Clinton
4Q/2004 Plant Inspection Findings

Initiating Events

Significance: G Sep 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
PORTABLE FIRE EXTINGUISHER MISSING FROM ITS DESIGNATED STORAGE.
A finding of very low safety significance was identified by the inspectors for a violation of license-required fire protection program requirements. The licensee had removed a portable fire extinguisher from its designated storage location on the 828 foot elevation of containment and could not locate it. The fire marshal quickly replaced the missing extinguisher and conducted a walkdown of the containment to ensure no other portable fire extinguishers were missing from their required locations.

This finding was more than minor because left uncorrected, it would become a more significant safety concern. The licensee's ability to cope with fires of limited size in the area was impaired due to the insufficient number of extinguishers. The issue was of very low safety significance because there were two nearby hose stations which could be used for fire suppression activities. The issue was a Non-Cited Violation of the facility operating license section 2.F which required the implementation of the fire protection program.
Inspection Report# : 2004006*(pdf)*

Mitigating Systems

Significance: G Sep 30, 2004
Identified By: NRC
Item Type: FIN Finding
DIVISION-3 ESSENTIAL SWITCHGEAR HEAT REMOVAL (VX) SYSTEM TRIPPED DUE TO INADEQUATE IMPACT STATEMENT FOR MAINTENANCE.
A finding of very low safety significance was self-revealed during a maintenance activity when Division essential switchgear heat removal was lost as a result of an inadequate impact statement in the work order. The primary cause of this finding was related to the cross-cutting area of Human Performance. In addition to the maintenance planner missing the relationship between the safety and non-safety supply fan motors, several other opportunities to identify this inadequate impact statement were missed.

This finding was more than minor because with the division three essential switchgear heat removal system unavailable, the high pressure core spray system may be rendered inoperable. The issue was of very low safety significance because the initial temperature in the division three switchgear room was low and the loss of essential switchgear heat removal was of short duration, the high pressure core spray system was never actually inoperable. No violation of NRC requirements occurred.
Inspection Report# : 2004006*(pdf)*

Significance: G Jul 26, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO HAVE AN ADEQUATE OPERATING PROCEDURE
A finding of very low safety significance, with an associated Non-Cited Violation, was self-revealed. Specifically, Clinton Power Station Procedure 3312.03, "Shutdown Cooling and Fuel Pool Cooling and Assist," was inadequate because it allowed the operators to create voids inside system piping while preparing to place the "B" residual heat removal (RHR) system in the shutdown cooling mode of operation. When sufficient differential pressure developed to open the RHR pump discharge check valve, about 2000 gallons of water unexpectedly drained from the reactor pressure vessel into the RHR system and produced a reactor automatic shutdown signal and Level 3 isolation on low reactor water level. The "B" RHR system was subsequently declared inoperable.

The finding was more than minor because it affected the Reactor Safety/Mitigating System Cornerstone and if left uncorrected, it would become a more significant safety concern. Specifically, voided piping could produce a system water hammer when the residual heat removal water pump is started in shutdown cooling mode and render the system inoperable. The finding was determined to be of very low safety significance because there was no design dificiency, no actual loss of safety function, no single train loss of safety function for greater than the Technical Specification allowed outage time and no risk due to external events. The licensee revised the shutdown cooling steps in the procedure, briefed all operators on the apparent cause, and entered the event into its corrective action system. The issue was a Non-Cited

Violation of Criterion V of 10 CFR 50 Appendix B.
Inspection Report# : 2004007*(pdf)*

Significance: G Jul 26, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
FAILURE TO MAKE PLANT PERSONNEL AWARE OF A MODIFICATION WHICH MAY AFFECT THE PERFORMANCE OF THEIR DUTIES
A finding of very low safety significance, with an associated Non-Cited Violation, was identified by the inspectors. Specifically, the licensee failed to analyze how a feedwater pump modification affected the operator's duties after an automatic shutdown. As a result of the modification, operators should have been directed, by procedure and training, to trip the "B" feedwater pump following an automatic shutdown. One of the causes of this finding related to the cross-cutting area of problem identification and resolution, in that, the licensee did not identify the discrepant procedure or training during investigation of a previous event.

The issue was more than minor because if left uncorrected, it could be reasonably viewed as a precursor to a significant event. Specifically, it caused unnecessary complications to the automatic shutdown sequence, placed extra importance on the motor-driven reactor feedwater (MDRF) pump and could challenge the high-pressure emergency core cooling systems (ECCS) during a motor-driven feedwater pump outage. The inspectors determined that the finding could not be evaluated in accordance with IMC 0609, "Significance Determination Process." Therefore, this finding was reviewed by the Regional Branch Chief in accordance with IMC 0612, Section 05.04c, and determined to be of very low safety significance because the MDRF pump did start and the high pressure ECCS systems were operable. The finding was assigned to the mitigating system cornerstone. The issue was a Non-Cited Violation of Criterion II of 10 CFR 50 Appendix B. The licensee took immediate corrective action to revise the procedure, installed a robust barrier over the "A" feedwater pump control switch, and briefed all operators on the effects of the modification.
Inspection Report# : 2004007*(pdf)*

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: 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 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 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 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)*

Barrier Integrity

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 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. This finding was determined to be a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion 1X.
Inspection Report# : 2004002*(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 : March 09, 2005