Browns Ferry 2
4Q/2004 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Inadequate Procedures and Poor Human Performance Resulted in a Drop of the Reactor Building Crane Trolley.
A self-revealing NCV was identified for the licensee's failure to comply with 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures and Drawings. As a result of inadequate procedures and poor human performance, a Reactor Building crane trolley was dropped approximately four feet onto the refuel floor while being rigged.

This finding is greater than minor because it is associated with program and process attributes and affected the objective of the Reactor Safety/Initiating Event Cornerstone to limit the likelihood of those events that upset plant stability and challenge critical safety functions during at power operations. In addition, if left uncorrected, this finding would result in a more significant safety concern. This finding was determined to be a finding of very low safety significance because no initiating event or transient actually occurred, there was no permanent structural damage to the refuel floor, there was no functional degradation, and mitigating capability was not affected. The cause of the finding is related to the cross-cutting element of human performance.
Inspection Report# : 2004005*(pdf)*

Significance: G Dec 31, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Poor Work Practices Resulted in a Failure to Follow Procedure and an Inadvertent Start of RHR.
A self-revealing NCV was identified for the licensee's failure, due to human performance, to comply with Technical Specification (TS) 5.4.1, Procedures, and correctly implement a surveillance test procedure for the Unit 2 Low Pressure Coolant Injection system. As a result, an inadvertent start of the Residual Heat Removal Pump 2B occurred.

This finding is greater than minor because it is associated with program and process attributes and affected the objective of the Reactor Safety/Initiating Event Cornerstone to limit the likelihood of those events that upset plant stability and challenge critical safety functions during at-power operations. In addition, if left uncorrected, this finding would result in a more significant safety concern if it occurred on a more sensitive plant-critical component. This finding was evaluated using the SDP and was determined to be a finding of very low safety significance because there was no actual loss of safety function, all aspects of the Emergency Core Cooling Systems (ECCS) remained fully functional, and other redundant ECCS were available to fulfill their safety function. The cause of the finding is related to the cross-cutting element of human performance.
Inspection Report# : 2004005*(pdf)*

Significance: G Dec 31, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
A Human Performance Error Resulted in the Loss of Safety-Related 480-Volt Shutdown Board 2A and the Inadvertent Start of ECCS Equipment.
A self-revealing NCV was identified for the licensee's failure to comply with Unit 2 Technical Specification (TS) 5.4.1, Procedures. A human performance error in the failure to correctly implement a surveillance test procedure during relay calibration resulted in the loss of power to the safety-related 480-volt shutdown board 2A. As a result, multiple Technical Specification Limiting Conditions of Operation were entered. This event initiated Engineered Safety Features and caused the loss of systems important to safety on all three units.

This finding is greater than minor because it is associated with program and process attributes and affected the objective of the Reactor Safety/Initiating Event Cornerstone to limit the likelihood of those events that upset plant stability and challenge critical safety functions during at-power operations. This finding was evaluated using the SDP and was determined to be a finding of very low safety significance because the event was of short duration (approximately six minutes), other redundant safety features were available and remained fully functional, and there was no loss of safety function. The cause of the finding is related to the cross-cutting element of human performance.
Inspection Report# : 2004005*(pdf)*

Significance: G Sep 25, 2004
Identified By: NRC

Item Type: NCV NonCited Violation
Violation of Technical Specification 3.3.1.1 - Turbine Control Valve Fast Closure Circuit
The inspectors identified a violation of Technical Specification (TS) 3.3.1.1. The Reactor Protection System (RPS) function in Table 1, Item 9, Turbine Control Valve Fast Closure, Trip Oil Pressure Low, was affected by disabling the inputs of the turbine generator power-load unbalance (PLU) circuit. The PLU input was the sole input signal that would initiate a reactor scram and was credited in the main generator load rejection event safety analysis. The licensee did not recognize the need to enter the associated TS Limiting Condition Of Operation and did not take the required actions to restore RPS trip capability within one hour and immediately reduce power to less than 30% RTP. As a result, Unit 2 operated in an unanalyzed condition from July 11, 2004 until August 11, 2004.

