

South Texas 1

Initiating Events



Significance: Dec 28, 2002

Identified By: NRC

Item Type: FIN Finding

Licensee was not Monitoring or Addressing Declining Performance in Circulating Water System, Resulting in Catastrophic Pump Failure and Plant Trip

A finding was identified for PI&R selected issue followup. The licensee was not adequately monitoring the declining performance of the circulating water system and treated problems with this system symptomatically rather than finding the cause. Several near-miss failures were experienced which could have resulted in plant trips. Failing to assess the cause of system problems contributed to a pump discharge valve becoming separated from the operator and slamming shut, catastrophic failure of the pump, and a plant trip. The safety significance associated with this issue was very low because it resulted in a manual plant trip with all safety-related equipment available to provide mitigation capability. The issue affected the performance objectives of the initiating events cornerstone for design control, and screened as Green during a Phase 1 SDP evaluation.

Inspection Report# : [2002005\(pdf\)](#)



Significance: Jul 07, 2002

Identified By: NRC

Item Type: FIN Finding

Licensee Did Not Align Safety-related Instrumentation to Diverse Power Sources, Contributing to a Reactor Trip When an Inverter Fuse Blew

On July 7, 2002, power was lost to the Train D instrumentation channel when the associated inverter blew a fuse. Because it was the licensee's practice to operate with all four controlling steam generator water level channels powered from that channel, the level instruments all failed low, causing the control system to increase feedwater flow to maximum. Operators were unable to gain manual control of four channels fast enough to control level and the unit tripped on high steam generator water level. The inspectors concluded that the licensee had not maintained an operating equipment lineup that would minimize events that upset plant stability and challenged safety functions. This performance deficiency was considered to be of more than minor significance because it affected the performance objective of the initiating events cornerstone by increasing the likelihood of a plant trip or transient. The issue was screened as Green using Phase 1 of the Significance Determination Process.

Inspection Report# : [2002004\(pdf\)](#)

Mitigating Systems



Significance: Dec 28, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Noncited Violation for Improper Design Control due to Undersized Overload Heaters Being installed in SG PORVs During Breaker Replacement

The licensee did not properly control or review vendor design work when upgrading safety related 480V motor control center breaker units. As a result, the breakers for the hydraulic pumps for Steam Generator Power Operated Relief Valves 1B, 2B and 2C had undersized overload heaters installed, such that the valves would not have functioned as designed during periods of prolonged use or under degraded voltage conditions. Failure to assure that the design change for installing replacement 480V breaker units satisfied design requirements was a violation of 10 CFR 50, Appendix B, Criterion III, "Design Control." This violation is being treated as a noncited violation (NCV), consistent with Section VI.A of the Enforcement Policy. The safety significance of this issue was determined to be very low safety significance since this issue screened as Green during a Phase 1 significance determination process (SDP) assessment. The issue was considered more than minor because it affected the mitigating system cornerstone objective for design control and plant modifications by affecting the reliability of a system that responds to initiating events to prevent undesirable consequences

Inspection Report# : [2002005\(pdf\)](#)



Significance: Feb 27, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Operability Evaluation Resulted in all trains of Control Room ventilation being inoperable for longer than allowed by TS

The licensee's failure to properly assess the impact of a failed fire damper in the electrical auxiliary building ventilation system on the operability of the control room ventilation system resulted in all three trains of control room ventilation being inoperable for longer than the allowed outage time permitted by Technical Specifications. The damper redirected air flow in a way that degraded the control room radiological barrier by preventing that system from attaining the positive pressure required by Technical Specifications. This violation of Technical Specification 3.7.7 is being treated as a noncited violation, consistent with Section VI.A.1 of the NRC Enforcement Policy. This issue is in the licensee's corrective action program as Condition Report 02-3183. This issue involved a degraded control room radiological barrier and was more than minor due to the potential impact on the mitigation capability provided by control room operators. A Phase 1 Significance Determination Process screening determined this issue to be of very low risk significance.

Inspection Report# : [2001008\(pdf\)](#)

Barrier Integrity



Significance: Dec 21, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Steam Generator Replacement

The South Texas Project Unit 2 steam generator replacement project was inspected utilizing the guidance in Inspection Procedure 50001, "Steam Generator Replacement Inspection," in a series of three inspection reports (50-498;499/02-07, 02-08, and 02-09). These inspections covered design and planning, steam generator removal and replacement, and postinstallation verification and testing. The inspections were conducted by resident and region-based engineering and plant support inspectors. The steam generator replacement outage was well planned and executed. The attention to lessons learned from the previous steam generator replacement outage were very effective in preventing recurrence of problems. Plant conditions were carefully controlled to minimize risk during construction activities.

Inspection Report# : [2002009\(pdf\)](#)



Significance: Aug 29, 2002

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow a Procedure to Update AFD Computer Constants as Required by TS 6.8.1 and Reg. Guide 1.33

Instrumentation and controls technicians did not ensure that computer constants needed to calculate axial flux difference were updated during calibrations of the nuclear instruments as required by the calibration procedures. The plant computer was the only method used to calculate core axial flux difference, and to alarm if limits were approached. This failure to follow procedures was a non-cited violation of Technical Specification 6.8.1 and Regulatory Guide 1.33. The axial flux difference function was still operable with the old constants not properly updated for two channels, since the computer constants had changed by a small amount. However, this issue was considered to be more than minor because, if left uncorrected, it would be of greater safety concern because instrument inaccuracies could increase over time as the core burned up and detectors aged. The error affected operators' ability to maintain reactor power distribution within limits in order to protect the fuel clad barrier. This issue screened as a Green issue using Phase 1 of the Significance Determination Process because only the fuel clad barrier was potentially affected.

Inspection Report# : [2002004\(pdf\)](#)



Significance: Mar 23, 2002

Identified By: NRC

Item Type: FIN Finding

Unidentified reactor coolant system leak in excess of TS limits for unidentified leakage - problems with reporting and configuration control

The inspectors identified a finding of very low safety significance associated with the licensee's handling of a reactor coolant leak. The finding was based on problems associated with configuration controls, problem reporting, and significance determination. The drain valve downstream of Centrifugal Charging Pump 1B was not fully shut or capped following pump maintenance, and was not checked following pump start. Licensee management was not sensitive to the fact that this drain line provided single valve isolation to atmosphere, operated under the highest pressure in the plant, and was known to have seat leakage. Operators were very slow to recognize indications of the 2.3 gpm leak, even though it was in excess of Technical Specifications limits. After it was located and stopped, the problem was not properly reported to station management, documented in the corrective action process, or investigated. The inspectors concluded that there was no violation of Technical

Specification requirements because the leak was stopped within the four hours allowed. Similarly, a violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," did not occur because the actual condition adverse to quality was identified and corrected. This event had a credible impact on safety and affected reactor coolant system integrity because a leak was created outside containment in an area not designed to detect, isolate, or treat reactor coolant system leakage. However, other indications and alarms were expected to alert operators to the condition well before it had more of a safety impact.

Inspection Report# : [2001008\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Last modified : March 25, 2003