Crystal River 3
2Q/2008 Plant Inspection Findings

Initiating Events

Significance: G Feb 15, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Control Transient Combustibles
The team identified a non-cited violation of Crystal River Unit 3 Operating License Condition 2.C.(9), for the licensee's failure to properly implement fire protection program procedures for control of transient combustible materials. Specifically, transient combustible materials were left unattended for four days in the 3B 480V ES Switchgear Room after work had been completed, which was a violation of the licensee's administrative procedures for control of transient combustibles. Once identified, the licensee removed the combustible materials and initiated a nuclear condition report to address the issue.

The finding is more than minor because the transient combustible materials presented a credible fire scenario involving equipment important to safety, which degraded the reactor safety Initiating Events cornerstone objective to limit the likelihood of those events that may upset plant stability and challenge critical safety functions. The amount of unattended transient combustible materials did not violate the licensee's transient combustible control limits for the fire area. Therefore, the finding was assigned a low degradation rating against the combustible controls program. The finding was of very low safety significance (Green) based on the low degradation rating. This finding has a cross-cutting aspect in the Work Practices component of the Human Performance area because the licensee failed to effectively communicate expectations regarding procedural compliance and personnel following procedures (NRC Inspection Manual Chapter 0305, H.4(b)).
Inspection Report# : 2008006 *(pdf)*

Significance: G Feb 15, 2008
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Reactor Coolant Pump 1B Lube Oil Collection System Leakage
A self-revealing non-cited violation of 10 CFR 50, Appendix R, Section III.O, was identified for failure of the reactor coolant pump (RCP) oil collection system to collect and drain RCP oil leakage to a vented closed container. Specifically, the licensee found an estimated one to two gallons of oil on the reactor building floor beneath RCP-1B. The licensee initiated a nuclear condition report for this issue.

This finding is more than minor because it is associated with the external factors attribute, i.e., fire, and it degraded the reactor safety Initiating Events cornerstone objective. The team completed a Phase 1 screening of the finding in accordance with IMC 0609, Appendix F, Attachment 1, Step 1.3, Qualitative Screening Approach, and concluded that the finding was of very low safety significance (Green) because the amount of oil identified in 2008 was bounded by the licensee's 2004 analysis (which assumed a 21 gallon oil leak). This finding has a cross-cutting aspect in the Corrective Action Program component of the Problem Identification and Resolution area because the licensee did not take appropriate corrective actions in a timely manner to address the adverse trend related to oil leakage for RCP-1B (NRC Inspection Manual Chapter 0305, P.1(d)).

Inspection Report# : 2008006 *(pdf)*

Significance: G Oct 29, 2007
Identified By: NRC
Item Type: FIN Finding
Failure to Implement Adequate Equipment Protection Resulted in a Plant Transient
A self-revealing finding was identified for failure to prevent inadvertent bumping of the condensate pump control

switch during maintenance activities. As a result of bumping the control switch, a condensate pump had to be secured and reactor power was rapidly reduced to 61 percent to prevent a reactor trip. Corrective actions included removing the control switch handle to prevent it from being bumped.

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 challenged critical safety functions. The inspectors referenced Inspection manual Chapter 0609.04, Significance Determination process (SDP), Phase 1 screening and determined the finding to be of very low safety significance (Green) because the finding did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. A contributing cause of this finding is related to the crosscutting area of human performance, with a work control component. Specifically, the licensee did not adequately plan work activities to protect the condensate pump control switch from being bumped.
Inspection Report# : 2008002 *(pdf)*

Mitigating Systems

Significance: G Feb 22, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Inoperable Fire Penetration Seal
The inspectors identified a Green non-cited violation (NCV) of Crystal River Unit 3 Operating License Condition 2.C (9), Fire Protection Program. The NCV was associated with an inoperable fire penetration seal in the 3-hour fire rated ceiling of the makeup system valve alley. The licensee declared the penetration seal inoperable. Corrective actions included establishing an hourly fire watch and repairing the penetration to its designed condition.

The finding adversely affected the fire confinement capability defense-in-depth element. The finding is greater than minor because it is associated with the protection against external factors attribute, i.e., fire, and degraded the mitigating systems cornerstone objective to ensure the availability of systems that respond to initiating events. Using NRC Inspection Manual Chapter (IMC) 0609, Appendix F, Fire Protection Significance Determination Process, the finding was determined to have a very low safety significance since the gap in the fire penetration seal was small (less than 1/8 inch in width).

Inspection Report# : 2008002 *(pdf)*

Significance: G Feb 15, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Protect Cables for Valve DHV-42
The team identified a non-cited violation of 10 CFR 50, Appendix R, Section III.G.2., for failure to protect cables from fire damage for components required for safe shutdown. Specifically, the Mecatiss MTS-3 fire wrap installed around the cables for valve DHV-42 (suction from the reactor building sump to the Train A decay heat pump) was not installed in accordance with the vendor's tested configuration. The licensee initiated a nuclear condition report and implemented an hourly roving fire watch to address this issue. Additionally, the licensee implemented repairs during the March 2008 forced outage to upgrade the Mecatiss MTS-3 fire wrap to comply with the vendor tested configuration.

This finding is more than minor because it is associated with the external factors attribute, i.e., fire, and it degraded the reactor safety Mitigating Systems cornerstone objective. The inspectors completed a Phase 1 screening of the finding in accordance with IMC 0609, Appendix F, Attachment 1, Step 1.3, Qualitative Screening Approach, and concluded that the finding, when given credit for the fixed automatic suppression system in the area, was of very low safety significance (Green).

Inspection Report# : 2008006 *(pdf)*

Significance: G Dec 31, 2007
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Procedural Guidance Associated with Removal of Containment Debris
The inspectors identified a non-cited violation (NCV) of Improved Technical Specification 5.6.1.1.a, for failure to adequately implement procedures required by Regulatory Guide 1.33, Appendix A, Section 3, Procedures for Startup, Operation, and Shutdown of Safety-Related PWR Systems. Specifically, the licensee failed to verify no latent debris was present in containment that could impact the emergency core cooling system (ECCS) sump. Corrective actions completed include: removal of the debris identified by the inspectors and performing additional inspection and cleaning of containment.

The finding is more than minor because it could be reasonably viewed as a precursor to a significant event involving debris accumulation on the containment sump screens which could cause impairment to ECCS recirculation flow during a design basis loss of coolant accident. The inspectors referenced Inspection Manual Chapter 0609, Significance Determination Process (SDP), Phase 1 screening and determined the finding to be of very low safety significance. Although the debris impacted the mitigating system cornerstone, it was unlikely to have resulted in an actual loss of safety function and was not potentially risk significant due to possible external events. A contributing cause of this finding is related to the crosscutting area of Human Performance, specifically Work Practices in that the licensee did not adequately comply with a containment inspection procedure. (IMC 305, H.4(b))

Inspection Report# : 2007005 *(pdf)*

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)*

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 : August 29, 2008