D.C. Cook 1
3Q/2003 Plant Inspection Findings

Initiating Events

Significance: G Dec 28, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to Provide an Appropriate Procedure for Testing the Unit 1 Pressurizer Power Operated Relief Valves Causing an Uncontrolled Release of Reactor Coolant System Inventory
A Non-Cited Violation of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed. The licensee failed to provide an appropriate procedure for testing the Unit 1 pressurizer power operated relief valves (PORVs), causing an uncontrolled release of reactor coolant system inventory to the pressurizer relief tank. This issue was self-revealed on June 5, 2002, when pressurizer PORV 1-NRV-153 inadvertently opened while testing actuation logic circuitry for pressurizer PORV 1-NRV-151. The surveillance test procedure failed to provide adequate control of 1-NRV-151 and 1-NRV-153, which have a common automatic opening signal. The release rate exceeded the 25 gallons-per-minute limit established for declaring an Unusual Event in accordance with the licensee's Emergency Plan.

The inspectors assessed this finding using the Significance Determination Process (SDP). The inspectors concluded that this issue could be reasonably viewed as a precursor to a significant event and was therefore more than a minor concern. The inspectors also concluded that this finding was associated with the initiating events cornerstone and adversely affected the cornerstone objective. Specifically, the uncontrolled release of reactor coolant system inventory upset plant stability and challenged the inventory control safety function. Because Unit 1 was in a shutdown mode during this period, the inspectors performed a Phase 1 SDP review of this issue using the guidance provided in NRC Inspection Manual Chapter 0609, Appendix G, "Shutdown Operations Significance Determination Process." Based on the plant conditions at the time, the inspectors concluded that the most appropriate Appendix G checklist to use for this issue was the checklist for "Pressurized Water Reactor Hot Shutdown Operation - Time to core boiling less than 2 hours." Because, operator intervention was required to manually close the affected PORV block valve, the inspectors concluded that the unit was in a configuration where a single active failure or personnel error could have resulted in a rapid loss of reactor coolant system inventory as described in Section II.B.(2) of the checklist. Consequently, the inspectors concluded that this issue increased the likelihood of a loss of reactor coolant system inventory and therefore required a Phase 2 SDP analysis. The inspectors discussed the safety significance of this issue with the Regional Senior Reactor Analyst (SRA). The SRA reviewed the finding and determined that the drain path could be easily isolated, accurate reactor coolant system level indication was available, all steam generators were available for cooling, and all trains of standby injection were available and not impacted by the finding. Based on these factors the finding was determined to be of very low safety significance.
Inspection Report# : 2002009*(pdf)*

Mitigating Systems

Significance: G Sep 30, 2003

Identified By: Self Disclosing
Item Type: FIN Finding
Incorrect Sensing Line Configurations on Control Room Air Conditioning Units
A finding of very low safety significance was self-revealed when licensee personnel failed to control the sensing line configuration on the Control Room Air Conditioning (CRAC) chiller units in accordance with design documentation which resulted in spurious tripping of an idle CRAC chiller unit upon initial start following an extended shutdown period. The primary cause of this finding was related to the cross-cutting area of Human Performance. The licensee subsequently corrected the sensing line configuration and successfully tested the operation of all four chiller units.

The finding was more than minor because this finding was associated with the Design Control and Equipment Performance attributes of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences because the reliability of the CRAC chiller units was impacted. This finding was of very low safety significance because the design deficiency did not result in a loss of function of the CRAC chiller units per Generic Letter 91-18. No violation of regulatory requirements occurred
Inspection Report# : 2003010*(pdf)*

Significance: G Sep 30, 2003
Identified By: Self Disclosing
Item Type: FIN Finding
Inappropriate Procedure for Testing Switchyard Breaker
A finding of very low safety significance was self-revealed when licensee personnel failed to accomplish testing of 345 kilovolt (kV) switchyard breaker "L" with an adequate procedure which resulted in the loss of the Class 1E reserve feed supply to Train "B" safety-related equipment for Unit 1 and Unit 2. The primary cause of this finding was related to the cross-cutting area of Human Performance. The licensee subsequently restored the switchyard Class 1E reserve feed supply and issued a standing order to control maintenance and testing in the switchyard.

The finding was more than minor because this finding was associated with the Procedure Quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences since the reliability of the offsite Class 1E reserve feed supply to safety-related equipment for both units was affected. This finding was of very low safety significance since it did not result in the actual loss of the safety function of any safety-related equipment. No violation of regulatory requirements occurred
Inspection Report# : 2003010*(pdf)*

Significance: G Jul 11, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Untimely corrective action for diesel fuel oil day tank level issue
A finding of very low safety significance was identified involving a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Actions, for the failure to timely resolve Technical Specification interpretation inconsistencies associated with the total required volume in the emergency diesel generator fuel oil day tanks. These inconsistencies were identified by the licensee in August 2000, however, as of July 11, 2003, this issue remains unresolved.

This finding is greater than minor because the licensee corrective actions have not been timely in resolving this issue. This issue affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding is of very low safety

significance because there was not a loss of function as each fuel oil system contains redundant, safety-related fuel oil transfer pumps that would start prior to reaching the unusable volume in the day tank; and that these pumps have shown good reliability.
Inspection Report# : 2003007*(pdf)*

Significance: G Mar 03, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Corrective Action to Ensure That Only Turbine Trip Throttle Valve Latch Hooks with the Correct Geometry Would be Installed in the Turbine-Driven Auxiliary Feedwater Pumps
The licensee failed to take corrective action to ensure that only turbine trip throttle valve latch hooks with the correct geometry would be installed in the turbine-driven auxiliary feedwater pumps after determining that the incorrect part had been supplied by the manufacturer.

