Crystal River 3
3Q/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 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

Significance: G Dec 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Conduct Adequate Surveys for Liquid Effluent Releases
The inspectors identified a non-cited violation (NCV) of 10 CFR 20.1501(a) for failure to perform accurate surveys to demonstrate compliance with Technical Specification (TS) 5.6.2.3 Offsite Dose Calculation Manual (ODCM) controls used to maintain doses to members of the public from radioactive effluents as low as reasonably achievable (ALARA) in accordance with Appendix I to 10 CFR 50 design criteria as specified in 10 CFR 50.36a. Specifically, as of December 4, 2006, the licensee failed to conduct adequate dose evaluations to demonstrate compliance with TS 5.6.2.3 for radioactive liquid effluent releases made from the station discharge tank SDT-1 to a percolation pond located within the owner controlled area. The failure to conduct accurate dose evaluations for this liquid release pathway impaired the licensee's ability to demonstrate compliance with ODCM ALARA limits for the liquid radioactive waste processing equipment and operations. The issue was entered into the licensee's corrective action program for resolution.

The violation is more than minor because it adversely affects the program and process attribute of the Public Radiation Safety cornerstone, in that it involved an occurrence in the licensee's radioactive effluent release program that is contrary to NRC regulations. The finding was determined to be of very low safety significance because preliminary calculations based on recently determined dilution factors for the settling pond demonstrated that resultant offsite dose values were small fractions of the ODCM limits (Appendix I to 10 CFR Part 50 design criteria). Further, evaluations of radionuclide concentrations in the effluent were conducted in accordance with 10 CFR 20.1302(b) (2) (i) to demonstrate compliance with 10 CFR 20.1301 limits. (Section 2PS1)

Inspection Report# : 2006005 *(pdf)*

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

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