

Watts Bar 1

3Q/2008 Plant Inspection Findings

Initiating Events

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Significance: Mar 14, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Installation of Different RHR Flow Limiters Than Prescribed by Procedure

A Green, NRC-identified, non-cited violation of 10 CFR 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for installing flow limiting devices, on A-train residual heat removal (RHR) system valves, which were not equivalent to those described in operating procedures. The devices were installed at reduced reactor coolant system (RCS) inventory to prevent pump cavitation in the event of a loss of control air during upcoming mid-loop operation. The nonconforming device caused the RHR heat exchanger outlet valve not to fully return to its desired throttled position after verification that the flow limiting devices would limit flow within specified values. The licensee entered this issue into their corrective action program (CAP) as problem evaluation report (PER) 140284.

The finding was more than minor because it was associated with the equipment performance attribute of the Initiating Events Cornerstone and adversely affected the cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown. The finding was evaluated by a Phase 2 analysis in accordance with the Significance Determination Process as specified by Manual Chapter 0609, Appendix G, Checklist 3 (one train of decay heat removal was degraded). The Phase 2 analysis characterized the finding as of very low safety significance (Green) because of the slow RCS heatup rate due to the low decay heat after being shutdown for 32 days and the ease of recovery from the condition. The cause of the finding was directly related to the corrective action program issue identification aspect of the cross-cutting area of Problem Identification and Resolution, in that, the licensee failed to identify the discrepancy in form, fit, and manner in which the function was accomplished between the flow limiting devices that were specified in licensee procedures and those that were actually installed (P.1(a)). (Section 40A3.2)

Inspection Report# : [2008004](#) (*pdf*)

Mitigating Systems

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Significance: Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Plant Startup with Inoperable AFW Automatic Start on Trip of All MFW Pumps

A Green, NRC-identified non-cited violation of Technical Specification (TS) 3.0.4.a was identified for entering Modes 2 and 1 without an operable channel of auxiliary feedwater automatic start on a trip of all main feedwater pumps as required by TS 3.3.2. The licensee defeated this channel by introducing a signal that artificially indicated that a main feedwater pump was operating. This practice existed since initial plant startup. The licensee entered this issue into their corrective action program as Problem Evaluation Report 147351.

The finding is more than minor because it is associated with the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring the availability of systems that respond to initiating events. Using IMC 0609, Appendix 0609.04, the finding was determined to be of very low safety significance because the finding did not represent an actual loss of safety function of a single train for greater than its TS allowed outage time since other initiation signals were available to automatically start the auxiliary feedwater pumps if needed. The cause of the finding was directly related to the Implementation of Corrective Actions aspect in the Problem Identification and Resolution cross-cutting area, in that, the licensee failed to take appropriate corrective action in a timely manner to address the non-cited violation issued in NRC Inspection Report 05000390/2006004 associated with making plant mode changes with the auxiliary feedwater automatic start function trip of all main feedwater pumps inoperable (P.1(d)).

Inspection Report# : [2008003](#) (*pdf*)

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Significance: Jun 30, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Comply with Technical Specification 3.3.2 to Have Two Trains of Automatic Actuation Logic and Actuation Relays for Safety Injection and Feedwater Isolation Operable

A Green, self-revealing non-cited violation of Technical Specification 3.3.2 was identified for failure to have two trains of safety injection (SI) automatic actuation logic and two trains of feedwater isolation actuation logic operable while in Mode 3. Upon the removal of temporary jumpers, the relay which blocks the actuation circuitry from performing their function was not reset. This condition existed until approximately 12 hours later when the licensee reset the relay by closing the reactor trip breakers. The licensee entered this event into their corrective action program as Problem Evaluation Report 140641.

This finding is more than minor because it affected the Mitigating Systems Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events and adversely affected the cornerstone's equipment performance attribute for availability and reliability. A Phase 2 evaluation in accordance with IMC 609, Significance Determination Process, determined the finding to be of very low safety significance (Green) because of the low decay heat at the end of a refueling outage; the time for operators to take recovery actions; and due to the plant conditions, only the containment high pressure SI actuation portion of the automatic SI actuation logic was affected. The cause of the finding was directly related to the documentation, procedures and component labeling cross-cutting aspect in the resources component of the Human Performance cross-cutting area, in that, the instructions used by personnel to remove the temporary jumpers failed to provide necessary steps to ensure the actuation logics were returned to an operable status (H.2(c)).

