

Surry 1

3Q/2004 Plant Inspection Findings

Initiating Events

Significance: N/A Apr 28, 2004

Identified By: NRC

Item Type: FIN Finding

Results of Supplemental Inspection for White Performance Indicator

This supplemental inspection was conducted to assess the licensee's evaluation associated with a White performance indicator in the initiating events cornerstone. The Unplanned Scrams per 7,000 Critical Hours Performance Indicator crossed the threshold from Green to White in the third quarter of calendar year 2003. Specifically, the licensee experienced two reactor trips during the first quarter of 2003, one reactor trip during the second quarter of 2003, and one reactor trip in the third quarter of 2003. The first reactor trip, which occurred on January 14, 2003, was a manual trip from approximately 100 percent reactor power due to high temperature and shaft vibration alarms on the C reactor coolant pump. The second reactor trip, which occurred on January 25, 2003, was an automatic trip from approximately 27 percent reactor power due to problems associated with manually controlling steam generator water level. The third reactor trip, which occurred on June 13, 2003, was a manual trip from less than one percent reactor power due to a control rod misalignment. The fourth reactor trip, which occurred on September 18, 2003, was a manual reactor trip from approximately 79 percent reactor power due to inclement weather conditions and a loss of the 1G and 2G buses which supplied power to all the circulating water pumps for both units.

The licensee's problem identification, root cause and extent-of-condition evaluations, and corrective actions for the four reactor trips were adequate. Common cause aspects linking the four reactor trips from a risk perspective were not evident.

Inspection Report# : [2004009\(pdf\)](#)

Mitigating Systems

Significance: **W** Jun 30, 2004

Identified By: NRC

Item Type: VIO Violation

Alternative Shutdown Capability and Response Procedures Not Adequate to Ensure Safe Shutdown of Unit 1 and 2

A violation of 10 CFR 50, Appendix R, Sections III.L.2.b and III.L.3 was identified, in that, for a severe fire in the Emergency Switchgear and Relay Room Number 1 (Fire Area 3), the licensee's fire response procedures were not effective in assuring a safe shutdown of the Unit 1 reactor. The licensee has revised the affected fire response procedures and is evaluating the need for additional corrective action.

This finding is greater than minor because it was associated with "protection against one of the external factors" attribute. It affected the objective of the Initiating Events cornerstone to limit the likelihood events that challenge critical safety functions as well as affected the objective of the Mitigating Systems cornerstone to ensure the availability, reliability and capability of systems that respond to initiating events. This degraded condition increased plant risk because, if a severe fire occurred in Fire Area 3, these procedures may not preclude an extended loss of reactor coolant pump seal injection flow and may initiate a reactor coolant pump seal loss of coolant accident which could result in pressurizer level failing to be maintained within the indicating range as required.

This violation was dispositioned as a White finding by NRC Inspection Report 05000280/2004008 and 05000281/2004008, dated September 15, 2004.

Inspection Report# : [2004008\(pdf\)](#)

Significance: **G** Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Fire Response Procedures 1-FCA-3.00 And 0-FCA-14.00 Not Adequate To Ensure Safe Shutdown Of Unit 1.

A Green non-cited violation of 10 CFR 50, Appendix R, Sections III.L.2.b and III.L.3, was identified, in that, for a severe fire in the Unit 1 Cable Vault and Tunnel (Fire Area 1), the licensee's alternative shutdown capability may not ensure that the reactor coolant makeup function would be capable of maintaining the reactor coolant level within the level indication of the pressurizer. The licensee has entered this finding into its corrective action program.

This finding is greater than minor because it was associated with "protection against one of the external factors" attribute. It affected the objective of the Initiating Events cornerstone to limit the likelihood events that challenge critical safety functions as well as affected the objective of the Mitigating Systems cornerstone to ensure the availability, reliability and capability of systems that respond to initiating events. This finding was determined to be of very low safety significance because the likelihood of a severe fire in the service building cable vault (SBCV) or the cable tunnel that could cause a loss of all three Unit 1 charging pumps is very low and a 3-hour rated fire door would prevent a severe fire in the remaining sections of Fire Area 1 from spreading through the cable tunnel to the SBCV.

