Fermi 2
3Q/2003 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Wrong Spring Installed in West Station Air Compressor Breaker Causes Compressor Failure
A self revealed finding was identified for inappropriate maintenance on the breaker for the west station air compressor on December 20, 1999. This led to excessive cycling of the breaker and failure of the compressor coupling during compressor shutdown on March 13, 2003. This issue was considered more than minor because it affected an attribute and objective of the Initiating Events Cornerstone. No violation of regulatory requirements occurred because the issue occurred on plant support equipment, which was nonsafety-related.

A phase 2 risk assessment was performed and it was determined that the issue had low safety significance (Green) do to a low initiating event frequency of a Loss of Instrument Air with one of three station air compressors unavailable.

Inspection Report# : 2003006*(pdf)*

Significance: G Jun 30, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Include Technical Specification Amendment 114 into UFSAR
The inspectors identified a non-cited violation for failing to comply with 10 CFR 50.71 (e). This violation was related to not updating the Updated Safety Analysis Report (USAR) with the effects of a safety analysis and evaluation performed by the licensee in support of approved license amendment 114, which allowed average reactor coolant system temperature to be between 200 and 212 degrees Fahrenheit for conducting in-service leakage tests and hydrostatic tests while in MODE 4. Specifically the licensee's safety analysis and evaluation credited all control rods as fully inserted to ensure additional shutdown margin during these testing evolutions, but this condition (all rods inserted) was not incorporated into the USAR or licensee procedures.

This finding was more than minor because this condition permitted the conduct of control rod scram testing during hydrostatic and system leakage testing, which was different from the initial condition that all control rods were fully inserted as assumed in the analysis and evaluation for approved license amendment 114. The licensee provided this initial condition in their amendment request and the NRC staff used this initial condition in the safety evaluation for approval of license amendment 114. The failure to comply with 10 CFR 50.71(e) caused inappropriate pressure testing procedure changes and created a situation where less shutdown margin than originally evaluated and accepted by the NRC staff was present at times when these activities were conducted concurrently. As such, the performance of scram time testing during hydrostatic or system leakage testing would have required prior NRC approval in accordance with 10 CFR 50.59. The issue was considered of very low safety significance because the finding did not contribute to the likelihood of a primary or secondary system loss of coolant accident, it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available nor did it increase the likelihood of a fire or internal/external flood. Adequate shutdown margin had always been maintained.

Inspection Report# : 2003006*(pdf)*

Significance: G Jun 30, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Operator Error Causes Loss of Shutdown Cooling
A self revealed violation of 10 CFR 50, Appendix B, Criterion V, occurred on April 28, 2003, when operators improperly shifted reactor protection system busses and caused a loss of shutdown cooling. 10 CFR 50, Appendix B, requires, in part, that activities affecting quality shall be accomplished in accordance with prescribed procedures. The licensee developed Procedure 23.316 to shift reactor protection system busses and require depression of the open pushbutton for E1150-F008. Contrary to these requirements, the operator failed to depress the pushbutton and caused a loss of shutdown cooling.

The inspectors determined that the violation is more than minor using the guidance provided in NRC Inspection Manual Chapters 0609 and 0612. Chapter 0609 provides guidance on evaluation of the significance of findings for a shutdown reactor. In accordance with Appendix G, Table 1 of 0609, loss of shutdown cooling is a finding of very low safety significance.

Inspection Report# : 2003006*(pdf)*

Significance: G Mar 31, 2003
Identified By: Licensee
Item Type: FIN Finding
Failure of Circulating Water Pump No. 2 Casing Bolts
One Green finding was identified regarding performance issues which resulted in the unexpected failure of circulating water pump No. 2, and an initiating event (a plant scram). The pump diffuser casing bolts were cleaned of rust and reinstalled following preventive maintenance in 2000. Residual rust left on the bolts caused an inadequate torque to be applied to the bolts. After running the pump for about 29 months, the bolts fatigued and failed. The diffuser casing separated from the pump column and struck and damaged the pump shaft on October 2, 2002. These failures led to a loss of condenser vacuum, a turbine trip, and a reactor scram.

This finding was more than minor because the failure of the pump caused a plant transient. However, the failure of the pump was of very low risk significance because the condition neither contributed to: (1) the likelihood of a primary or secondary loss of coolant accident initiator, (2) the likelihood of a reactor trip and unavailability of mitigating equipment or loss of mitigating equipment functions, or (3) the increased likelihood of a fire or an internal or external flood. There were no violations of NRC requirements because the pump is a nonsafety-related component and the pump pieces did not impact the operation of safety-related equipment.
Inspection Report# : 2003002*(pdf)*

Mitigating Systems

Significance: G Sep 30, 2003
Identified By: NRC
Item Type: NCV NonCited Violation

Failure to Apply Adequate Design Control Measures Results in Equipment Exceeding Its Design Basis Service Life.
The inspectors identified a Non-Cited Violation of Criterion III of Appendix B to 10 CFR Part 50, for failure to assure adequate design controls were in place to ensure that Agastat general purpose relays would be replaced prior to exceeding their design basis life. Although the licensee's preventive maintenance program allowed safety-related general purpose relays to remain in service beyond their design basis life, a review of work history identified no general purpose relays that had malfunctioned due to heat-related problems.

