Palisades
2Q/2005 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2004
Identified By: NRC
Item Type: FIN Finding
Condensate Pump Motor Bearing Fire Resulted in Manual Reactor Trip
A finding of very low safety significance was self-revealed on August 31, 2004, when a fire occurred on the lower bearing of the condensate pump P-2B motor. The motor and pump were misaligned during reassembly following maintenance in July 2004 which was not identified when the pump was returned to service. Consequently, the fire was caused by heat that was generated around the bearing due to an overload condition caused by an excessive radial offset between the motor and pump.

This finding was more than minor because it was related to the procedure quality and human performance attributes of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. Control room operators commenced a rapid downpower in response to the fire and manually tripped the reactor so that the condensate pump motor could be secured. The finding was of very low safety significance because all mitigating systems were available during the event, and the fire was of short duration and was isolated to the motor. No violation of NRC requirements occurred. Planned corrective actions included the development of a written procedure for aligning vertical pumps and motors that specified a method for obtaining alignment data and associated acceptance criteria.
Inspection Report# : 2004012*(pdf)*

Significance: G Dec 31, 2004
Identified By: NRC
Item Type: FIN Finding
Condensate Reject Valve Failed Full Open During Maintenance Activities Resulted In Operator Action to Mitigate Transient
A finding of very low safety significance was self-revealed when condensate reject valve CV-0731 unexpectedly opened during maintenance activities on December 1, 2004, resulting in a low suction pressure to the main feedwater pumps. The primary cause of this finding was related to the cross-cutting area of human performance because licensee personnel failed to follow appropriate administrative procedure requirements when completing minor maintenance activities.

This finding was more than minor because it was related to the human performance attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because all mitigating systems were available during the transient. No violation of NRC requirements occurred. Corrective actions included evaluating all open work requests designated as minor maintenance to ensure that plant operations would not be impacted.
Inspection Report# : 2004012*(pdf)*

Significance: G Sep 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Inadvertent Opening of Pressurizer Power Operated Relief Valve 1042B
A finding of very low safety significance was self-revealed when testing of the reactor protection system by maintenance personnel caused pressurizer power operated relief valve (PORV) 1042B to open while the plant was in a water solid condition. The primary cause of this finding was related to the cross-cutting area of human performance. The finding was more than minor because it was related to the human performance and procedure quality attributes of the Initiating Events cornerstone. Also, the finding affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations since plant stability was upset while shutdown during solid plant operations with shutdown cooling in service.

A Phase 2 Significance Determination Process analysis was performed by the regional Senior Reactor Analyst which evaluated the key safety functions including core heat removal capability, power availability, containment control, reactivity controls, and inventory control. The Phase 2 analysis determined that all standby injection sources were available to preclude a loss of inventory and there was no possibility that residual heat removal would have been lost. Consequently, the finding screened as Green and therefore was of very low safety significance.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included revising the work order to properly complete the testing activities and completion of an engineering evaluation to verify that no adverse impact on plant equipment resulted from the inadvertent opening of the PORV.

Inspection Report# : 2004010*(pdf)*

Significance: G Sep 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Inadvertent Lift of Main Steam Safety Valve RV-0709
A finding of very low safety significance was self-revealed when main steam safety valve RV-0709 inadvertently lifted on September 14, 2004. Main steam safety valve setpoint testing on RV-0709 was conducted with the plant at power using hydraulic test equipment attached to the valve spindle. The test equipment required an adjustment for final verification testing but was unable to be moved due to residual hydraulic pressure from previous test steps. However, test personnel failed to turn off the hydraulic pump prior to attempting to bleed off the residual pressure. Consequently, hydraulic pressure continued to increase and RV-0709 inadvertently lifted. The primary cause of this finding was related to the cross-cutting area of human performance.

The finding was determined to be more than minor because it was related to the procedure quality and human performance attributes of the Initiating Events cornerstone Also, the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations was affected since actions taken during testing activities increased the likelihood of opening a main steam safety valve and upsetting plant stability due to an increased steam demand while at power. However, the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available and therefore screened out as Green.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included a revision to licensee procedures to include steps from the vendor test equipment instructions on securing the hydraulic pump.
Inspection Report# : 2004010*(pdf)*

Mitigating Systems

Significance: G Apr 02, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Corrective Actions Which Impaired the Ability to Identify the Cause of CV-0823 and CV-0826 Failing to Open
The inspectors identified a finding of very low safety significance (Green) regarding the failure to implement corrective actions in a timely manner to identify why the component cooling water heat exchanger service water outlet valves failed to open in February 2003 and March 2003. Consequently, the cause was not identified and on January 16, 2005, CV-0826, "Component Cooling Water Heat Exchanger E-54B Service Water Outlet Valve," again failed to open when control room operators initially attempted to open the valve. The primary cause of this finding was related to the cross-cutting area of problem identification and resolution for failing to implement corrective actions.

