significance: G Mar 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
EMERGENCY CORE COOLING SYSTEM WATER HAMMER
A finding of very low safety significance, with an associated Non-Cityed Violation, was self-revealed relating to a violation of the requirements of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings. The licensee failed to properly vent the high pressure core spray system before performing an integrated ECCS test resulting in a water-hammer event on the high-pressure core spray system.

This finding was more than minor because it affected the Mitigating Systems Cornerstone objective of maintaining mitigating systems operable. The finding was of very low safety-significance because a licensee follow-up system investigation, including a complete system walkdown by engineers, revealed that the high pressure core spray system remained operability. This issue was entered into the licensee corrective action program.

Inspection Report# : 2004002*(pdf)*

Significance: G Mar 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
DESIGN CONTROL OF MOTOR OPERATED VALVE MOUNTING BOLTS
A finding of very low safety significance was identified by the inspectors for a violation of the requirements of 10 CFR 50, Appendix B, Criterion III, Design Control. Following the licensee's identification that the operator mounting bolts for several Limitorque SMB-2 actuators did not fit properly, the licensee installed bolts with thread engagement less than the required minimum. This was completed without performing the appropriate level design control review. The minimum thread engagement caused a residual heat removal system Limitorque SMB-2 valve actuator to wobble when operated. This finding affected the cross-cutting are of problem identification and resolution because initially, the licensee did not determine cause or extent of condition of the wobbly actuator.

This finding was more than minor because it affected the Mitigating Systems Cornerstone objective of maintaining mitigating systems operable. The finding was of very low safety-significance because an evaluation determined that the valve would have performed its safety function when called upon during a design basis seismic event. The finding was entered into the licensee corrective action program and the licensee verified the correct installation of all SMB-2 actuator mounting bolts.
Inspection Report# : 2004002*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PROMPTLY IMPLEMENT CORRECTIVE ACTIONS.
The inspectors identified a non-cited violation of 10 CFR 50 Appendix B Criterion XVI involving the licensee's failure to promptly enter an identified condition adverse to quality into their corrective action program. This finding related to the cross-cutting area of Human Performance, in that, engineering personnel were aware of a discrepant condition on the 4160 volt Bus 1C1 Reserve Feed potential transformer cubicle door but did not correct the condition for several days.

The inspectors determined that this issue was more than minor because the finding could be reasonably viewed as a precursor to a significant event if left uncorrected because the station personnel could fail to evaluate non-conforming conditions which could render safety related equipment inoperable. This issue was design/seismic qualification deficiency that was determined to not cause a loss of function by the licensee's evaluation. Based on this conclusion, this finding was determined to be of very low safety significance using the Phase 1 worksheets.
Inspection Report# : 2003009*(pdf)*

Barrier Integrity

Significance: G Mar 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
INADEQUATE ULTRASONIC EXAMINATION PROCEDURES FOR WELDS SUBJECT TO THERMAL FATIGUE
The inspectors identified a finding of very low safety significance associated with inadequate ultrasonic examination procedures used to examine Code welds subject to thermal fatigue.

This finding was more than minor because it affected the Barrier Integrity Cornertone objective of maintaining barrier integrity. In this example, the inadequate inservice inspection examination procedures could affect the reactor coolant system barrier integrity in that, if left uncorrected, it could become a more significant safety concern. The inspectors were concerned that if the required examination volumes were not achieved, that the large bore reactor coolant piping would be at an increased risk for failure due to thermal fatigue cracking. Because, there was no evidence of actual flaws, the inspectors concluded that this issue was a finding of very low safety significance.
Inspection Report# : 2004002*(pdf)*

Significance: G Mar 31, 2004
Identified By: NRC
Item Type: FIN Finding
CONTAINMENT DRAW DOWN POST MAINTENANCE TESTING
The inspectors identified a finding of very low safety significance associated with an improperly performed a secondary containment draw-down surveillance test. The licensee did not verify the train A standby gas treatment system was capable of drawing a vacuum after an initial test failure. No specific licensee procedure or instruction required by 10 CFR 50 Appendix B was violated; therefore, no violation of regulatory requirements occurred.

This finding was more than minor because it affected the Barrier Integrity Cornerstone objective of providing reasonable assurance that physical design barriers protect the public from radionuclide release caused by accidents or events. The finding was of very low safety-significance because the system

was demonstrated operable when properly tested. The licensee entered the event into its corrective action system and performed the test correctly after NRC involvement.
Inspection Report# : 2004002*(pdf)*

Significance: G Dec 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO PERFORM A TS REQUIRED SURVEILLANCE
The inspectors identified a finding of very low safety significance (Green) concerning the licensee's failure to verify heatup and cooldown rates in accordance with Technical Specification (TS) following a scram on December 2, 2003. This was determined to be a NCV of TS surveillance requirement 3.4.11.1.

