

Surry 2

2Q/2007 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Risk Assessment for Unit 2 Cross-Under Relief Valve Event

The inspectors identified a non-cited violation of 10 CFR 50.65 (a)(4), which requires that the licensee assess and manage the increase in risk that may result from the proposed maintenance activities. Specifically, in assessing the increase in risk of planned maintenance activities, the licensee failed to adequately assess planned risk. The licensee entered this issue in their corrective action program as CR-003611 for resolution.

The finding was considered to be more than minor because the licensee's risk assessment had known errors or incorrect assumptions that had the potential to change the outcome of the assessment. The inspectors determined that the finding is of very low safety significance (Green) since the incremental core damage probability deficit was less than 1E-6. The inspectors determined that the cause of the finding was related to the proper work planning aspect of the human performance cross-cutting area.

Inspection Report# : [2007003](#) (*pdf*)

Significance:  Mar 31, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Perform an Adequate Extent of Condition Review for Unit 1 June 29, 2006, Turbine Building Damage Event

A Green self-revealing finding was identified for not performing an adequate extent of condition review in accordance with the licensee's established procedures. The potential consequences of having siding torn from the Turbine Building if Unit 2 experienced steam relief valve actuations, as had occurred on Unit 1 on June 29, 2006, was not recognized. Consequently on October 7, 2006, the actuation of Unit 2 steam relief valves resulted in the loss of normal power to two emergency buses on Unit 1 and one emergency bus on Unit 2 due to flying debris impacting electrical conductors. The finding was entered into the licensee's corrective action program as Condition Report (CR) 003598. Sections of the Turbine Building near the discharge of the steam relief valves were temporarily strengthened while additional long term corrective actions were being evaluated.

The finding is more than minor due to its impact on the Initiating Events objective to limit the likelihood of those events that upset plant stability and the related attribute of human performance. This finding was of very low safety significance (Green) because the increase in risk was limited by the duration of the condition. The cause of the finding was directly related to the appropriate and timely corrective actions aspect of the problem identification and resolution cross-cutting area because sufficient information was available for the licensee to have identified potential damage to plant equipment and taken actions to limit it when the Unit 2 steam relief valves actuated.

Inspection Report# : [2007002](#) (*pdf*)

Mitigating Systems

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure the Suitability of Application of Equipment Essential to Safety-Related Functions

The NRC identified a non-cited violation (NCV) for the failure to ensure the suitability of application of equipment essential to the safety-related functions of structures, systems, and components (SSCs) through their commercial dedication process as required by 10 CFR Part 50, Appendix B, Criterion III, Design Control. The licensee entered each of the two examples identified by the team into their corrective actions program as CR-013984, including an action to review their overall commercial dedication program.

The examples involve Agastat 7000 relays used in supporting the emergency diesel generator (EDG) start sequence and pressure control valves (PCVs) for use in the safety-related air supply supporting design operation of the power-operated relief valves (PORVs). In the first example, the licensee's commercial grade dedication did not verify the adequacy of seismic qualification. In the second, the licensee utilized a non-conservative test pressure as part of their dedication to critical characteristics. Both examples of the finding are more than minor because they are associated with the Design Control attribute affecting the Reactor Safety Mitigating Systems Cornerstone objective. The examples to the finding were evaluated using the SDP for Reactor Inspection Findings for At-Power Situations. The SDP Phase 1 analysis demonstrates the finding to be of very low safety significance (Green) as the licensee confirmed operability in accordance with plant procedures for both examples. The cause of the first example is related to the cross cutting aspect of human performance.

Inspection Report# : [2007003](#) (*pdf*)

G

Significance: Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Include the Pressurizer Power Operated Relief Valve in the On-line Risk Assessment Prior to Other Maintenance Activities

The inspectors identified a Green, non-cited violation (NCV) of 10 CFR 50.65 (a)(4), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," for failure to assess the increase in risk that results from proposed maintenance activities. Specifically, in assessing the increase in risk of planned maintenance activities, the licensee failed to adjust their on-line risk evaluation for operation with a pressurizer power operated relief valve (PORV) block valve closed. The licensee entered this violation in their corrective action program as CR007055 for resolution.

This finding is more than minor because it relates to risk management, in that, the maintenance risk assessments failed to consider the unavailability of a PORV, a risk significant component. The inspectors determined that the finding is of very low safety significance (Green) since the inclusion of the closed PORV block valve into the risk assessments showed no appreciable increase in plant risk during the performed maintenance activities. The cause of the finding was directly related to the proper work planning aspect of the human performance cross-cutting area because the licensee had not included the PORV block valve in their on-line risk monitoring program.

