Crystal River 3
1Q/2009 Plant Inspection Findings

Initiating Events

Significance: G Mar 31, 2009
Identified By: Self-Revealing
Item Type: FIN Finding
Inadequate Peer and Peer Checking Resulted in Connecting Improper Test Equipment and a Manual Plant Trip
A self-revealing finding was identified for the failure to follow procedure HUM-NGGC-0001, Human Performance Program, which required workers to perform self and peer checks to ensure the correct action is performed on the correct component. Specifically, during meter calibration activities, workers performing voltage checks failed to perform adequate self and peer checks when connecting test equipment. As a result, incorrect test equipment was connected resulting in blown fuses, the loss of several secondary plant pumps, and ultimately a manual plant trip. Corrective actions include: move relay work identified in the extent of condition review from on-line to outage to prevent recurrence, revise maintenance procedures associated with calibration of meters and relays to incorporate human factoring from lessons learned from this event, and perform an analysis of and incorporate best practices in procedures regarding how plant risk is assessed for activities that could cause transients.

The finding was more than minor since it affected the human performance attribute of the Initiating Event Cornerstone and resulted in an event that upset plant stability. Specifically, the failure to properly utilize human performance tools such as self and peer checking as specified in HUM-GGC-0001, Revision 2, resulted in the connection of incorrect test equipment, the loss of several secondary plant pumps and ultimately led to a manual reactor trip. The inspectors assessed the finding using the SDP and determined that the finding was of very low safety significance (Green) 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 with a work practices aspect (H.4(a)). Specifically, workers did not utilize proper self and peer checking.

Inspection Report# : 2009002 *(pdf)*

Mitigating Systems

Significance: G Mar 31, 2009
Identified By: Self-Revealing
Item Type: FIN Finding
Failure to Have Adequate Controls in Place to Ensure the Temperature of the Emergency Diesel Room was Maintained to Support EGDG Operability
A self-revealing finding was identified for failing to have adequate controls in place to ensure the temperature of the emergency diesel room was maintained to support emergency diesel generator (EGDG) operability. As a result, during cold weather conditions, licensee personnel did not close an access door which caused a low EGDG-1B lube oil temperature condition and inoperability of the EGDG. Corrective actions include: posting signs on all external doors of both safety and non-safety EGDGs rooms indicating that the doors should not be left open, discussing the event with site personnel; and initiation of changes to the site's cold weather checklist to check closed EGDG room doors during cold weather conditions.

The finding was more than minor since it affected the equipment availability attribute of the Mitigating System

Cornerstone and resulted in an unavailable emergency diesel generator train for approximately 13 hours. The inspectors assessed the finding using the SDP and determined that the finding was of very low safety significance (Green) since it was not a design or qualification deficiency, did not result in a loss of a system safety function, did not result in an actual loss of safety function of a single train for greater than allowed by improved technical specifications (ITS), did not represent an actual loss of safety function of risk-significant, non-technical specification equipment, and did not screen as risk significant due to external events. The inspectors found that the cause of this finding was not reflective of current performance since the EGDG door lacked the proper signage since initial plant operation. Therefore, a cross-cutting aspect was not assigned.

Inspection Report# : 2009002 *(pdf)*

Significance:  Mar 31, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Timely and Effective Corrective Actions Resulted in a Repeat Failure of a Main Feedwater Isolation Valve due to Magnesium Rotor Oxidation/Corrosion
The inspectors identified a NCV of 10 CFR 50, Appendix B, Criterion XVI, Corrective Actions, for failure to take timely and effective corrective actions to prevent a second failure of a main feedwater isolation valve (MFIV) due to corrosion of the valve actuator's magnesium rotor. Specifically, corrective actions associated with a similar failure of a MFIV in 2005 were not enhanced when additional information became available through NRC Information Notice (IN) 2006-026, Failure of Magnesium Rotors in Motor-Operator Valve Actuators. As a result, in December 2008, a MFIV failed to operate due to magnesium rotor degradation. Corrective actions for the failure of FWV-30 include: installation of a new motor; development and implementation of engineering
changes to replace the station's motor-operated valve (MOV) magnesium rotor motors with aluminum rotor motors (when available); ensuring the engineering staff is trained on effective correction action plans; and revision of MOV maintenance procedures to include information obtained from IN 2006-026 prior to the next MOV inspections.

The finding was more than minor because it affected the equipment availability attribute of the Mitigating System cornerstone and resulted in a MFIV being inoperable for a period of time greater than allowed by ITS. Since the valve would not have performed its safety function for greater than the ITS' allowed outage time, a SDP Phase 2 analysis was required. Based upon the Phase 2 results, a regional senior reactor analyst performed a Phase 3 evaluation. The Phase 3 evaluation concluded that the finding was of very low safety significance (Green). A contributing cause of the finding is related to the cross-cutting area of Problem Identification and Resolution with an operating experience component (P.2(b)). Specifically, the licensee did not implement and institutionalize, in a timely manner, IN 2006-26 in station procedures and training programs associated with magnesium rotor inspections.

Inspection Report# : 2009002 *(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

Significance: N/A Apr 25, 2008
Identified By: NRC
Item Type: FIN Finding
Identification and Resolution of Problems
The team concluded that in general, problems were properly identified, evaluated, prioritized, and corrected within the licensee's corrective action program (CAP). Evaluation of issues was generally comprehensive and technically adequate. Formal root cause evaluations for issues classified as significant adverse conditions were comprehensive and detailed. Overall, corrective actions developed and implemented for issues were effective in correcting the problems. However, the team identified a few examples where corrective actions have not been entirely effective.

The team determined that thresholds for identifying issues were appropriately low. Nuclear Assessment Section audits and departmental self-assessments were effective in identifying issues and directing attention to areas that needed improvement. Licensee identified weaknesses and issues in self-assessments were appropriately entered into the CAP and addressed.

Based on discussions and interviews conducted with plant employees from various departments, the inspectors did not identify any reluctance to report safety concerns. The team concluded that the employee concerns program (ECP) was functioning as intended.

Inspection Report# : 2008007 *(pdf)*

Last modified : May 28, 2009