This finding was more than minor because if left uncorrected, failure to perform a TS surveillance could become a more safety significant issue. This finding was not suitable for SDP evaluation but has been reviewed by NRC management and was determined to be a finding of very low safety significance. This issue may have been greater than Green if the TS temperature limitations had been exceeded and if subsequent evaluation showed a degradation of the reactor coolant system integrity.
Inspection Report# : 2003009*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: FIN Finding
FAILURE TO MAINTAIN COLLECTIVE DOSES ALARA FOR RWP NO. 10002827.
A finding of very low safety significance was identified by the inspectors when the collective dose for RWP No. 10002827, "Drywell SRV Replacement," exceeded 5 person-rem and exceeded the licensee's dose estimate by more than 50 percent. This finding was related to the Human Performance cross-cutting area, in that, radiation protection personnel did not adequately evaluate the radiological consequences of a first-time evolution (i.e., the enhanced cool-down process). The Problem Identification and Resolution cross-cutting area was impacted, in that, the licensee did not identify the increased contact dose rates, which resulted in unplanned, unintended occupational collective dose for the work activity in a timely manner. This resulted in the total collective dose for the RWP of 11.839 person-rem versus a resonable re-estimate of 6.043 person-rem.

This issue was determined to be more than minor in that it was associated with the As Low As is Reasonably Achievable (ALARA) planning/dose projection attribute of the Occupational Radiation Safety Cornerstone, and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The finding involved ALARA planning/work controls; however, the licensee's current 3-year rolling collective dose average was not greater than 240 person-rem per unit. Therefore, the finding was of very low safety significance. No violation of NRC requirements was identified.
Inspection Report# : 2004005*(pdf)*

Significance: G Jun 30, 2004
Identified By: NRC
Item Type: FIN Finding
FAILURE TO MAINTAIN COLLECTIVE DOSES ALARA FOR RWP NO. 10002830.
A finding of very low safety significance was identified by the inspectors when the collective dose for RWP No. 10002830, "Drywell Main Steam and Feedwater Work," exceeded 5 person-rem and exceeded the dose estimate by more than 50 percent. This finding was related to the Human Performance cross-cutting area, in that, radiation protection personnel did not adequately evaluate the radiological consequences of a firts-time evolution (i.e., the enhanced cool-down process). The Problem Identification and Resolution cross-cutting area was impacted, in that, the licensee did not identify the increased contact dose rates, which resulted in unplanned, unintended occupational collective dose for the work activity in a timely manner. This resulted in the total collective dose for the RWP of 5.405 person-rem versus an estimate of 1.455 person-rem.

This issue was determined to be more than minor, in that, it was associated with the As Low As is Reasonably Achievable (ALARA) planning/dose projection attribute of the Occupational Radiation Safety Cornerstone, and affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation. The finding involved ALARA planning/work controls; however, the licensee's current 3-year rolling collective dose average was not greater than 240 person-rem per unit. Therefore, the finding was of very low safety significance. No violation of NRC requirements was identified.
Inspection Report# : 2004005*(pdf)*

Significance: G Mar 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO ESTABLISH APPROPRIATE RADIOLOGICAL CONTROLS FOR A TS HIGH RADIATION AREA
A finding of very low safety significance and an associated Non-Cited Violation were identified through a self-revealing event, when on February 6, 2004, an operator working in an area adjacent to the Inclined Fuel Transfer System (IFTS) shield wall in the Fuel Building received an unanticipated electronic dosimetry dose rate alarm. The licensee's subsequent investigation revealed that transfer of spent fuel bundles using the IFTS created a previously unidentified beam of radiation with dose rates in accessible areas in excess of 1000 millirem per hour, and thus the licensee had failed to control the area in accordance with Technical Specifications (i.e, appropriate barricades, postings, and locking mechanisms or flashing lights were not in place).

This issue was associated with the "Program and Process" attribute of the Occupational Radiation Safety Cornerstone and affected the cornerstone objective in ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material. The issue was more than minor because it involved the occurrence of a potential for unplanned, unintended dose to individuals working in an inadequately controlled high radiation area resulting from conditions contrary to licensee technical specifications and NRC requirements. Based in part on: (1) the dose rates identified in area; (2) the typcial spent fuel bundle transit time; and (3) the length of time the operator was in the area, the inspectors determined that there was not an overexposure, nor was there a substantial potential for an overexposure. Therefore, the finding was of very low safety significance. One Non-Cited Violation for the failure to barricade, properly post, and establish a flashing light for the area surrounding the IFTS shield wall in accordance with Technical Specification 5.7.2 was identified.
Inspection Report# : 2004002*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : September 08, 2004