This finding is greater than minor because it affected the objective of the Barrier Cornerstone, specifically Fuel Cladding Barrier and could induce localized fuel rod leaks during the postulated event. This finding is of very low safety significance because reactor power was only the susceptible power range (30%-70%) for a short duration, no actual transient occurred, the turbine bypass system was operational during the time period, and leaking fuel represents degradation of only one of three major barriers designed to mitigate leaking fuel and to protect the public. The reactor pressure vessel and containment barriers were never affected by this deficiency.
Inspection Report# : 2004004*(pdf)*

Significance: G Sep 25, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to Adequately Conduct Post-Design Change Testing in accordance with10 CFR 50, Appendix B, Criterion III, Design Control
A self-revealing NCV was identified for the licensee's failure to adequately control post-design change testing in accordance with 10 CFR 50, Appendix B, Criterion III, Design Control. Following a design change to main turbine monitoring circuits credited in a safety analysis, failure modes unaccounted for and not tested by the test program resulted and later contributed to a Unit 2 reactor scram.

This finding is greater than minor because it is associated with program and process attributes and affected the objective of the Reactor Safety/Initiating Event Cornerstone to limit the likelihood of those events that upset plant stability and challenge critical safety functions during at power operations. This finding is of very low safety significance because all plant systems operated as designed following the scram.
Inspection Report# : 2004004*(pdf)*

Mitigating Systems

Significance: G Dec 31, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Demonstrate that the RMOV Board 1B Performance Was Effectively Controlled per 10 CFR 50.65 (a)(2).
The inspectors identified an NCV of 10 CFR 50.65 (Maintenance Rule) for failing to demonstrate that the performance of the Reactor Motor-Operated Valve (RMOV) Board 1B was being effectively controlled through the performance of appropriate preventive maintenance such that the system remained capable of performing its intended function. As a result, after it exceeded its Maintenance Rule a(2) performance criteria, the licensee had not established goals nor monitored the performance of the RMOV Board 1B per 10 CFR 50.65a(1).

This finding is more than minor because it affected the reliability objective of the Equipment Performance attribute under the Mitigating Systems Cornerstone. The finding is of very low safety significance because there was no design deficiency, the equipment affected by the board failure either failed in a safe manner or had its redundant equipment functional.

Inspection Report# : 2004005*(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G Sep 25, 2004
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to Implement Adequate Engineering Controls for Airborne Radioactive Material
A self-revealing NCV of 10 CFR 20.1701 was identified for failure to implement adequate engineering controls to limit airborne radioactivity stemming from decontamination activities for the 1C Reactor Water Cleanup (RWCU) Regenerative Heat Exchanger. Specifically, the High Efficiency Particulate Air (HEPA) filtration unit being used during the evolution did not have a HEPA filter cartridge. In addition, the HEPA filtration unit used during this evolution had been selected from the station's common pool of HEPA units. Consequently, this type of event could have occurred on Unit 2 or Unit 3 had the unit been selected for use on one of the other two units.

This finding is more than minor because it adversely affects the Occupational Radiation Safety cornerstone objective to ensure the adequate protection of worker health and safety from exposure to radiation from radioactive materials and the attribute of having adequate programs and processes for contamination control. The finding is of very low safety significance because the licensee's three-year rolling average for collective dose is less than 240 person-rem.
Inspection Report# : 2004004*(pdf)*

Significance: G Mar 27, 2004
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Ensure That ARMs Are Periodically Calibrated.
The inspectors identified a Non-Cited Violation of 10 CFR 20.1501(b) for failure to ensure that instruments and equipment used for quantitative radiation measurements (e.g., area radiation monitors) were calibrated at an adequate periodicity for the radiation measured.

The inspectors determined that the licensee's failure to ensure that area radiation monitors were calibrated at an appropriate periodicity for the radiation measured was a performance deficiency. This finding is greater than minor because it is associated with the Occupational Radiation Safety Cornerstone and adversely affects the cornerstone objective attribute to ensure the adequate protection of worker health and safety from exposure to radiation from radioactive material. The finding is of very low safety significance because there are other instrumentation and means to identify degraded operation involving a radioactive material release, and no known operational event occurred during this period.
Inspection Report# : 2004002*(pdf)*

Public Radiation Safety

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Last modified : March 09, 2005