This finding was determined to be a Non-Cited Violation of 10 CFR 50 Appendix B Criterion XVI, "Corrective Action". This finding was of very low safety significance because failure to take corrective action did not result in parts of incorrect geometry being installed in the auxiliary feedwater system and therefore did not affect the operability or availability of the system.

Inspection Report# : 2003004*(pdf)*

Significance: G Mar 03, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Adequate Corrective Action to Revise Procedure 12-MHP-5021-056-007
The licensee failed to take adequate corrective action to revise procedure 12-MHP-5021-056-007, "Turbine-driven Auxiliary Feedwater Pump Trip and Throttle Valve Linkage Adjustment" to include the manufacturer's recommendations regarding the set-up of the turbine trip throttle valve.

This finding was determined to be a Non-Cited Violation of 10 CFR 50 Appendix B Criterion XVI, "Corrective Action". This finding was of very low safety significance because the inadequate corrective action in revising the procedure did not affect the operability or availability of the auxiliary feedwater system

Inspection Report# : 2003004*(pdf)*

Significance: G Dec 28, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Assure that Corrective Actions were Taken to Preclude Repetition of EDG Starting Air System Relay Failures
The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action." The licensee failed to assure that corrective actions were taken to preclude repetition of emergency diesel generator (EDG) starting air system relay failures, a significant condition adverse to quality. This issue was self-revealed when the failure of a starting air system relay for the Unit 2 AB EDG occurred on October 16, 2002, causing the engine to roll without a valid start signal. The inspectors subsequently identified that appropriate corrective actions to prevent repetition had not been taken following two previous age-related EDG air start relay failures in January 1999 and

September 2000.

The inspectors assessed this finding using the Significance Determination Process (SDP). The inspectors concluded that this issue, if left uncorrected, would become a more significant safety concern and was therefore more than a minor concern. The inspectors also concluded that this finding was associated with the mitigating systems cornerstone and adversely affected the cornerstone objective. Specifically, the repetitive EDG air start relay failures affected the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors performed a Phase 1 SDP review of this finding using the guidance provided in NRC Inspection Manual Chapter 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and determined that this finding was a licensee performance deficiency of very low safety significance because the finding: (1) was not a design or qualification deficiency; (2) did not represent an actual loss of safety function of a system; (3) did not represent an actual loss of safety function of a single train for greater than its Technical Specification allowed outage time; (4) did not represent an actual loss of safety function of one or more Non-Technical Specification trains of equipment designated as risk significant; and (5) did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

Inspection Report# : 2002009*(pdf)*

Barrier Integrity

Significance: 

Dec 28, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Identify and take Appropriate Corrective Actions to Preclude the Failure of Reactor Coolant System Pressure Boundary Charging Line Check Valves which were at Risk of Common Cause Failure
The inspectors identified a Non-Cited Violation of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action." The licensee failed to identify and take appropriate corrective actions to preclude the failure of four Unit 1 reactor coolant system pressure boundary charging line check valves (Velan Model B10-3114B-13M), which were at risk of common cause failure due to industry identified design and manufacturing defects, a significant condition adverse to quality. This issue was self-revealed when the check valves were all found to be stuck in either the full or partially open position during radiographic nonintrusive testing in May 2002.

The inspectors assessed this finding using the Significance Determination Process (SDP). The inspectors concluded that this finding was associated with the barrier integrity cornerstone and adversely affected the cornerstoneobjective, and as such it was more than a minor concern. Specifically, the charging line check valves perform a safety-related function of limiting the release of reactor coolant inventory should a charging line failure occur. The failure of the valves in the open position would prohibit the performance of this function and therefore affects the objective of the barrier integrity cornerstone. The inspectors performed a Phase 1 SDP review of this finding using the guidance provided in NRC Inspection Manual Chapter (IMC) 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." Because this finding involved the integrity of the reactor coolant system barrier, the inspectors determined that this finding required a Phase 2 SDP analysis. After consulting with the Regional Senior Reactor Analyst, the inspectors determined that this issue was of very low safety significance because no actual loss of safety function occurred. The inspectors concluded that no actual loss of safety function occurred based on the reported minimal force required to shut the valves (indicating they would have shut given the differential pressure applied during accident conditions) and the redundancy provided by a third check valve (1-CS-321) in the charging line. In accordance with IMC 0609, Appendix A, Attachment 1, Step 2.6, the SDP results were not evaluated for potential risk contribution due to Large Early Release Frequency because the accident sequence result was less than

1E-7 per year.

Inspection Report# : 2002009*(pdf)*

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance:  Oct 28, 2002
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure to Conduct an Adequate Radiological Survey
A finding of very low safety significance was self-revealed when a second survey of a valve that was previously surveyed and unconditionally released from the radiologically controlled area identified that the valve was contaminated. The primary cause of this finding was related to the cross-cutting area of Human Performance.

The finding was more than minor because this finding was associated with the Human Performance and Program and Process attributes of the Public Radiation Safety cornerstone and adversely impacted the cornerstone objective of ensuring adequate protection of the public health and safety from exposure to radioactive materials released or potentially released into the public domain. The finding was of very low safety significance because the public radiation exposure resulting from the problem was low and the finding was not repetitive. To address this issue, the licensee performed a thorough extent of condition evaluation to ensure that contaminated residue was identified which included radiation surveys in offsite areas and of personal items located outside the radiologically controlled area. One Non-Cited Violation of Technical Specification 6.8.1 regarding licensee procedures that govern the unconditional release of radioactive material was identified
Inspection Report# : 2003010*(pdf)*

Physical Protection

Miscellaneous

Last modified : December 01, 2003