South Texas 1
1Q/2006 Plant Inspection Findings

Initiating Events

Significance: G May 12, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedures Result in Relief Valve Openings During the Performance of Surveillance Tests
Green. The inspectors identified a noncited violation of Technical Specification 6.8.1.a and Regulatory Guide 1.33, Appendix A, Item 8.b.(1).i, "Emergency Core Cooling Tests," for inadequate procedures that resulted in a letdown pressure relief valve opening during the performance of Plant Surveillance Procedure 0PSP03-RH-0009, "Residual Heat Removal System Valve Operability Test," Revision 5, on March 16, 2004, and again during performance of preventive maintenance procedure PM IC-2-89001568 on May 2, 2005. This finding was a performance deficiency because it had the actual impact of lifting a relief valve and therefore is associated with an increase in the likelihood of an initiating event. The finding was of greater than minor significance since it was associated with the cornerstone attribute of Initiating Events and affected the associated cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding was only of very low safety significance because, assuming worst case degradation, the lifted relief valve would not have resulted in exceeding the technical specification limit for identified reactor coolant system leakage. This issue also involved problem identification and resolution crosscutting aspects in the area of prioritization and evaluation. Additionally, the event had cross-cutting aspects in the area of human performance related to procedural adequacy and equipment knowledge.

Inspection Report# : 2005003*(pdf)*

Mitigating Systems

Significance: G Jul 14, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to ensure redundant safe shutdown systems located in the same fire area are free of fire damage
The team identified a noncited violation of Section III.G.2 of Appendix R to 10 CFR Part 50 for failure to ensure that redundant trains of safe shutdown systems in the same fire area were free of fire damage. For example, cables associated with the charging pumps suction valve from the Refueling Water Storage Tank, CV-MOV-0112C were not physically protected from fire damage. 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.2.

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. The team found that the manual operator actions implemented to mitigate the effects of fire damage were reasonable (as defined in Enclosure 2 of NRC Inspection Procedure 71111.05T, "Fire Protection (Triennial)"), and could be performed within the analyzed time limits. Therefore, in accordance with Enclosure 2 of NRC Inspection Procedure 71111.05T, the finding was determined to be of very low safety significance (green), and the significance determination process was not entered. The licensee plans to readdress manual actions following incorporation of manual actions into 10 CFR Part 50, Appendix R, Section III.G.2. (Section 1R05.2)
Inspection Report# : 2005006*(pdf)*

Significance: G Jun 24, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Reactor Coolant Leakage Detection System Calibration
Green. The inspectors identified a noncited violation of 10 CFR Part 50, Appendix B, Criterion III, associated with the licensee's failure to assure that applicable regulatory requirements and the design basis for the containment radiation gas monitors were correctly translated into the reactor containment building radiation monitor setpoints. This deficiency resulted in the radiation monitors being incapable of performing the design basis function to detect a one gallon per minute reactor coolant system leak within one hour in accordance with the licensee's commitment to Regulatory Guide 1.45, "Reactor Coolant Pressure Boundary Leakage Detection Systems." This finding was a performance deficiency because the reactor containment building radiation monitor was not capable of performing the design basis function for an extended period of time. The finding was of greater than minor significance because the failure to alarm by the containment radiation monitor resulted in potential impact on reactor safety and adversely affected the reactor coolant leakage performance attribute of the Barrier Integrity cornerstone.

The finding was only of very low safety significance because other methods of reactor coolant system leak detection were available to the licensee and operators responded to the trending in the volume control tank level and then noted the rising trend recorded by the particulate radiation monitor. The failure of the radiation monitor to alarm within one hour did not contribute to an increase in core damage sequences when evaluated using the Significance Determination Process Phase 2 worksheets.

Inspection Report# : 2005003*(pdf)*

Barrier Integrity

Significance: G Dec 01, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inoperability of Essential Cooling Water Trains 2A and 2B
A green self-revealing noncited violation of Technical Specification 3.7.4 was identified which requires in part, that with only two of three required essential cooling water loops operable, three loops be restored to operable within 7 days or be in at least hot standby within 6 hours. Contrary to the above, Unit 2 continued to operate at 100% power while essential cooling water Train 2B was inoperable for an indeterminate time greater than 7 days. At the time of discovery, it was determined that Train 2B had already been inoperable due to cavitation induced pipe cracking for greater than the 7 day allowed outage time. The licensee entered the performance deficiency into their corrective action program for resolution. This finding is greater than minor because it affected the availability, reliability and capability objectives of the mitigating systems reactor safety cornerstone. Engineering analysis determined that if a seismic event had occurred, essential cooling water Train 2B train could have been rendered non-functional. The finding is only of very low safety significance because it did not involve the total loss of any safety function that contributed to the external event initiated core damage accident sequences as the minimum required two trains of essential cooling water were available for accident mitigation. As there were several missed opportunities to prevent the performance deficiency, this finding involved crosscutting aspects in the area of problem identification and resolution.
Inspection Report# : 2005005*(pdf)*

Significance: G Oct 12, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Improper Fuel Handling Improper Fuel Handling Improper Fuel Handling
A green self-revealing noncited violation of Technical Specification 6.8.1.a and Regulatory Guide 1.33, Appendix A, was identified for a failure to adhere to Plant Operating Procedure 0POP08-FH-0003, "Fuel Transfer System," Revision 26. The failure to follow procedure resulted in fuel movers challenging the interlocks in the fuel transfer system. Specifically, a fuel mover attempted to lower a fuel assembly in the upender while the upender was still rising. The interlock prevented the upender from making contact with the fuel assembly. The licensee entered the performance deficiency into their corrective action program for resolution. This finding is greater than minor, because it involved the potential damage to fuel assemblies. This issue involves fuel assembly handling so it is not suitable for evaluation under the NRC Significance Determination Process. Therefore, this finding was reviewed by NRC management and determined to be of low safety significance because the event did not result in damage to a fuel assembly. As the performance deficiency involved a failure to follow procedure, this finding involved crosscutting aspects in the area of human performance.

