Crystal River 3
4Q/2007 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2007
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Address Marine Fouling Resulted in a Plant Transient
A self-revealing finding was identified for the failure to address the marine fouling failure mode in the scope of the existing preventive maintenance on the intake screen wash auto start system. As a result, reactor power had to be decreased to 80 percent to maintain condenser operating temperature limits. The licensee entered the issue into the corrective action program. Corrective actions included cleaning both the low and high side differential level sensing tubes, replacing tubes as needed, and implementing preventive maintenance procedures to periodically clean the tubes.

The finding was more than minor since it affected the equipment performance attribute of the initiating events cornerstone and affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions. Using the NRC Manual Chapter 0609, “Significance Determination Process,” Phase 1 screening worksheet, the finding was determined to be of very low safety significance since it did not contribute to the likelihood of a loss of coolant accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. A contributing cause of the finding is related to the cross-cutting area of Problem Identification and Resolution, specifically the Operating Experience (OE) Program, in that, the licensee did not adequately implement OE through changes to station procedures to provide instructions to clean the sensing tubes during preventive maintenance on the system. (Section 4OA2.2)
Inspection Report# : 2007002 *(pdf)*

Significance: G Mar 31, 2007
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Replace a Non-refurbished ICS Module Resulted in a Reactor Trip
A self-revealing finding was identified for failure to replace a non-refurbished integrated control system (ICS) multiplier module that had been temporarily installed during the Fall 2005 refueling outage. As a result, an age-related failure of a multiplier module resulted in an automatic reactor trip. The licensee entered the issue into the corrective action program. Corrective actions completed and/or proposed include: installation of a refurbished multiplier module; development of an engineering refueling outage turnover checklist to ensure formal followup actions are implemented whenever components not of desired quality are installed; and briefing of engineering personnel of this event.

The finding was more than minor because it affected the equipment reliability attribute of the Initiating Events Cornerstone and resulted in an automatic reactor trip that upset plant stability and challenged critical safety functions. Using the NRC Manual Chapter 0609, “Significance Determination Process,” Phase 1 screening worksheet, the finding was determined to be of very low safety significance since it did not contribute to the likelihood of a loss of coolant accident, did not contribute to a loss of mitigation equipment, and did not increase the likelihood of a fire or internal/external flood. The cause of the finding is related to the cross-cutting area of Human Performance, specifically Decision Making in that the licensee did not adequately communicate decisions and the basis for decisions to personnel who have a need to know the information. (Section 4OA3.1)

Inspection Report# : 2007002 *(pdf)*

Mitigating Systems

Significance: G Oct 05, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Violation of Technical Specification 5.6.1 for Failure to Implement an Adequate Procedure for Manual Starting of the Control Complex Chilled Water Chiller Units (CHHE-1A/1B) Following a LBLOCA
The inspectors identified a finding of very low safety significance involving a violation of Technical Specifications (TS) 5.6.1 for failure to implement an adequate procedure for manual starting of the Control Complex Chilled Water Chiller Units (CHHE-1A/1B) following a Large Break Loss of Coolant Accident (LBLOCA). The chiller units are required to be restarted prior to 127 minutes after the accident to ensure adequate cooling to components within the control complex.

This finding is more than minor because it affects the Procedure Quality attribute of the Mitigating Systems Cornerstone. It impacts the cornerstone objective of ensuring the availability, reliability, and operability of CHHE-1A/1B to perform the intended safety function during a design basis event. The vendor for CHHE-1A/1B provided a maximum temperature for restarting the chiller units of 104 degrees Fahrenheit (°F). The basis for this limitation is to prevent an inadvertent chiller unit trip due to high chiller freon condenser pressure. The inspectors assessed the finding using the SDP and determined that the finding was of very low safety significance (Green) because the inspectors found that Nuclear Services Closed Cycle Cooling (SW) temperature falls below 104 °F no later than 84 minutes after a LBLOCA. This affords operators at least 40 minutes to successfully restart the chiller units. This issue is documented in the corrective action program as nuclear condition report (NCR) 247908. This finding was reviewed for cross-cutting aspects and none were identified.(Section 1R21.2.3
Inspection Report# : 2007006 *(pdf)*

Significance: G Oct 05, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Violation of 10 CFR 50, Appendix B, Criterion XI for Failure to Account for Instrument Uncertainty During EFP-2 Testing
The inspectors identified a finding of very low safety significance involving a violation of 10 CFR 50, Appendix B, Criterion XI, Test Control, for failure to implement a test program which accounted for the effects of instrument uncertainty on surveillance testing of Emergency Feedwater Pump (EFP)-2 in accordance with the approved In-service Testing (IST) program.

