

North Anna 2

1Q/2008 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Secure the Unit 2 Safety Related Pressurizer Heater Cabinet Doors as Required by Procedure VPAP-0312

Failure to Secure the Unit 2 Safety Related Pressurizer Heater Cabinet Doors as Required by Procedure VPAP-0312

A Green, non-cited violation of 10 CFR 50, Appendix B, Criterion V was identified by the NRC for failure to properly accomplish a procedure to ensure doors on safety-related pressurizer (PZR) heater cabinets were adequately secured to maintain seismic requirements. On March 15, 2007, during a plant status tour the inspectors identified that all five of the PZR heater cabinet doors were improperly secured. The problem was documented in the licensee's corrective action program as condition report 013992.

The finding was more than minor because if left uncorrected it would cause a more significant safety concern. The finding was of very low safety significance, Green, because it was potentially risk significant due to a seismic initiating event, and the loss of the equipment would not sufficiently degrade the TS required system that supported the intended safety function as described in Phase 1 of the significance determination process. This finding has aspects relating to the cross-cutting area of human performance (IMC 305 H.4.(b)), based on procedural compliance and failure of personnel to follow procedures.

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

Mitigating Systems

Significance:  Mar 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Design Control Involving Unit 2 Containment Sump Strainer Gaps

A Green NRC-identified non-cited violation of 10 CFR 50, Appendix B, Criterion III, Design Control, was identified for inadequate design control measures to assure that the measurement technique used to verify the gaps between Unit 2 containment sump strainer modules were within the design particle retention size and the acceptance criteria for spacing between modules. The licensee entered the condition into their corrective action program and inspected all the gaps and either corrected or evaluated any gaps which exceeded the installation procedure acceptance criteria. This issue had previously been addressed on Unit 1.

The finding was more than minor because it impacted the mitigating systems cornerstone objective to ensure the availability and capability of systems that respond to initiating events to prevent undesirable consequences, and the related attribute of design control. The finding was of very low safety significance or Green because it did not result in an actual loss of safety function. The cause of this finding involved the cross-cutting area of human performance, the component of resources and the aspect of complete and accurate procedures and work packages H.2(c), because the licensee failed to establish an adequate method to verify that the installed configuration of the containment sump strainer met the design specification.

Inspection Report# : [2008002](#) (*pdf*)

Significance:  Mar 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Spurious Turbine Driven Auxiliary Feedwater Pump Trip Due to Failure to Adequately Implement Procedure

The inspectors identified a non-cited violation of Technical Specification 5.4.1a for a failure to adequately implement maintenance procedure requirements for the turbine driven auxiliary feedwater pump (TDAFWP) which, consequently, led to a spurious trip of the TDAFWP, following a reactor trip, on December 25, 2007. The licensee's corrective actions included repair of the affected TDAFWP components and procedure revisions to ensure accurate dimensional checks.

The finding was more than minor because it impacted the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and the related attribute of equipment reliability. The finding was of low safety significance or Green based upon both the motor driven auxiliary feedwater pumps being available and the subsequent manual restart of the TDAFWP. The cause of the finding was related to the cross-cutting area of human performance, the component of work practices and the aspect involving procedure compliance, H.4(b), because the licensee failed to adequately implement a maintenance procedure step to identify unacceptable component dimensions.

Inspection Report# : [2008002](#) (pdf)

Significance:  Jan 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Install an Oil Collection System on a Reactor Coolant Pump Motor

The inspectors identified a non-cited violation of the North Anna Power Plant Facility Renewed Operating Licensee NPF-7, Condition D, Fire Protection Program, which involved a failure to adequately install a section of the oil collection system on the Unit 2 'A' reactor coolant pump motor. The licensee entered this issue into their corrective action program and took prompt action to repair the problem.