This finding is greater than minor because, if left uncorrected, it would become a more significant safety concern. Specifically, the licensee's process of including a 25 percent grace period on most preventive maintenance tasks could allow a component to remain in service longer than the design basis lifetime, thus reducing the reliability of that component to perform its intended safety function. Because the relay that was found in service beyond its design basis lifetime remained functional, this finding did not represent an actual loss of a safety function. Therefore, this finding is characterized as an issue of very low safety significance.
Inspection Report# : 2003008*(pdf)*

Significance: G Sep 30, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to Implement Design Control Processes for Adding Plastic Sleeves on EDG Drain Line.
The inspectors identified a Non-Cited Violation of Criterion III of Appendix B to 10 CFR Part 50, for site personnel installing plastic sleeves on the drain lines for all four emergency diesel generators without using the design control measures for design changes specified in Procedure MES 12, "Temporary Modifications." Consequently, installation of the plastic sleeves for the drain line on Emergency Diesel Generator 11 restricted the oil draining capacity of the diesel and was a contributing cause for oil reaching the hot exhaust manifold and creating a fire.

This finding is greater than minor because it affected the Mitigating System Cornerstone of equipment reliability. Specifically, the plastic sleeves restricted the fuel oil draining flow for Emergency Diesel Generator 11. The restriction caused the fuel oil to collect on the injector deck, migrate, and collect on the hot exhaust manifold piping insulation and catch fire. The finding is of very low safety significance because the fire was manually suppressed using available fire extinguishers before substantial damage to Emergency Diesel Generator 11 occurred. Also, emergency onsite power availability was maintained in that only one of four emergency diesel generators was impacted.
Inspection Report# : 2003008*(pdf)*

Significance: G Dec 06, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Have Adequate Procedures for Alternative Shutdown in Effect
The inspectors identified that the licensee failed to have adequate procedures in effect for alternative shutdown in accordance with their license conditions. Specifically, performance of necessary actions to conduct an alternative shutdown would have required operators to perform steps contrary to the emergency operating procedures. The failure to have adequate procedures in effect for alternative shutdown is a violation of a license condition.

This issue was greater than minor because the conflict between procedures could result in operator delay and confusion for performance of necessary alternative shutdown steps. The finding was determined to be of very low safety significance, i.e., Green, because the finding did not affect a fire protection feature and interviews with operators indicated that they would take the necessary actions. Because the finding was of very low safety significance, and the finding was captured in the licensee's corrective action system, this finding is being treated as a NCV consistent with

Section VI.A.1 of the NRC Enforcement Policy.
Inspection Report# : 2002008*(pdf)*

Significance: G Dec 06, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Prompt Corrective Actions to Correct Identified Deficiencies in Alternative Shutdown Procedure
The inspectors identified that the licensee failed to promptly correct identified deficiencies in the alternative shutdown procedure which specified safe shutdown actions to be taken in the event of a fire in an affected fire area. Specifically, the alternative shutdown procedure which specified operator actions in the event of a fire in fire area 11ABE relied upon operator actions to be taken in the same area. As such, operators may not have been able to perform the directed actions due to exposure to the fire, the actions may not have been effective due to fire damage, and the carbon dioxide fire suppression system for the area could have been adversely affected. The failure to take prompt corrective actions is a violation of a license condition.

The issue was greater than minor because specified actions may not have been effectively accomplished and a fire protection feature was affected. The finding was determined to be of very low safety significance, i.e., Green, because there were no identified fire damage scenarios which would require alternative shutdown. Because the finding was of very low safety significance, and the finding was captured in the licensee's corrective action system, this finding is being treated as a NCV consistent with Section VI.A.1 of the NRC Enforcement Policy.
Inspection Report# : 2002008*(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: G Mar 20, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
FAILURE TO MAINTAIN CONTROL OF LICENSED RADIOACTIVE MATERIAL
A self-revealing violatoin of 10 CFR 20.1802 was identified, when the licensee failed to maintain control of a measurable amount of licensed radioactive material (i.e., external radioactive contamination on a lanyard) identified during whole body counting of a contractor.

The finding was more than minor because it was associated with the "Program and Process" and "Human Performance" attributes of the Public Radiation Safety Cornerstone and affected the cornerstone objective in ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain. The vendor operator's apparent lack of knowledge as to the requirements to control measurable amounts of radioactive material, which was exacerbated by less than adequate radiation protection oversight of the vendor and procedure deficiencies, led to the unrestricted release of measurable radioactive material. However, this finding, associated with the licensee's radioactive material control program, was of very low safety significance in that public radiation exposure was not greater than 0.005 rem and the licensee did not have more than five radioactive material control occurrences (in the previous eight quarters). An associated Non-Cited Violation of 10 CFR 20.1802 was identified for the failure to control licensed radioactive material in an unrestricted area and not in storage.
Inspection Report# : 2003006*(pdf)*

Physical Protection

Miscellaneous

Last modified : December 01, 2003