Inspection Report# : [2008003](#) (*pdf*)

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Significance: Mar 31, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedure Resulted in Inadequate Control of Materials Brought into Containment

Green. The inspectors identified a NCV of Technical Specification (T.S.) 5.7.1 for failure to properly implement procedural requirements and engineering controls for materials brought into containment while the plant was at power. The procedural violation resulted in temporary equipment/material left in containment with incorrect/incomplete documentation. The licensee entered these issues into the corrective action program (CAP) and either removed or properly evaluated the materials left in containment.

This finding is more than minor because it was associated with the Mitigating Systems Cornerstone attribute of equipment performance, specifically reliability, and adversely affected the cornerstone objective. The finding is of very low safety significance because no equipment was rendered inoperable. The finding directly involved the cross cutting area of human performance under the procedural compliance aspect of the work practices component, in that, the procedural requirements of the licensee's procedure for containment access were not met and equipment/material left in containment was not properly analyzed and documented. (H.4 (b)) (Section 40A2)

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

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Significance: Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Properly Reactivate RO/SRO Licenses in Accordance with Procedure OPDP-1, "Conduct of Operations"

The inspectors identified a non-cited violation of Technical Specification 5.7.1.1(a) for the procedure adherence to OPDP-1, "Conduct of Operations," and 10 CFR 55, Part 55.53 f(2), Conditions of Licenses, which resulted in two licensee employees failing to properly reactivate reactor operator/senior reactor operator licenses. The licensee entered the procedure adherence issues into their corrective action program for resolution.

This finding is more than minor because it affected the human performance attribute of the Mitigating System Cornerstone to ensure that licensed operators are available, reliable, and capable to respond to initiating events in order to prevent undesirable consequences. The inspectors evaluated this finding using IMC 0609, Appendix I, and determined the finding to be of very low safety significance. The finding is directly related to the cross-cutting area of human performance under the aspect of procedural compliance and personnel following procedures (H.4(b)).

Inspection Report# : [2007005](#) (*pdf*)

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Significance: Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Fire Protection Program Did Not Demonstrate Eight-Hour Emergency Light Unit Battery Capacity

The Triennial Fire Inspection Team identified a non-cited violation of Unit 1 License Condition 2F and 10 CFR 50, Appendix R, Section III.J, Emergency Lighting, for having a fire protection program which failed to demonstrate that the emergency lighting units had eight-hour capacity.

This finding is more than minor because it is associated with the reactor safety attribute of the Mitigating Systems Cornerstone for protection against external factors (i.e., fire) and it affects the objective of ensuring reliability and capability of systems that respond to initiating events. The finding was of very low safety significance because safe shutdown would likely have been achieved with nearly the same level of effectiveness and reliability as it would have been had the degradation not been present. Prompt corrective action taken by the licensee was to replace the affected emergency light batteries. The finding had no cross-cutting aspects.

Inspection Report# : [2007005](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance:  Mar 31, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Properly Prepare a Radioactive Material Package for Shipment

Green. A self-revealing NCV of 10 CFR 71.5 was identified for failure to properly package radiological material such that, under conditions normally incident to transportation, the radiation levels at the external surface of the package would not exceed applicable Department of Transportation (DOT) limits. When the shipment of equipment arrived at a processing facility on March 3, 2008, the contact radiation dose rate measurement in a small area on the bottom of the external surface of one of the packages was 340 mrem/hr, which was in excess of the 200 mrem/hr limit. Subsequent measurements by the licensee determined the dose rate to be 400 mrem/hr. This finding was entered into the licensee's corrective action program as Problem Evaluation Report (PER) 139447.

This finding is more than minor because it is associated with the plant facilities/ equipment and instrument attribute of the Public Radiation Safety Cornerstone and adversely affected the cornerstone objective, in that the improper transportation packaging resulted in a shipping container with external dose rates exceeding regulatory requirements. Using the Public Radiation Significance Determination Process, the finding was determined to be of very low safety significance because the area on the package with the elevated radiation level was inaccessible to the public and the radiation level did not exceed two times the DOT limit. This finding was reviewed for cross-cutting aspects and none were identified. (Section 2PS2)

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

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 : November 26, 2008