Crystal River 3
1Q/2011 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Mar 31, 2011
Identified By: Self-Revealing
Item Type: FIN Finding
Operating Crew Failures on the 2011 Annual Requalification Operating Test
A self-revealing Green finding, associated with operating crew performance on the simulator during facility-administered requalification examination was identified. Two of the eight crews evaluated failed to pass their simulator examinations. As immediate corrective action, the failed operating crews were remediated (i.e., the operating crews were re-trained and successfully retested) prior to returning to shift. The licensee has entered this issue into the corrective action program as Nuclear Condition Report (NRC) 450196.

The inspectors determined that the crew failures constituted a performance deficiency based on the fact that licensed operators are expected to operate the plant with acceptable standards of knowledge and abilities demonstrated through periodic testing as required by 10 CFR 55.59(a)(2). Two out of eight crews of licensed operators failed to demonstrate a satisfactory understanding of the required actions and mitigating strategies required to safely operate the facility under normal, abnormal, and emergency conditions. The finding is greater than minor because the performance deficiency potentially affects the Human Performance attribute of the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the finding reflected the crew's potential inability to take timely actions in response to actual abnormal and emergency conditions. The cause of this finding was directly related to the cross-cutting aspect of personnel training and qualifications in the Resources component of the Human Performance area, in that the licensee failed to ensure the adequacy of the training provided to operators to assure nuclear safety. (H.2(b)) (Section 1R11)

Inspection Report# : 2011002 *(pdf)*

Significance: G Sep 30, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Flood Calculations did not Reflect Plant Configuration
The inspectors identified a non-cited violation (NCV) of 10 CFR 50 Appendix B, Criterion III, "Design Control," regarding the licensee's failure to ensure that the design bases of two components were correctly translated into specifications, drawings, procedures, and instructions. Specifically, licensee personnel failed to ensure that two floor penetration flood barriers (metal sleeves) were of the proper height to prevent water from entering the A train decay heat removal (DHR)/building spray (BS) vault during a design basis internal flooding event. The design basis did not assume any leakage to the vault. The licensee initiated nuclear condition report (NCR) 409263 in the corrective action program to address the issue.

This finding is more than minor because it affects the design control attribute of the mitigating system cornerstone, and affected the cornerstone objective of ensuring availability, reliability, and capability of systems that respond to initiating events. Using Manual Chapter 0609, Phase 1 screening worksheet, the inspectors determined that the finding has very low safety significance because it did not result in a loss of any system safety function. The inspectors found that the cause of the finding is not reflective of current performance and therefore, a cross-cutting aspect will not be assigned. (Section 1R06)

Inspection Report# : 2010004 *(pdf)*

Significance: G Sep 30, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Inoperable Fire Barrier Penetration Seals
The inspectors identified an NCV, with five examples, of Crystal River Unit 3 Operating License Condition 2.C (9), fire protection program. The NCV was associated with one inoperable fire penetration seal in the ceiling of the B train decay heat and building spray pump vault and four inoperable fire penetration seals associated with the main steam piping in the wall between the intermediate building and the turbine building. Once identified, the licensee initiated an hourly watch and entered the issue in the corrective action program as nuclear condition reports 369096, 406215, and 418755.

The finding is more than minor because if left uncorrected, the fire seals could experience further degradation and potentially lead to a more significant safety concern.
Using NRC IMC 0609, Appendix F, Fire Protection Significance Determination Process, the inspectors assessed the defense-in-depth (DID) element of each fire barrier degradation in the fire confinement category. One penetration was determined to have a low degradation rating and was determined to be of very low safety significance. The other four degraded penetrations were determined to have moderate degradation and were screened to be very low safety significance due to having non-degraded automatic full area water-based fire suppression system available in the exposing fire area. A contributing cause of the finding is related to the cross-cutting area of Problem Identification and Resolution with an evaluation aspect (P.1.(c)). Specifically, the licensee had the opportunity to evaluate the need to change the frequency of main steam line fire penetration inspections after finding degradation of main steam piping penetrations in 2007. (Section 4OA5)

Inspection Report# : 2010004 *(pdf)*

Significance: G Aug 27, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Preconditioning of Safety-Related Air Operated Valves
The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, Test Control for preconditioning of a safety-related air operated valve prior to surveillance testing. The licensee entered this deficiency into their corrective action program for resolution.

