

Palisades

3Q/2005 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

Failure to Provide Adequate Oversight of Maintenance Activities in the Switchyard

A finding of very low safety significance was self-revealed on April 25, 2005, when the 345 kilovolt rear bus in the switchyard was unexpectedly de-energized during planned breaker testing. Consequently, one qualified offsite power source to the onsite electrical distribution system was rendered inoperable for about 30 minutes. Plant administrative procedures did not establish an adequate level of oversight by licensee personnel for activities in the switchyard by personnel working for the switchyard owner.

This finding was more than minor because it was related to the procedure quality 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 while the rear bus was de-energized, and the bus was de-energized for only about 30 minutes. No violation of regulatory requirements occurred. This finding also affected the cross-cutting area of human performance.

Inspection Report# : [2005006\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Provide Adequate Oversight of Contractors Modifying Turbine Drains

A finding of very low safety significance was self-revealed on January 9, 2005, when there was an unexpected lowering of condenser vacuum which resulted in a manual reactor trip. Licensee personnel found that a low pressure turbine bearing drain line had failed which caused the lowering of condenser vacuum. This drain line was to have been permanently plugged in 2003 along with three other drain lines as directed by a permanent modification, but was not included in the work package that was implemented.

The finding was more than minor because it was associated with the design control 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 the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation functions would not be available. No violation of regulatory requirements occurred. This finding also affected the cross-cutting area of human performance.

Inspection Report# : [2005006\(pdf\)](#)

Significance:  Jun 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Loss of Primary Coolant Due to Unseated Check Valve

A finding of very low safety significance was self-revealed on May 9, 2005, when the licensee created an unexpected loss of primary coolant inventory while depressurizing a portion of a safety injection line.

The inspectors determined that the finding was more than minor because the finding was associated with the procedure quality attribute of the Initiating Events cornerstone and adversely impacted the cornerstone objective of limiting the likelihood of events that upset plant stability and challenge critical safety functions during power operation. Specifically, the event resulted in an unexpected loss of coolant in excess of Technical Specifications allowable leakage; however, the finding was of very low safety significance since the leakage was within the capacity of the centrifugal charging pumps. This finding represented a Non-Cited Violation of Technical Specification 5.4, "Procedures", in that procedures were not adequate to perform the evolution. Corrective actions included isolating the leak.

Inspection Report# : [2005006\(pdf\)](#)

Significance:  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:  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\(pdf\)](#)

Mitigating Systems

Significance:  Sep 30, 2005

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Provide Adequate Instruction for Proper Breaker Reassembly

A finding of very low significance (Green) was self-revealed on June 6, 2005, when the licensee discovered that a safety injection valve failed to close as expected. The licensee determined that the procedure used to reassemble the safety-related breaker for the valve was inadequate. This finding represented a Non-Cited Violation of Technical Specifications 5.4, "Procedures," in that procedures were not adequate to ensure the safety related breaker was adequately reassembled after maintenance. Corrective actions included correcting the breaker and looking at other possible breakers with similar failure mechanisms. The licensee entered the item in the Corrective Action Program. The deficiency was also an issue in the cross-cutting area of problem identification and resolution in that a previous event investigation from the same valve failing, and corrective actions from the event, were not effective.

The inspectors determined the issue was more than minor because the issue impacted the cornerstone attributes of equipment performance and procedure quality. The deficiency affected the mitigating system objective to ensure availability and reliability of systems that respond to events to prevent core damage. Specifically, some alternate functions, where the valve was shut in the Emergency Operating Procedures to control charging or ensure adequate hot leg injection, would not be available based on this deficiency.

Inspection Report# : [2005008\(pdf\)](#)

Significance:  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\(pdf\)](#)

Barrier Integrity

Significance:  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:  Dec 31, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Lack of Code UT Calibration 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

G**Significance:** Jun 30, 2005

Identified By: NRC

Item Type: FIN Finding

Failure to Maintain Collective Doses ALARA for RWP No. P046005

An NRC-identified finding of very low safety significance was identified when the collective dose for RWP P046005, "Engineered Safeguards Room Cooler Maintenance," conducted during the RO17 refueling outage, exceeded 5 person-rem and exceeded the dose estimate by more than 50 percent.

This finding was more than minor because it was associated with the 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 licensee's current 3-year rolling collective dose average was greater than 135 person-rem per unit; however, the actual dose expended for the work activity was not greater than 25 person-rem, and there were no additional ALARA findings identified during the assessment period. Therefore, the finding was of very low safety significance. No violation of regulatory requirements occurred.

Inspection Report# : [2005006\(pdf\)](#)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : November 30, 2005