Inspection Report# : 2005005*(pdf)*

Significance: G Oct 02, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Inadvertent Letdown Relief Valve Opening
A green self-revealing noncited violation of Technical Specification 6.8.1.a and Regulatory Guide 1.33, Appendix A, was identified for a failure to adhere to Plant Operating Procedure 0POP02-CV-004, "Chemical and Volume Control System Subsystem," Revision 41. The failure to follow procedure resulted in reactor coolant system inventory being diverted to the pressurizer relief tank when a letdown pressure relief valve opened during a letdown orifice swap. The licensee entered the performance deficiency into their corrective action program for resolution. This finding is greater than minor because it had the actual impact of lifting a relief valve and is associated with the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during power operations. The finding is only of very low safety significance because, assuming worst case degradation, the lifted relief valve would not have resulted in exceeding the Technical Specification limit for identified reactor coolant system leakage. As the performance deficiency involved a failure to follow procedure, this finding involved crosscutting aspects in the area of human performance.

Inspection Report# : 2005005*(pdf)*

Significance: G May 19, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Unit 1 Exceeding Licensed Thermal Power Limits
Green. A self revealing noncited violation of License Condition 2.C(1) of Facility Operating License NPF-76 was identified. License Condition 2.C(1) of Facility Operating License NPF-76 requires, in part, that South Texas Project Unit 1 operate at reactor core power levels not in excess of 3,853 megawatts thermal. It was determined that the reactor thermal output instruments provided non-conservative data to the reactor power calculation. This resulted in the 8-hour power average routinely being in excess of the licensed thermal power limit of 3,853 megawatts thermal between April 15 and May 19, 2005. This finding was a performance deficiency because the facility was not operated in accordance with the conditions of the South Texas Project license. The finding was more than minor because it was associated with the Barrier Integrity cornerstone and the protection of the fuel cladding barrier attribute. The finding was only of very low safety significance because the small increase in power above the licensed limit could be accommodated by the available margins in the safety analysis, and therefore did not significantly degrade plant safety. This issue involved problem identification and resolution crosscutting aspects associated with identifying and evaluating conditions adverse to quality.

Inspection Report# : 2005003*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance: G Jan 26, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Confine Radioactive Material to A Radiologically Controlled Area
The team reviewed two examples of a self-revealing non-cited violation of Technical Specification 6.8.1, resulting from the licensee's failure to prevent radioactive material from being unconditionally released from a radiologically controlled area. The first example involved a radiation detection instrument with fixed radioactive contamination. The second example involved a contaminated lifting sling that was used to remove equipment and containers from the containment building. In both examples, the radioactive material was identified after it was removed from a radiologically controlled area but before it left the protected area. Corrective actions for the first example involved counseling the responsible individual. Corrective actions for the second example are still being evaluated. Both examples were entered into the licensee's corrective action program as Condition Reports 04-4266 and 05-14345. This finding is greater than minor because it was associated with a Public Radiation Safety cornerstone attribute (material release) and it affected the associated cornerstone objective in that the failure to control radioactive material decreases the licensee's assurance that the public will not receive unnecessary dose. Using the Public Radiation Safety Significance Determination Process, the team determined that the finding had very low safety significance because: (1) the finding was a radioactive material control finding, (2) it was not a transportation finding, (3) it did not result in public dose greater than 0.005 rem, and (4) radioactive material was not released from the protected area more than five times. Additionally, this finding had cross-cutting aspects associated with human performance. In the first example, a radiation protection technician failed to maintain direct supervision of the contaminated instrument. In the second example, the procedural guidance allowed the licensee to use only portable GM instruments on large items despite the loss of detection sensitivity.

Inspection Report# : 2006008*(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: G Jun 23, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Refer an Employee to the Employee Assistance Program
Green. The inspector identified a noncited violation of 10 CFR parts 26.20 and 26.27 (b)(1), and South Texas Project Policy 502. Specifically, an individual whose fitness was in question, was allowed to return to duty prior to determining whether he was fit to safely and competently perform his job function. The licensee initiated a corrective action document to address this failure. This finding is greater than minor because it affects the Physical Protection cornerstone attribute associated with Access Authorization Systems. When this finding is processed through the interim physical protection significance determination process, it was determined to be a finding of very low significance because although there was no malevolent act and there were no greater than two similar findings in four quarters. This finding had cross-cutting aspects associated with human performance, because of the licensee's failure to follow their procedures.
Inspection Report# : 2005003*(pdf)*

Last modified : May 25, 2006