Browns Ferry 2
4Q/2005 Plant Inspection Findings

Initiating Events

Significance: Dec 31, 2005
Identified By: NRC
Item Type: FIN Finding
Requalification Program Simulator Exam Grading Error Resulted In Unidentified Individual Failure
Green. The inspectors identified a finding for licensee grading errors which resulted in a failure to identify an individual performance issue that would have resulted in an operational test failure during a biennial operating test requalification examination.

The finding is more than minor because if left uncorrected, it would allow less-than-competent operators to continue licensed duties and it affected the human performance attribute of the Initiating Event Cornerstone. The inspectors evaluated the finding using MC 0609, Significance Determination Process, Appendix I. Using the Operator Requalification Human Performance SDP flow chart, the finding involved the licensee's grading of an exam, in which the licensee failed to identify an individual performance issue which would have resulted in an operational test failure. Per the SDP flowchart, this finding is of low safety significance because it is likely that a single operator's potential error would be prevented or mitigated by the rest of the crew. (Section 1R11)

Inspection Report# : 2005005*(pdf)*

Significance: Nov 18, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Three Examples of Inadequate Implementation of Corrective Actions
The inspectors identified a finding involving a non-cited violation (NCV), with three examples, of 10 CFR 50, Appendix B, Criterion XVI, for inadequate implementation of corrective actions for two previously identified NCVs. The previous NCVs were associated with rigging deficiencies that resulted in the drop of a Reactor Building crane trolley and with a human performance error that resulted in the loss of a 480-volt Shutdown Board and inadvertent start of emergency equipment.

The finding was more than minor because it is associated with the Procedure Quality attribute and objective of the Reactor Safety/Initiating Event Cornerstone. In addition, if left uncorrected, this finding would result in a more significant safety concern because the failure to implement the corrective actions for the NCVs would result in more significant safety concerns. This finding was determined to be of very low safety significance because no related examples of significant rigging deficiencies or loss of power to shutdown boards caused by relay calibrations have occurred as a result of the inadequate implementation of corrective actions. The cause for all three examples were determined to affect the PI&R crosscutting area.

Inspection Report# : 2005011*(pdf)*

Mitigating Systems

Significance: Mar 31, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Adequately Implement the Inservice Testing Program.
Green. A self-revealing NCV was identified for the Failure to Comply with Unit 3 TS 5.5.6, Inservice Testing Program, specifically 3-SI-3.2.3, Testing ASME Section XI Check Valves. As a result of failing to follow procedures, a common cause failure was not addressed, resulting in Unit 2 operating with multiple stuck open Service Water inlet check valves to Residual Heat Removal (RHR) Heat Exchangers for a period of time in excess of one year.

This finding is greater than minor because it affected the equipment performance attribute of the Mitigating Systems Cornerstone to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was evaluated using the SDP and was determined to be a finding of very low safety significance because the accident analysis did not specifically credit the closure function of these check valves. However, 10 CFR 50.55a required, in part, that both opening and closing functions be demonstrated even when the close function is not credited. The cause of this finding involved the cross-cutting aspect of Human Performance

due to the failure to properly follow the written guidance of the surveillance instruction.
Inspection Report# : 2005002*(pdf)*

Significance: G Mar 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Promptly Identify and Correct a Stuck Fuel Injector on the 1A EDG
Green. The inspectors identified an NCV for the failure to promptly identify and correct a condition adverse to quality as prescribed in 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. As a result of not reviewing post maintenance test (PMT) data in a timely manner, the 1A Emergency Diesel Generator (EDG) was operated on four occasions during surveillance testing with a stuck fuel injector.

This finding is greater than minor because it affected the equipment performance attribute of the Mitigating Systems Cornerstone to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). This finding was evaluated using the SDP and was determined to be a finding of very low safety significance because the 1A EDG did not fail during any of its four one-hour surveillances, was not called upon to mitigate the consequences of a accident, and vendor information regarding operation of similar EDG's with failed fuel injectors provided some assurance that the engine could operate without imminent failure. The cause of this finding, the failure to use available indications and identify the stuck injector, is associated with the cross-cutting area of Problem Identification and Resolution.
Inspection Report# : 2005002*(pdf)*

