

Pilgrim 1

3Q/2003 Plant Inspection Findings

Initiating Events

Significance:  Jun 28, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Operator Error on MPR Caused MSIVs to Close and Reactor Scram on May 19

An operator manipulated the incorrect main control board (MCB) switch, which resulted in the automatic closure of the main steam isolation valves and shutdown of the reactor on May 19, 2002. The inspector identified a non-cited violation of Technical Specification 5.4.1.a because the operator failed to properly implement procedure 2.1.1, "Startup from Shutdown," by failing to properly operate the pressure regulating system, maintain the required MPR setpoint, and heed the procedure caution. The finding is more than minor because it led to a plant trip. This human performance error was determined by a phase 3 risk analysis to be of very low safety significance because the reactor decay heat was low, the operators could recover the main condenser as the normal heat sink, and mitigating systems were available following the shutdown.

Inspection Report# : [2003006\(pdf\)](#)

Significance:  Jun 28, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Inadequate Tagout Resulted in Inadvertent Drain Of Reactor Vessel on April 27, 2003

An inadequate tagout restoration resulted in an unintended drain path from the reactor vessel on April 27, 2003. The inspector identified a non-cited violation of Technical Specification 5.4.1.a because the operators failed to properly implement Section 6.2.10 of procedure 1.4.5, "PNPS Tagging Procedure," by failing to ensure appropriate restoration positions and sequences were specified. The loss of reactor water level is an issue that is more than minor because it is a precursor to a more significant event, the loss of shutdown cooling. The finding did not degrade the licensee's ability to terminate the leak path or recover decay heat removal, if lost. Because the loss of level was less than 24 inches, the finding was determined to be of very low safety significance (Green) when assessed in accordance with MC 0609, Appendix G.

Inspection Report# : [2003006\(pdf\)](#)

Significance:  Jun 28, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Inadequate Test Procedure Resulted in Inadvertent Reactor Vessel Drain Event on May 9, 2003.

A non-cited violation of Technical Specification 5.4.1.a occurred because a test procedure for testing emergency power sources was not adequate. This resulted in the inadvertent drain down of the reactor vessel through the automatic depressurization system (ADS) valves to the torus on May 9, 2003. The procedure failed to establish initial plant conditions or conditions to inhibit the ADS to prevent a drain down of the reactor vessel through the ADS valves. The loss of reactor water level is an issue that is more than minor because it is a precursor to a more significant event, the loss of shutdown cooling. The finding did not degrade the licensee's ability to terminate the leak path, recover decay

heat removal, if lost, or impact the ability to establish a heat removal path to the suppression pool. Because the loss of level was less than 24 inches, the finding was determined to be of very low safety significance (Green) when assessed in accordance with MC 0609, Appendix G.
Inspection Report# : [2003006\(pdf\)](#)

Mitigating Systems

Significance:  Mar 29, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Operator Failed to Assure RWM Operable for Startup

The rod worth minimizer (RWM) was bypassed when the control rods were being withdrawn on February 27, 2003. The issue occurred because the operators failed to follow procedure 2.1.1 for plant startup and failed to assure the RWM was operable when taking the reactor critical. This issue was more than minor because a system used to protect a safety barrier (fuel cladding) was not operable. The finding is of very low safety significance because a second licensed operator was present per Technical Specification (TS) 3.3.F to verify control rod movement was in accordance with the banked position withdrawal sequence. The operator errors were examples of a cross-cutting issue in human performance. The failure to follow procedure 2.1.1 was a licensee-Identified, non-cited violation of Technical Specification 5.4.1.

Inspection Report# : [2003004\(pdf\)](#)

Significance:  Mar 29, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Inadequate Procedures for Shutdown Cooling Resulted in Vessel Drain Down

An inadequate procedure used to control the residual heat removal (RHR) system resulted in the unintended decrease of reactor vessel level with the plant in cold shutdown on February 23. The combination of an inadequate procedure controls for the RHR minimum flow valve and inadequate operator procedure use caused vessel level to decrease about 21 inches. The finding is greater than minor because a loss of reactor level can be viewed as a precursor to a more significant event, the loss of shutdown cooling. The issue had very low safety significance when evaluated in the Significance Determination Process because the level decrease was less than 24 inches. The failure to provide adequate procedures was a non-cited violation of 10CFR 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

Inspection Report# : [2003004\(pdf\)](#)

Significance:  Dec 28, 2002

Identified By: Self Disclosing

Item Type: FIN Finding

Maintenance error resulted in the unplanned loss of all X-page rod position indication (about 60% of the all control rods) for approximately 13.5 hours.

