South Texas 2
3Q/2009 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Jul 04, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify Maintenance Rule A1 Condition
The inspectors identified a noncited violation of 10 CFR 50.65(a)(2) for the licensee's failure to effectively monitor the performance of the Unit 2 4160Vac Class 1E system. On August 30, 2007, an undervoltage Agastat relay on the Unit 2 4160Vac Train A bus failed. The inspectors determined that this failure should have been recorded as a maintenance preventable functional failure, which would have caused the system to be placed into the Maintenance Rule A1 category. The reason for not recording this failure as a maintenance preventable functional failure was the improper use of the as-found condition codes. The licensee has captured this event under Condition Report 09-2891.

This finding was more than minor because it affected the equipment performance attribute of the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the reliability of systems that respond to initiating events to prevent undesirable consequences. Using the Significance Determination Process Phase 1 worksheet, this finding was determined to have very low safety significance because it did not result in the actual loss of safety function of one or more trains and did not screen as risk-significant due to seismic, flooding, or severe weather. This finding had a human performance crosscutting aspect associated with work practices because workers failed to ensure proper documentation of activities [H.4(a)].

Inspection Report# : 2009003 *(pdf)*

Significance: G Jul 04, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Potential Loss of Centrifugal Charging Pump Suction Due to Fire Damage
The inspectors identified a noncited violation of License Condition 2.E, "Fire Protection," for failure to ensure that equipment required for post-fire safe shutdown system remains free of fire damage. Specifically, the licensee credited manual actions to mitigate the effects of fire damage in lieu of providing the physical protection required by 10 CFR Part 50, Appendix R, Section III.G for the two series-connected volume control tank outlet valves (motor-operated Valve 112B and motor-operated Valve 113A).

Failure to ensure that the volume control tank outlet valves relied upon for achieving post-fire safe shutdown were protected from fire damage was a performance deficiency. This finding is of greater than minor safety significance because it impacted the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to external events (such as fire) to prevent undesirable consequences. Specifically, 13 fire areas contain unprotected cables that had the potential to spuriously close at least one of the volume control tank outlet valves which could result in a loss of suction and damage to the only charging pump credited for post-fire safe shutdown. Based on the senior reactor analyst Phase 3 analysis of the Significance Determination Process, this finding was determined to have very low safety significance.
Inspection Report# : 2009003 *(pdf)*

Significance: G Apr 09, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Assess and Manage Outage Maintenance Risk Activities Resulting in the Loss of the Residual Heat Removal System
The inspectors reviewed a self-revealing noncited violation of 10 CFR 50.65(a)(4), for the failure to assess and manage risk from an emergent maintenance work activity on the solid state protection system during the Unit 2 refueling outage that resulted in a loss of the residual heat removal system. Specifically, on October 25, 2008, the licensee planned an emergent maintenance activity to replace a general logic card on the solid state protection system without adequately assessing the risk to the plant. Consequently, when the logic card was removed, the low steam pressure safety injection actuation signal became unblocked and resulted in the loss of the operating residual heat removal system pumps. The licensee's immediate corrective action was to restore the residual heat removal system to operation and enter the issue into their corrective action program.

The finding was more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance and adversely affected the cornerstone objective of availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Phase 1 screening criteria of Inspection Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process," Attachment 1, Checklist 4, the finding screened to a Phase 2 quantitative analysis because no residual heat removal loops were in operation. The finding was determined to be of very low safety significance because the Phase 2 screening by the senior reactor analyst concluded that the conditional core damage probability from this event was approximately 1E-08. In addition, this finding had human performance crosscutting aspects associated with decision making [H.1(a)] because the licensee failed to make risk-significant decisions using a systematic process to ensure safety is maintained, and did not formally define authority and roles for key personnel responsible for implementing these risk-significant decisions.

Inspection Report# : 2009002 *(pdf)*

Significance: G Apr 09, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Reportability Misses an Inoperable Component Cooling Water Train
The inspectors identified a noncited violation of Technical Specification 3.7.3 for an inadequate reportability review on the Train A component cooling water low-level actuation switch which failed during surveillance testing. On October 14, 2008, during the 18-month surveillance test, Unit 2 component cooling water Train A was determined to be inoperable due to the failure of system valves to actuate to their designated positions. The inspectors continued to ask questions related to the event and discovered that the last time the switch was manipulated was January 22, 2008, during a calibration procedure. After the inspectors questioned the reportability, engineering reviewed it and determined that the calibration procedure did not have a functional check of the switch internal contacts before restoration. Engineering concluded that, as a result of the switch not being functionally checked after the calibration, that the wire must have become disconnected during the restoration section of the procedure. Consequently, from January 22, 2008 through October 16, 2008, the Train A component cooling water low-low level switch was inoperable and therefore reportable. The licensee performed a root cause of the event itself and an apparent cause for operations inappropriately applying time of discovery for the initial reportability review under Condition Reports 08-15541 and 08-19420, respectively.