This finding was more than minor because it was related to the equipment performance attribute of the mitigating systems cornerstone and the cornerstone objective to ensure the reliability and capability of systems that respond to initiating events to prevent undesirable consequences was adversely impacted. Specifically, the reliability and capability of CV-0826 to automatically open on a recirculation actuation signal and provide the required flow to the component cooling water heat exchangers was not ensured when CV-0826 failed to open on January 16, 2005.

The finding was of very low safety significance because the safety function was not lost. A non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," was identified. As an interim corrective action, both CV-0823 and CV-0826 are being cycled on an increased frequency to verify the valves will stroke open. Other planned corrective actions included installing a larger spring in the valve actuators to increase the opening force to overcome high frictional forces and to evaluate and implement appropriate modifications for the valves.
Inspection Report# : 2005004*(pdf)*

Significance: G Sep 30, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure of Auxiliary Packing on High Pressure Safety Injection Pump P-66B
A finding of very low safety significance was self-revealed when the auxiliary packing on high pressure safety injection pump P-66B failed on June 3, 2004, immediately after the pump was started for surveillance testing. During a maintenance activity in March 2004 to replace the auxiliary packing, the procedure that was utilized did not contain adequate guidance. Consequently, the packing was excessively compressed and failed during the inservice surveillance test.

The finding was determined to be more than minor because it was related to the procedure quality attribute of the Mitigating Systems cornerstone. Also, the finding affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences since high pressure safety injection pump P-66A had to be removed from service to

replace the auxiliary packing only 3 months after it had been replaced previously. However, because the finding was (1) not a design or qualification deficiency that had been confirmed to result in a loss of function per Generic Letter 91-18; (2) did not represent an actual loss of a safety function; and (3) did not screen as potentially risk significant due to a seismic, flooding, or severe weather event, the finding screened out as Green.

One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified. Corrective actions included a revision to the maintenance procedure to provide additional guidance on the installation of the auxiliary packing to preclude excessive compression.
Inspection Report# : 2004010*(pdf)*

Barrier Integrity

Significance: G Dec 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Heavy Load Lift of Primary Coolant Pump Outside of Required Path
The inspectors identified a finding of very low safety significance when the defined heavy load path inside containment was not followed on September 28, 2004, when a primary coolant pump motor was lifted and moved using the polar crane. Consequently, a portion of the motor passed over the refueling cavity during the move.

This finding was more than minor because a portion of the heavy load traveled over the open reactor vessel that contained irradiated fuel and therefore could be reasonably viewed as a precursor to a significant event. Because this finding was not suitable for a significance determination process evaluation, in accordance with Inspection Manual Chapter 0612, Section 05.04.c, the finding was submitted for review by NRC management. This finding was of very low safety significance because: (1) the estimated likelihood of dropping the load was only about 1E-5 per crane operation based on a study in NUREG CR-4982 performed for spent fuel pool accidents; (2) the polar crane was in good working condition and had no known deficiencies that would have adversely impacted the crane's ability to lift the load; (3) the duration of the heavy load lift over the reactor cavity was short; and, (4) only a portion of the heavy load passed over the reactor cavity. One Non-Cited Violation of Technical Specification 5.4, "Procedures," was identified. Corrective actions included planned changes to the heavy load procedure and training of personnel involved with heavy load lifts to clearly define that the entire load, regardless of orientation, must be maintained within the heavy load path.
Inspection Report# : 2004012*(pdf)*

Significance: G Dec 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Lack of Code UT Calaibration Requirements in Procedure of Examination of Nozzle Repair Welds
The inspectors identified a finding of very low safety significance when American Society of Mechanical Engineers Code requirements were not met for an ultrasonic examination procedure associated with the non-destructive examinations of the weld repairs to reactor vessel head penetration nozzles No. 29 and No. 30. Specifically, the licensee failed to incorporate the Code requirements related to the timing, acceptance criteria, and corrective actions for unsatisfactory calibration checks into the ultrasonic examination procedure used for examination of these repair welds. The cause of this finding was related to the cross-cutting area of human performance because the cause of this error was due to a lack of rigor in the review of procedures.

This finding was more than minor because if left uncorrected, unacceptable weld flaws could be allowed to remain in service. Because this finding was not suitable for a significance determination process evaluation, in accordance with Inspection Manual Chapter 0612, Section 05.04.c, the finding was submitted for review by NRC management. The finding was of very low safety significance because these errors did not affect the quality of the ultrasonic examination data recorded. A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified. As part of their immediate corrective actions, licensee personnel verified that the inadequate procedure had no actual impact on the quality of the weld examination.
Inspection Report# : 2004012*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

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