The finding was more than minor because it impacted the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences, and the related attribute of protection against external factors such as fire. This finding had a credible impact on safety because the inadequate installation of the oil collection system presented a degradation of a fire confinement component which has a fire prevention function of not allowing an oil leak to reach hot surfaces. The finding was of very low safety significance or Green because of the low degradation rating of the fire confinement category related to the oil collection system. The cause of this finding involved the cross-cutting area of human performance, the component of resources and the aspect of complete, accurate and up-to-date procedures, H.2(c), because the procedure was not adequate to ensure all bolting material was correctly installed.

Inspection Report# : [2008002](#) (pdf)

Significance:  Sep 30, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Procedure for SW System Inspection and Maintenance which Resulted in Reduced SW Flow to the Unit 2 RS Hx

A Green non-cited, self-revealing violation (NCV) of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures and Drawings," was identified for the failure to have an adequate procedure to ensure that the recirculation spray heat exchanger service water system was inspected and maintained such that degradation in performance on the safety-related system would not occur. During testing on March 20, 2007, service water flow to the Unit 2 'B' recirculation spray (RS) heat exchanger (Hx) was low. The low flow was attributed to service water pipe corrosion products partially blocking the Hx tubes. Corrective actions included cleaning of all four RS Hxs and hydrolazing the respective SW piping to remove corrosion products. This issue was documented in the licensee's corrective action program as condition report 014987.

The finding is more than minor because if left uncorrected, it would result in a more significant safety concern, in that, corrosion products would continue to degrade Hx performance. A Significance Determination Process evaluation determined that the finding is of very low safety significance based on the remaining capability of the 'B' RS Hx and the availability of the three remaining RS Hxs to perform the safety function. A direct cause of this finding was

related to the aspect of maintaining long term plant safety through maintenance practices aspect of the cross-cutting area of human performance, by not maintaining design margins (H.2(a)).

Inspection Report# : [2007004](#) (pdf)

Significance: **G** Aug 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Ensure Adequate Control and Storage of Safety-Related EDG Parts

A non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XIII, Handling, Storage and Shipping, was identified by the NRC. Specifically, the licensee failed to ensure adequate controls for the storage and preservation of safety-related material and equipment in accordance with plant instructions. Emergency diesel generator (EDG) parts were stored in an uncontrolled, unmonitored, and environmentally unregulated storage container on an open pad outside the Protected Area, but within the Owner Controlled Area.

The failure to ensure adequate controls were in place to store safety-related EDG parts was considered a performance deficiency. The finding was considered more than minor because if left uncorrected, it would become a more significant safety concern because of the possible use of these parts in safety-related equipment. The finding was determined to be of very low safety significance because it did not represent an actual malfunction or inoperability of an EDG system or component. This finding has a cross-cutting aspect of safety or risk-significant decision making in the area of human performance because the organization knowledgeable of quality assurance storage requirements was not included in the decision for the relocation of the storage container (H.1(a)).

Inspection Report# : [2007008](#) (pdf)

Barrier Integrity

Emergency Preparedness

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

Significance: N/A Jul 20, 2007

Identified By: NRC

Item Type: FIN Finding

Special Inspection Results - Unit 2 Spurious Safety Injection and Reactor Trip

The team determined that, in general, the licensee responded appropriately to the event on June 29. The team determined that equipment anomalies were adequately identified and evaluated, and effective immediate corrective actions were implemented. The team determined the licensee's preliminary cause evaluation, extent of condition review, and immediate corrective action implementation were overall adequate and timely. The team noted that the operating crew's response was good overall and they were able to effectively stabilize the plant and bring it to a hot shutdown condition. However, several examples were identified where actions taken by the operators to stabilize the unit were knowledge-based and skill-of-the-craft rather than procedurally driven. The operators utilized procedural steps before transition was directed or where the entry conditions were not met. The team also noted that the licensee did not have a surveillance or maintenance program that was able to identify degradations of reactor protection system logic cards. The licensee did not have a method of trending and documenting component performance and thus identifying degraded components prior to failure. The licensee relied upon surveillance testing to identify and correct failures and reactor protection system redundancy to ensure availability and reliability of the reactor protection system.

Inspection Report# : [2007009](#) (*pdf*)

Last modified : June 05, 2008