

North Anna 2

3Q/2007 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*)

Significance:  Mar 31, 2007

Identified By: Self-Revealing

Item Type: FIN Finding

Inadequate Implementation of a Non-quality Procedure Results in Reactor Trips

A self-revealing finding was identified for inadequate implementation of a non-quality procedure associated with the equipment reliability process. This led to a 'run-to-failure' classification for two different 7300 System cards which each resulted in a reactor trip on Unit 1 and 2.

This self-revealing finding is greater than minor because it resulted in a perturbation in plant stability by causing a reactor trip. The finding was of very low safety significance because, although it caused a reactor trip, it did not increase the likelihood of a primary or secondary system loss of coolant accident initiator, did not contribute to a combination of a reactor trip and loss of mitigation equipment functions, and did not increase the likelihood of a fire or internal/external flood. The licensee entered the problem involving Units 1 and 2 into their corrective action program. This finding involves the safety-significant and risk significant decisions aspect of the human performance cross-cutting area because the licensee incorrectly determined that operators had sufficient time to take necessary actions to preclude a plant trip when the cards failed (IMC 305 H.1(a)).

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

Mitigating Systems

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:  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*)

Significance:  Mar 31, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Procedure Resulting in the Inoperability of 2J Emergency Diesel Generator

A self-revealing non-cited violation of Technical Specification (TS) 5.4.1.a was identified for a failure to adequately implement a surveillance procedure which resulted in the inoperability of the 2J Emergency Diesel Generator (EDG). The licensee restored the EDG to operable status and initiated actions to evaluate the problem and determine the appropriate corrective actions.

This finding is more than minor due to its impact on the Mitigating Systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences and its attribute of human performance. The finding is of very low safety significance because the 2J EDG was not out of service for longer than the allowed Technical Specification time. The cause of the finding involved the procedure compliance aspect of the human performance cross-cutting area because personnel failed to correctly perform a procedure step, which included a separate verification (IMC 305 H.4(b)).

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

G**Significance:** Dec 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Identify Unsatisfactory Performance of a Fire Brigade Crew

The inspectors identified a Green, non-cited violation of the Fire Protection Program because the licensee's assessment of a fire brigade drill was inadequate. Fire brigade performance was not accurately critiqued to identify deficiencies requiring corrective action. The licensee entered this problem into their corrective action program for appropriate action.

his finding is more than minor because it had a high negative impact or degradation on the ability of the fire brigade to effectively carry out its manual fire fighting control and suppression function. This finding was of very low safety significance because the observed crew was only one of four crews of the site fire brigade team, and that the overall condition of the fire detection and suppression systems had been satisfactory. The cause of the finding is related to the cross-cutting area of problem identification and resolution (IMC 305 P.3(a)).

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

Barrier Integrity

G**Significance:** Dec 31, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate Corrective Action to Upgrade Breaker Operating Mechanism

A Green, self-revealing non-cited violation of 10 CFR 50, Appendix B, Criterion XVI was identified as a result of inadequate corrective action to upgrade the operating mechanism for a Unit 2 Quench Spray pump breaker. The licensee initiated corrective actions that involved replacement of the breaker with an upgraded spare breaker and extent of condition review.

The failure to implement corrective action had a credible impact on safety due to the impact on the component's accident response time which exceeded the analyzed value. The finding is more than minor because it affected the mitigating system cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences and the related attribute of equipment performance. The finding was of very low safety significance (Green) in that it did not result in a loss of operability due to a design or qualification deficiency, did not represent an actual loss of safety function, and was not potentially risk significant due to possible external events. The cause of this finding involved the cross-cutting area of problem identification and resolution (IMC 305 P.1(d)).

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

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 : December 07, 2007