This finding is more than minor because it affects the Procedure Quality attribute of the Mitigating Systems Cornerstone. It impacts the cornerstone objective of ensuring the availability, reliability, and operability of EFP-2 to perform the intended safety function during a design basis event. The inspectors assessed the finding using the SDP and determined that the finding was of very low safety significance (Green) because the inspectors found no documented history of in-service failures of EFP-2 rendering safety-related equipment inoperative. This issue is documented in the corrective actions program as NCR 248036. This finding was reviewed for cross-cutting aspects and none were identified. (Section 1R21.2.7)

Inspection Report# : 2007006 *(pdf)*

Significance: G Jun 30, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Establish Preventative Maintenance Procedures for Hydrostatic Seals Necessary to Protect Safety-Related Equipment from Internal Flooding
The inspectors identified a non-cited violation (NCV) of Improved Technical Specification 5.6.1.1.a, for failure to adequately establish and implement procedures required by Regulatory Guide 1.33, Appendix A, Section 9, Procedures for Performing Maintenance (PM). Specifically, no procedure, program or process existed to periodically inspect hydrostatic barriers to identify and repair any degradation of the seals which provide protection of safety-related equipment from internal flooding. Corrective actions completed or planned include: Repair and qualify applicable fire seals as hydrostatic barriers and establish a hydrostatic penetration seal preventative maintenance program.

The finding is more than minor because it affected the protection against external factors (i.e. flood hazard) attribute of the Mitigating System cornerstone and could have impacted the availability of mitigating equipment during an internal flood event if left uncorrected. The inspectors determined that several degraded fire barrier seals did not meet hydrostatic barrier acceptability requirements. The finding was assessed through the SDP Phase 1 screening and determined to be of very low safety significance since the as-found condition of the hydrostatic barriers would not have resulted in the loss or degradation of safety-related mitigating equipment in the event of an internal flood.

Inspection Report# : 2007003 *(pdf)*

Significance: G Mar 31, 2007
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Identify and Correct Repetitive Raw Water System Flush Water Strainer Baskets Degradation
A self-revealing, non-cited Violation of 10 CFR 50, Appendix B, Criterion XVI was identified for failure to identify and take appropriate corrective actions for repetitive failures of the raw water pumps bearing flush water strainer baskets. As a result, both raw water pumps, RWP-2B and RWP-3B, were inoperable for a period greater than that allowed by Improved Technical Specifications when shell debris passed through a corroded strainer and clogged the cyclone separator discharge piping. The licensee entered the issue into the corrective action program. New strainer baskets made of a material compatible with service conditions were installed. Additional corrective actions include: performing routine engineering review of degraded conditions found during preventative maintenance activities; revision to applicable surveillance procedures, and counseling of maintenance and engineering personnel on the need to identify and document adverse conditions in the corrective action program.

The finding was more than minor because it affected the equipment reliability attribute of the Mitigating System Cornerstone and resulted in a raw water train being inoperable for a period of time greater than allowed by Improved Technical Specifications. The finding was assessed through the Significance Determination Process (SDP) Phase 1 screening worksheet and determined to be of very low safety significance since the raw water pumps with a degraded flush water system had a very high likelihood of performing their safety function during a loss of offsite power event. A contributing cause of the finding is related to the cross-cutting area of Problem Identification and Resolution, specifically, the licensee did not document the adverse condition of degraded strainer baskets in the corrective action program after it was determined that the filtering ability of the cyclone separator was a required design function. (Section 4OA3.2)

Inspection Report# : 2007002 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Last modified : February 04, 2008