Inspection Report# : [2007002](#) (*pdf*)

G

Significance: Mar 31, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Procedural Instructions Results in Inoperable Charging Pump Component Cooling Water System

A self-revealing non-cited violation of Technical Specification 6.4.A, "Unit Operating Procedures and Programs," was identified for failure to have adequate written procedures for normal startup of systems and components involving nuclear safety. Specifically, the licensee failed to have adequate procedural instructions to preclude the Unit 2 charging pump component cooling water system from becoming air bound when returning it to service. As a result all three Unit 2 charging pumps, also emergency core cooling system (ECCS) pumps, were declared inoperable due to lack of seal cooling. This violation was entered in the licensee corrective action program as CR000031 for resolution, which included performing an apparent cause analysis, and determining corrective actions.

The finding is more than minor because a procedural error that results in a consequence, in this case the inoperability of three ECCS pumps, is more than of minor safety significance. The significance of the finding was determined to be of very low safety significance (Green) due to the short period of time the cooling water system was unavailable. The cause of the finding was directly related the complete documentation and component labeling aspect of the human performance cross-cutting area because procedural instructions for venting the component cooling water system were not adequate.

Inspection Report# : [2007002](#) (*pdf*)

G**Significance:** Mar 31, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Breaker Control Circuit Design Deficiency Results in Failure to Supply Emergency Bus 1J

A self-revealing, non-cited violation of 10 CFR 50.63 was identified regarding a breaker control circuit design deficiency which prevented the licensee from supplying the 1J emergency bus on Unit 1 from the alternate AC diesel generator. The problem occurred during a transient on October 7, 2006, in which the actuation of Unit 2 steam relief valves resulted in the loss of normal power to two emergency buses on Unit 1 and one emergency bus on Unit 2 due to flying debris impacting electrical conductors. The licensee installed a modification to correct the breaker circuit design deficiency.

The finding is more than minor because it impacted the Mitigating Systems objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage) and the related attribute of design control. This finding was of very low safety significance (Green) because the recovery of the alternate AC diesel generator's ability to energize a safety bus after four hours was credible.

Inspection Report# : [2007002](#) (*pdf*)**Significance:** SL-IV Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Proceduralized Departures from TS

The inspectors identified a Severity Level IV non-cited violation of 10 CFR 50.59, "Changes, Tests, and Experiments." Specifically, the licensee implemented proceduralized departures from the approved station technical specifications (TS) without the required NRC approval in procedures AP-13.0, Turbine Building Flooding, revision 13, and FCA 6.01, Uncontrollable Turbine Building Flooding, revision 2.

This finding was evaluated using traditional enforcement since it impacted or impeded the regulatory process in that the licensee improperly used the 10 CFR 50.59, "Changes, Tests, and Experiments," process to incorporate operator actions inconsistent with the TS. This finding was of more than minor safety significance because the procedure changes improperly bypassed the required NRC review and approval prior to implementation. The unapproved procedural actions would only be involved at the end of a very rare accident sequence. Given the time during the accident sequence in which these actions were to be accomplished, the actions were not a deterrent to core damage. Therefore, the violation was of very low safety significance. The finding is identified as Severity Level IV because the noncompliance is not considered to be of more than very low significance based on risk.

Inspection Report# : [2006005](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

G**Significance:** Oct 27, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Activate ERDS Within One Hour of an Alert Declaration

A green self-revealing non-cited violation of 10 CFR 50.72(a)(4) was identified. During the October 7, 2006, partial loss of offsite power event, the licensee failed to activate the Emergency Response Data System (ERDS) within one hour of an Alert declaration. The ERDS was not made operable until approximately five and one-half hours after the Alert declaration due to an upgrade to the telephone exchange that had been done seven days prior to the event.

The finding is more than minor due to its impact on the Emergency Preparedness cornerstone objective to ensure that

the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency and the related attribute of Emergency Response Organization response. The finding is of very low safety significance (Green) because it involved a “failure to implement” (in distinction to a “failure to meet”) an NRC emergency planning standard. The cause of the finding is related to the cross-cutting area of human performance, in that, the licensee failed to reprogram the telephone exchange following a telephone system change which occurred prior to the event. Upon discovery, the licensee immediately reprogrammed the telephone exchange and entered the problem into their corrective action program as condition report CR 002183.

Inspection Report# : [2006011](#) (*pdf*)

Occupational Radiation Safety

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

Last modified : August 24, 2007