The finding was more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern in that inadequate operability/reportability reviews could result in a degraded system being returned to service, and it affected the Mitigating Systems cornerstone attribute of human performance and the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Significance Determination Process Phase 1 worksheets from Inspection Manual Chapter 0609, the finding was determined to have very low safety significance because it did not result in the actual loss of safety function of one or more trains and it did not screen as risk significant due to seismic, flooding, fire, or severe weather. In addition, this finding had Problem Identification and Resolution crosscutting aspects associated with the corrective action program [P.1(c)] because the licensee failed to thoroughly evaluate for operability and reportability

conditions adverse to quality.
Inspection Report# : 2009002 *(pdf)*

Significance: G Apr 09, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Surveillance Test for Component Cooling Water
The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criteria V, “Instructions, Procedures, and Drawings,” for the inadequate surveillance Procedure 0PSP05-CC-0001, “FCI CCW Surge Tank Compartment Level Switch Calibration,” Revision 7. On October 14, 2008, during the 18-month surveillance test, Unit 2 component cooling water Train A was determined to be inoperable due to the failure of system valves to actuate to their designated positions. Troubleshooting determined that a loose wire was the reason for the inoperability. The wire was restored and the train returned to operable status on October 16, 2008. From January 22 through October 16, 2008, the Train A component cooling water low-low level switch was inoperable. Since this procedure is applicable to all trains of both units, the licensee verified that all other trains low-low level switches on both units were either surveillance tested after the last calibration procedure or were functionally checked using a temporary procedure to ensure operability.

The finding was more than minor because it was similar to several examples in Inspection Manual Chapter 0612, Appendix E, where the system was returned to service without being fully operable, and it affected the Mitigating Systems cornerstone attribute of procedure quality and the objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using the Significance Determination Process Phase 1 worksheets from Inspection Manual Chapter 0609, the finding was determined to have very low safety significance because it did not result in the actual loss of safety function of one or more trains and it did not screen as risk significant due to seismic, flooding, fire, or severe weather. This issue had no crosscutting aspects because the last revision to the procedure was too long ago (2005) to be indicative of current performance.

Inspection Report# : 2009002 *(pdf)*

Significance: G Dec 31, 2008
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Perform Routine Operator Rounds Results in the Creation of Fire Hazards
The inspectors identified two examples of a non-cited violation of 10 CFR Part 50, Appendix B, Criterion V (Procedures), for the failure to adequately perform routine operator rounds in accordance with station procedures. Plant operators had failed to observe degraded material conditions (oil soaked insulation) and abnormal oil leakage onto the floor below Essential Chiller 22C, and stray material (oil absorbent pads) in between the cylinder heads of the standby Diesel Generators 11 and 13. The inspectors determined that both examples resulted in fire hazards. The licensee implemented corrective actions to remove the fire hazards and entered the concerns into their corrective action program as Condition Reports 08-18903, 08-19296, 09-184, and 09-195.

The finding was more than minor because it was similar to example 4.f of Manual Chapter 0612, Appendix E, "Examples of Minor Issues," because both conditions created a fire hazard. The inspectors used NRC Inspection Manual Chapter 0609, Appendix F, “Fire Protection Significance Determination Process,” to determine that the finding was of very low safety significance because the deficiency resulted in a low degradation rating that minimally impacted the plant combustible material controls program element of the fire prevention and administrative controls category. In addition, the finding had a Problem Identification and Resolution crosscutting aspect (corrective action program component), because operators failed to implement a corrective action program with a low threshold for identifying issues [P.1(a)].

Inspection Report# : 2008005 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G Jul 04, 2009
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Perform Radiation Surveys
A self-revealing noncited violation of 10 CFR 20.1501(a) was identified for failure to perform a radiological survey to determine the potential radiological hazards present when deposting a high contamination area. On October 25, 2008, decontamination technicians were sent into the reactor containment building to remove the decontamination tent from steam generator eddy current testing which was posted as a high contamination area. The technicians were not informed of the expectation to decontaminate the scaffolding and health physics personnel did not follow-up and perform surveys of the deposted area. Subsequently, carpenters were sent in to remove the scaffolding which was still highly contaminated. The licensee was made aware of the situation when one of the carpenters alarmed the personnel contamination monitor and a whole body count revealed approximately 3 millirem intake. The issue was entered into the licensee's corrective action program as Condition Report 08-16599.

The failure to perform surveys necessary to support deposting a contamination area is a performance deficiency. The finding was greater than minor because it was associated with the Occupational Radiation Safety cornerstone attribute (exposure control) of program and process and affected the cornerstone objective, in that, failure to conduct a radiation survey resulted in unplanned and unintended dose to personnel. Using the Occupational Radiation Safety Significance Determination Process, the finding was determined to be of very low safety significance because it was not an as low as is reasonably achievable finding, there was no overexposure or substantial potential for an overexposure, and the ability to assess dose was not compromised. The finding was self-revealing because the licensee was alerted to the situation when the worker could not pass the personnel contamination monitor. Additionally, this finding had human performance crosscutting aspects associated with work control, in that, the work planning did not appropriately plan work activities by incorporating risk insights and radiological safety [H.3(a)].

Inspection Report# : 2009003 *(pdf)*

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

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