

Palisades

3Q/2004 Plant Inspection Findings

Initiating Events

G**Significance:** 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\(pdf\)](#)**G****Significance:** 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\(pdf\)](#)**G****Significance:** Jun 30, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Operating Experience Information Precluded Implementation of Effective Corrective Actions For Frazil Ice at the Intake Crib

The inspectors identified a finding of very low safety significance when licensee personnel failed to adequately review operating experience information. As a result, frazil ice formed on the intake crib in February 2003 which partially blocked flow from the ultimate heat sink to the intake structure. The finding was more than minor because the finding was associated with the Protection Against External Factors attribute of the Initiating Events cornerstone and adversely affected the cornerstone objective of limiting events that upset plant stability and challenge critical safety functions during power operations. The finding was of very low safety significance because the risk significance of the sequences

evaluated using the Significance Determination Process Worksheet for the Palisades Nuclear Plant were less than the 1E-6 Green-to-White threshold.

Corrective actions to address this issue included the removal of bar racks from the intake crib to create a large enough gap to minimize the potential for frazil ice to form; revising plant procedures to add alternate methods of supplying water to the intake structure; and implementing the Nuclear Management Company operating experience program fleet procedure at Palisades. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

Inspection Report# : [2004007\(pdf\)](#)

Mitigating Systems

Significance:  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\(pdf\)](#)

Significance:  May 20, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Licensed Operators Were Not Completing the Requirements of 10 CFR 55.53(f) to Reactivate Their licenses Prior to Resuming Watchstation Activities

The inspectors identified that the licensee was not completing the requirements of 10 CFR 55.53(f) prior to allowing inactive licensed operators to resume control room watchstanding duties. Because the Shift Engineer position did not meet the definition of "actively performing the functions of an operator or senior operator" per 10 CFR 55.4, "Definitions," operators inappropriately received credit for license proficiency when standing this watch station. For licensees that stood this watch station exclusively, their licenses became inactive at the end of the next calendar quarter. When these licensees subsequently stood Shift Manager or Control Room Supervisor watches prior to completing the requirements of 10 CFR 55.53(f), a violation of 10 CFR 55.53(e) requirements occurred.

The finding was more than minor because the failure to satisfy license proficiency requirement increased the likelihood of an operator error involving systems used to mitigate an event. The Significance Determination Process (SDP) Appendix I flowchart focused on general record deficiencies exceeding a specified threshold of 20 percent of the records reviewed. The sample review of 27 operators revealed that 7 operators had inactive senior operator licenses (26 percent). The inspectors determined from the SDP that this finding was of very low safety significance.

Inspection Report# : [2004008\(pdf\)](#)

Significance:  Apr 09, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Maintain AFW Design Basis Physical Separation

A finding of very low safety significance was identified for the failure to maintain the design basis configuration (i.e., physical separation) between Auxilliary Feedwater (AFW) system trains. Specifically, the licensee's facility change that converted the spare high pressure safety injection pump into the independent AFW train C was to be physically separated from the AFW trains A and B. However, the AFW trains' A and B common pump discharge header piping was routed through the west safeguards (WESG) room, where the AFW train C pump was

located. The primary cause of this finding was that the licensee's facility change provided no engineering evaluation that demonstrated the as-built configuration was acceptable.

This issue was more than minor because the lack of physical separation between the AFW trains' A and B common pump discharge header piping and the AFW train C pump affected the mitigating systems cornerstone objective. Specifically, a common pump discharge header piping break in the WESG room could potentially cause a failure of the AFW train C pump. As a result, the cornerstone objective of ensuring the availability, reliability, and capability of the AFW system to respond to initiating events was affected. The issue was of very low safety significance because it did not represent an actual loss of a safety function as determined by the licensee's subsequently documented engineering analysis. The issue was a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure to maintain the design basis configuration (i.e., physical separation) between AFW system trains.

Inspection Report# : [2004003\(pdf\)](#)

Significance:  Dec 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure of High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 to Open

A finding of very low safety significance was self-revealed when High Pressure Safety Injection Pump P-66B Subcooling Valve CV-3070 failed to stroke open during surveillance testing. Licensee personnel improperly installed a flow control valve in the operating air system which contributed to the valve failing to stroke open. The finding was more than minor because the availability and capability of High Pressure Safety Injection Pump P-66B was adversely affected. The finding was of very low safety significance because there was not an actual loss of safety function for High Pressure Safety Injection Pump P-66B for greater than the Technical Specification allowed outage time.

Corrective actions to address this issue included reinstalling the flow control valve in the proper direction, testing CV-3070 during a mid-surveillance cycle stroke test, and generating a work order to inspect the CV-3070 valve internals at the earliest opportunity. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.

Inspection Report# : [2003008\(pdf\)](#)

Barrier Integrity

Significance:  Dec 31, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure of Containment Spray Pump P-54C Inboard Motor Bearing

A finding of very low safety significance was self-revealed when the Containment Spray Pump P-54C inboard motor bearing failed on August 21, 2003. Following a scheduled oil change on the motor bearing, the bearing housing drain plug was also replaced and enough oil was lost during this drain plug replacement to uncover the bearing; however, the vent on the oiler had been plugged when the pump was painted in June 2002 which resulted in an erroneous level indication in the oiler for the bearing housing. Consequently, the operator did not add sufficient oil through the oiler to the bearing housing after the drain plug was replaced. As a result, the inboard motor bearing was inadequately lubricated which caused the bearing to fail when Containment Spray Pump P-54C was started. This finding was more than minor because if left uncorrected, it would become a more significant safety concern. Specifically, the painted vent hole on the motor bearing oiler resulted in erroneous oil level indication and prevented the oiler from adding oil to the bearing housing when the level decreased. Consequently, an inadequately lubricated bearing would not be detected until the bearing failed. The finding was of very low safety significance because it did not represent an actual reduction of the atmospheric pressure control function of the reactor containment.

Corrective actions to address this issue included clearing the vent hole on the bearing oiler, verifying that the oiler vent holes on other safety-related pump motors were not painted over and replacing the inboard motor bearing on Containment Spray Pump P-54C. One Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified.

Inspection Report# : [2003008\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

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

Miscellaneous

Last modified : December 29, 2004