Green. The licensee failed to properly isolate and check for voltage during maintenance on the rod position information system (RPIS) X-page 28V power supply. The maintenance error resulted in the unplanned loss of rod position indication for about 60% of the control rods (all X-page rods) for about 13.5 hours. The momentary short on the power supply further resulted in a momentary loss of the Y2 vital AC bus, and resulted minor perturbations in plant conditions. The failure to properly isolate the equipment prior to performing maintenance was an example of a cross-

cutting issue in human performance.

The issue was more than minor because the lack of rod position information affects the ability of the operator to verify the controls rod position and to make a timely determination that the reactor is shutdown following a scram. The issue had very low safety significance because the failure of RPIS alone does not affect the safety function of the control rods to shutdown the reactor. (Section 1R13)

Inspection Report# : [2002007\(pdf\)](#)

 **Significance:** Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Inadequate post maintenance test failed to identify that the replacement of the "B" control room high efficiency air filtration (CRHEAF) humidity switch was wired incorrectly.

Green. The post maintenance test for the replacement of the "B" control room high efficiency air filtration (CRHEAF) humidistat was inadequate in that the test failed to identify that the humidity switch was wired incorrectly and would not function to control humidity below 70 percent. The operator's failure to perform a required surveillance, which would have detected the design error, was an example of a cross-cutting issue in human performance.

This issue was more than minor because the "B" CRHEAF system was returned to service and declared operable prior to the licensee discovering the problem, similar to example 5.b. in Appendix E of Manual Chapter 0612. The issue had very low safety significance because only the radiological barrier function provided for the control room was affected and the issue screened to Green in Phase 1 of the Significance Determination Process. The failure to correctly translate the design to the as-built configuration and check the adequacy of the design by a suitable test was a non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control." (Section 1R19)

Inspection Report# : [2002007\(pdf\)](#)

 **Significance:** Dec 28, 2002

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Past corrective actions, procedures and actions to trend flow channel performance not timely to preserve flow-biased APRM scram function when "A" flow converter failed due to age related degradation.

Green: The A reactor protection system (RPS) channel flow-biased APRM scram function was inoperable because of a failure of the "A" flow converter FC-Z7a due to age related degradation. The scram function was lost because the licensee failed to establish adequate preventative maintenance practices following the age related failure of the redundant flow converter in 1997. Further, procedures and trending of flow converter performance was inadequate to assure timely action could be taken in response to a failing transmitter on October 2 to preserve the safety function. The ineffective corrective actions were an example of a cross-cutting issue in problem resolution.

This issue is more than minor because it affected the Mitigating system cornerstone objective that the APRM scram preclude plant operation in minimum flow area of power flow map. The finding had very low safety significance since an automatic scram and operator manual action would have mitigated a power instability event. The failure to take the actions within the time-frame specified in T.S. Table 3.1.1. for the inoperable Flow Biased APRM scram function, was considered a non-cited violation. (Section 1R22)

Inspection Report# : [2002007\(pdf\)](#)

Barrier Integrity

Significance:  Jan 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedures, Resulting in a Control Rod Mis-Positioning During Surveillance Testing.

A non-cited violation of 10CFR50, Appendix B, Criterion V, was identified for a failure to follow a surveillance test procedure for control rod timing that resulted in a control rod being left in the wrong position.

This finding is greater than minor because, if left uncorrected, it could lead to reactivity control issues that can result in core thermal limits being exceeded. This finding affected the Barrier Integrity cornerstone. This finding was of very low significance (Green) because issues affecting the fuel barrier screen to Green in Phase 1 of the Significance Determination Process for Reactor At-Power Situations. (Section 4OA2.b(2))

Inspection Report# : [2003003\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : December 01, 2003