The licensee's preconditioning of air operated valves prior to performing as-found testing is a performance deficiency. This finding is more than minor because if left uncorrected the performance deficiency has the potential to lead to a more significant safety concern in that safety-related valve performance deficiencies could be masked. The finding is of very low safety significance (Green) using the SDP because it did not represent a loss of system or safety function. The finding involved the cross-cutting aspect of complete and accurate procedures under the Resources component of the Human Performance area [H.2(c)]. [Section 1R21.2.2]

Inspection Report# : 2010007 *(pdf)*

Significance: G Aug 27, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Incorporate Requirements of Recovering from a Station Blackout into Calculations
The team identified a non-cited violation of 10 CFR 50.63, Loss of all alternating current power, for failure to ensure Regulatory Guide 1.155, Station Blackout commitments were implemented in calculations for restoring off-site power. The licensee entered this deficiency into their corrective action program for resolution.

The licensee's failure to maintain calculations to assure adequate voltage for the remote closing of switchyard

breakers during a station blackout event is a performance deficiency. The team determined that the finding is more than minor because it adversely affected the design control attribute of the mitigating reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding is of very low safety significance (Green) using the SDP because it did not represent a loss of system or safety function. A cross-cutting aspect was not identified because the finding does not represent current performance. [Section 1R21.2.13]

Inspection Report# : 2010007 *(pdf)*

Significance: G Aug 27, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Monitor the Service Water and Decay Cooling Expansion Tank Check Valves
The team identified a non-cited violation of 10 CFR 50.65(a)(1) for the licensee's failure to monitor service water and decay heat cooling expansion tank level indicator check valves. In response to this concern, the licensee closed the isolation valves as an interim action, performed an in situ check valve test with satisfactory results, and entered the deficiency into their corrective action program for resolution.

The licensee's failure to perform appropriate maintenance on the check valves was a performance deficiency. This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The finding is of very low safety significance (Green) using the SDP because it did not represent a loss of system or safety function. A cross-cutting aspect was not identified because the finding does not represent current performance. [Section 1R21.2.17]

Inspection Report# : 2010007 *(pdf)*

Barrier Integrity

Significance: G Sep 30, 2010
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Submit Production Splices of Swaged Mechanical Splices for the Testing
The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR Part 50, Appendix B, Criterion IX, "Control of Special Processes," for the licensee's failure to establish measures to assure that testing of rebar splices would adhere to the requirements of American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code. Specifically, licensee procedures for containment building repairs did not accommodate rebar production splice testing, which was required by Code. As part of their immediate corrective actions, the licensee revised their procedures to include production splice testing and also entered the issue into their corrective action program.

The inspectors determined that the finding was more than minor because it was associated with the human performance attribute of the barrier systems cornerstone and affected the cornerstone objective of ensuring the reliability of containment wall barrier system. Failure to adhere to ASME Code testing requirements can adversely affect assurance that the rebar splices would meet strength requirements as part of the containment barrier. The inspectors completed a Phase 1 screening of the finding using Inspection Manual Chapter 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings" and determined that the performance deficiency represented a finding of very low safety significance (Green). Specifically, the finding did not result in the actual loss of function of the Unit 3 Containment Wall. This finding has a cross-cutting aspect in the area of Human Performance under the "Effectiveness Reviews" aspect of the "Decision-Making" component

because the licensee failed to validate assumptions used as a basis for their decision to pursue an alternative testing plan. [H.1(b)] (Section 4OA5)

Inspection Report# : 2010004 *(pdf)*

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 23, 2010
Identified By: NRC
Item Type: FIN Finding
Problem identification and Resolution (PI&R)
The team concluded that, in general, problems were properly identified, evaluated, prioritized, and corrected. The licensee was effective at identifying problems and entering them into the corrective action program (CAP) for resolution, as evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. Generally, prioritization and evaluation of issues were adequate, formal root cause evaluations for significant problems were adequate, and corrective actions specified for problems were acceptable. Overall, corrective actions developed and implemented for issues were generally effective and implemented in a timely manner.
The team determined that overall, audits and self-assessments were adequate in identifying deficiencies and areas for improvement in the CAP, and appropriate corrective actions were developed to address the issues identified. Operating experience usage was found to be generally acceptable and integrated into the licensee's processes for performing and managing work, and plant operations. However, the team found examples where operating experience was not adequately evaluated.

Based on discussions and interviews conducted with plant employees from various departments, the inspectors determined that personnel at the site felt free to raise safety concerns to management and use the CAP to resolve those concerns.
Inspection Report# : 2010006 *(pdf)*

Last modified : June 07, 2011