Inspection Report# : [2003008\(pdf\)](#)

G

Significance: Jan 07, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Alternate Shutdown Panel Ventilation System Not Independent From Impacts Of A Main Control Room Fire.

A Green non-cited violation was identified for failure to comply with 10 CFR 50, Appendix R, Sections III.G.3.a and III.L.3. Specifically, the shared ventilation system between the main control room (MCR) and the Unit 1 and Unit 2 emergency switchgear and relay rooms (ESGRs), did not have adequate separation, isolation, or barriers to preclude smoke and toxic gases from being transported to the ESGRs during a fire in the MCR. The alternative shutdown capability for an MCR fire is located in each unit's ESGR, respectively. Consequently, operators may not have the environmental conditions or visibility to safely man and accomplish a successful shutdown of either Unit 1 or Unit 2 from the Auxiliary Shutdown Panels. The licensee has entered this finding into its corrective action program.

This finding is greater than minor because it was associated with the "protection against external factors" attribute and affected the objective of the Mitigating Systems cornerstone to ensure the availability, reliability, and capability of systems that respond to initiating events. This finding was determined to be of very low safety significance because heat from a fire, and the natural buoyancy of smoke, will cause the smoke gas layer to accumulate near the ceiling of the MCR (away from the ESGRs), the likelihood of a severe fire in the MCR is low, and the prompt response and actions of the MCR operators and the fire brigade would prevent any fires that start from becoming severe.

Inspection Report# : [2003008\(pdf\)](#)

G

Significance: Dec 05, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Auxiliary Feedwater Pump Design Basis not Translated into Procedures

The inspectors identified a non-cited violation of 10 CFR 50 Appendix B, Criteria III (Design Control), in that, a design basis requirement for the Unit 1 auxiliary feedwater pump turbine governor oil viscosity was not correctly translated into a March 2001 procedure revision. The procedure revision failed to require the main steam valve house room temperature to be above that required for minimum vendor specified governor oil viscosity. This non-cited violation contributed to the pump's failure to continue to operate after starting in response to a reactor trip on January 25, 2003.

This finding is greater than minor because it affected the reliability of the Unit 1 turbine driven auxiliary feedwater pump. However, the finding was determined to be of very low safety significance since (1) except for January 25, 2003, conditions after the procedure change in March 2001 would not have been expected to lower main steam valve house room temperatures below acceptable temperatures, and (2) on January 25, 2003, the two motor driven auxiliary feedwater pumps were operable and performed as expected. Surry personnel tracked corrective actions for this issue under plant issue S-2003-5822.

Inspection Report# : [2003009\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

G

Significance: Sep 25, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to implement and maintain a respiratory protection program that includes written procedures regarding training of respirator

users in the change out of SCBA air cylinders

The inspectors identified a violation of 10 CFR 20.1703(c)(4)(ii) which requires the licensee to implement and maintain a respiratory protection program that includes written procedures regarding training of respirator users. In addition, this was related to the emergency planning standards of 10 CFR 50.47(b) (10). Specifically, procedures were not in place to ensure that all Control Room staff had demonstrated proficiency in changing Self Contained Breathing Apparatus (SCBA) air cylinders during emergencies.

This finding is greater than minor because emergency workers who are required to use respiratory protective equipment are not trained to use that equipment. This finding is of very low safety significance because an adequate number of SCBA qualified plant personnel/staff, which were designated emergency responders, would have been available to respond in the event of an actual emergency.

Inspection Report# : [2004004\(pdf\)](#)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Significance: N/A Dec 05, 2003

Identified By: NRC

Item Type: FIN Finding

Biennial Problem Identification and Resolution Report

The team concluded that Surry personnel were properly identifying problems and entering them into the corrective action program at a threshold that supported safe plant operation. The team did not identify instances where conditions adverse to quality were handled outside the corrective action process. The team further concluded that evaluations were prioritized and completed in a timely fashion consistent with the safety significance of the issue. Cause evaluations generally were found to address technical issues to a depth necessary to identify likely causes. The team identified one finding regarding a less than adequate procedure change evaluation that impacted the reliability of the Unit 1 turbine driven auxiliary feedwater pump. The team found that corrective actions were adequately tracked and completed in a time frame commensurate with their safety significance.

Inspection Report# : [2003009\(pdf\)](#)

Last modified : December 29, 2004