Barrier Integrity

Significance: G Jun 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Untimely and Ineffective Corrective Actions To Ensure RHR Keep Fill Containment Isolation Valves Fulfill Their Safety Function Per 10 CFR 50.65 (a)(1)
The inspectors identified a non-cited violation of 10CFR50.65(a)(1) in which the licensee has failed to implement timely and effective corrective actions to preclude multiple, repetitive failures of containment isolation valves in the Unit 2 and 3 Residual Heat Removal (RHR) Keep Fill System. These failures ultimately resulted in the failure of two containment isolation valves simultaneously for the same penetration, which created an open pathway from containment and a consequential loss of the maintenance rule safety function. Licensee monitoring and corrective actions per 10 CFR 50.65(a)(1) were ineffective at ensuring that containment isolation valves in the RHR Keep Fill System were capable of performing their intended safety function.
The finding is greater than minor because if left uncorrected it would become a more significant safety concern and because it affected the Containment Isolation SSC Reliability objective of the SSC and Barrier Performance attribute under the Barrier Integrity Cornerstone. The finding was assessed using the SDP, Manual Chapter 0609, Appendix H, Table 4.1. This assessment determined the finding to be of very low safety significance because, in the case of the most consequential containment isolation valve failures, the associated pathway was a small (i.e., 2-inch) line and would not have significantly contributed to Large Early Release Frequency (LERF). This finding had cross-cutting aspects associated with Problem Identification and Resolution.
Inspection Report# : 2005003*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jun 30, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Two Examples of Failure to Comply with Radiation Work Permit Requirements
The inspectors reviewed two examples of a self-revealing, non-cited violation of TS 5.4.1 for the failure of workers to comply with radiation work permit (RWP) requirements. The first example occurred on March 22, 2004, when an operator entered a posted high radiation area on an RWP that did not allow entry into high radiation areas. The operator received a electronic dosimeter dose rate alarm. Radiation dose rates in the area were 600 mrem per hour on contact and 300 mrem per hour at 30 cm from the radiation source. The second example occurred on October

4, 2004, when a craft worker entered an area in the overhead, greater than 6 feet, of the Unit 1 reactor building 593-foot elevation without contacting radiation protection personnel as required by the RWP. The worker did not review the planned work with radiation protection personnel prior to entry and did not monitor electronic dosimetry prior to reaching the dose alarm setpoint. A survey of the overhead area indicated dose rates of 200 mrem per hour on contact, 60 mrem per hour at 30 cm, and 25 mrem per hour general area from overhead piping. The finding is greater than minor because it was associated with the Occupational Radiation Safety cornerstone attribute of program and process and it affected the associated cornerstone objective to ensure adequate protection of worker health and safety from exposure to radiation. Using the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because it did not involve (1) ALARA planning and controls, (2) an overexposure, (3) a substantial potential for overexposure, or (4) an impaired ability to assess dose. In addition, this finding had cross-cutting aspects associated with human performance when personnel failed to follow radiation work permit instructions.
Inspection Report# : 2005003*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Nov 18, 2005
Identified By: NRC
Item Type: FIN Finding
Problem Identification and Resolution (PI&R) Inspection - U2/3 Results
Overall, the licensee maintained an effective program for the identification and correction of conditions adverse to quality. Site management was purposely active and involved in the Corrective Action Program (CAP) and focused appropriate attention on significant plant issues. The licensee was effective at identifying problems at a low threshold and entering them into the CAP. In general, the licensee consistently prioritized issues in accordance with their CAP and routinely performed adequate evaluations that were technically accurate and of sufficient depth. However, several issues were identified related to ineffective implementation of corrective actions for previously identified NRC violations and other corrective action issues identified by the licensee.

Formal root cause evaluations for significant conditions adverse to quality were thorough and detailed. Corrective actions developed for lower level root and contributing causes were generally timely, effective, and commensurate with the safety-significance of the issue. Improvement was noted in management oversight to ensure all contributing causes were being adequately considered for broader corrective actions, extent of condition reviews, and enhanced trending.

Self-assessments, audits performed by the Nuclear Assurance (NA) organization, and Multi-site CAP Self-Assessments, were effective in identifying issues and entering them into the CAP. These audits and self-assessments were self-critical and identified substantive issues, numerous lower level problems, and areas that needed improvement. The audits and self-assessments reviewed appeared to be comprehensive and thorough. However, several identified repeat issues from previous self-assessments and audits in which prior corrective actions had proven ineffective. Although new Problem Evaluation Reports (PERs) were issued to address each specific repetitive problem, the licensee did not always clearly delineate the repeat nature of the PER and thereby lost an opportunity to bring additional attention to the problem or take action to determine why the previous corrective actions were ineffective.

Based on review of the licensee's Concerns Resolution Program (CRP) and discussions conducted with plant employees from various departments, the inspectors did not identify any reluctance to report safety concerns. Increased program usage in conjunction with the increase in Unit 1 recovery activities was being adequately managed. Based on the samples reviewed, the depth of issue evaluations were adequate to address the identified concerns raised to the CRP. Oversight of contractor CRPs was being implemented in an appropriate manner.

Inspection Report# : 2005011*(pdf)*

Last modified : March 03, 2006