

Watts Bar 1

4Q/2009 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Implement Analysis for Failed Auxiliary Charging Pumps

The inspectors identified a finding of very low safety significance and an associated NCV of 10 CFR 50.55a(f)(4) for the licensee's failure to meet in-service test requirements for the 1B auxiliary charging pump. Between December 2008 and December 2009, licensee personnel tested the pump and determined that it was in the required action range. The licensee failed to either declare the pump inoperable until corrected or perform an analysis in accordance with program requirements. As part of their corrective action, the licensee performed an analysis of the pump, revised test procedures, and entered the issue into the corrective action program (CAP) as PER 211724.

This finding was more than minor because if left uncorrected it has the potential to become a more significant safety concern. Specifically, the failure to adhere to equipment testing requirements could have allowed the loss of functional capability of the auxiliary charging pumps to exist without detection until the pumps were required to perform their designed safety function. The inspectors determined that the finding was of very low safety significance because the functional capability of the auxiliary charging pumps (ACPs) was not lost. The finding directly involved the cross-cutting area human performance under the supervisory and management oversight of work activities component, in that, the failures of the ACPs were left unresolved for an extended period of time over a number of failed tests. (H.4(c)).

Inspection Report# : [2009005](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to impliment proc. to maintain design of intake pumping station missile shield

10 CFR 50 Appendix B, Criterion V states, in part, that activities affecting quality shall be prescribed by documented instructions or procedures of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions or procedures. Contrary to the above, on April 16 and 30, 2009, the NRC identified that the licensee failed to accomplish documented instructions contained in work order 08-818588-000 to ensure that the design of the safety-related IPS missile shield was maintained. Because this finding was of very low safety significance and has been entered into the corrective action program as PERs 168839 and 170028, this violation is characterized as an NCV, consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000390/2009003-01, Failure to Adequately Implement Procedures to Maintain the Design of the Intake Pumping Station Missile Shield.

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Jun 26, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

failure to promptly correct a condition adverse to quality --- A shutdown boardroom chiller

Green. A self-revealing non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI was identified for failure to take timely and effective corrective action to maintain the capillary line to the Essential Raw Cooling Water

(ERCW) condenser water temperature control valve (1-TCV-67-158) filled with water to ensure operability of the 'A' Shutdown Boardroom chiller. The licensee vented the line, returning the chiller to service, and entered the issue into their CAP.

The finding is more than minor because it affects the Mitigating Systems Cornerstone objective of ensuring the availability of the 'A' Shutdown boardroom chiller, which is a system that responds to initiating events. It is also associated with the cornerstone attribute of equipment availability and reliability. This finding was assessed using the Phase 1 screening worksheet of the SDP and determined to be of very low safety significance (Green) because it did not result in an actual loss of safety function of a single train for greater than the Technical Specification (TS) allowed outage time and was not potentially risk-significant due to external events. This finding has a cross-cutting aspect in the Work Control component of the Human Performance area (H.3(b)), because the licensee failed to properly prioritize the compensatory maintenance activities to support safety system operability of an operable but degraded system. (Section

Inspection Report# : [2009006](#) (pdf)

Barrier Integrity

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to incorporate existing design criteria into temporary secondary containment boundary doors

A self-revealing, non-cited violation (NCV) of 10 CFR 50 Appendix B, Criterion III, Design Control, was identified for failure to correctly translate the personal access door design basis into the specifications for the temporary ABSCE boundary doors installed to facilitate Unit 2 construction. As a result, the ABSCE boundary was disabled when the temporary doors (R002 and R003) failed during auxiliary building ventilation changes on May 27, 2009. The licensee entered the issue into the corrective action program as PER 172301, made door repairs to re-establish the ABSCE boundary, and took interim actions to minimize differential pressure across the temporary doors during auxiliary building ventilation changes.

The licensee's failure to utilize existing design criteria for doors R002 and R003 was a performance deficiency. The inspectors reviewed Inspection Manual Chapter (IMC) 0612 and determined that the finding was more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern, specifically for loss of the secondary containment boundary. Additionally, the finding was associated with the design control attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers, such as the secondary containment boundary, protect the public from radionuclide releases caused by accidents or events. Using the phase I screening worksheet of IMC 0609, the inspectors determined that the finding was of very low safety significance (Green) because it only represented a degradation of the radiological barrier function provided for the auxiliary building. The cause of the finding had a cross-cutting aspect in the area of human performance associated with the resources component. It was directly related to maintaining long term plant safety by maintenance of the design margins aspect of the resources component [H.2(a)]. Specifically, the licensee did not utilize the existing design criteria for auxiliary building doors designated as air locks. (Section 40A3.1.b.1)

Inspection Report# : [2009004](#) (pdf)

Significance:  Sep 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Inadequate corrective actions to preclude additional temporary secondary containment boundary doors failure

A self-revealing NCV of 10 CFR 50 Appendix B, Criterion XVI, Corrective Action, was identified for the licensee's failure take prompt corrective actions to preclude repetition of the failure of the temporary auxiliary building secondary containment envelope (ABSCE) boundary doors installed to facilitate Unit 2 construction. Following the previous failure of temporary ABSCE boundary doors R002 and R003 during auxiliary building ventilation changes, the licensee initiated PER 172301 to determine the cause of the door failure. In accordance with licensee procedure PIDP-4, Corrective Action Program Screening and Oversight, PER levels are assigned based on the consequences of the identified condition and also on the frequency or probability of issue occurrence. Based on the condition

classification guidance in Appendix A of PIDP-4, the door failures were considered by the licensee to be a Significant Condition Adverse to Quality (SCAQ), which required the associated PER to be designated as an A-level PER. Accordingly, PER 172301 was assigned as an A-level (highest category) requiring a root cause analysis and corrective actions to prevent recurrence. Corrective actions to prevent recurrence developed by the root cause team were not incorporated into plant procedures, and as a result, temporary doors (R002 and R003) failed during auxiliary building ventilation changes on June 27, 2009. The licensee entered the issue into the corrective action program as PER 175160, made door repairs to re-establish the ABSCE boundary, and shut the Unit 2 reactor building access doors to provide an additional ventilation barrier.

The licensee's failure to take corrective actions to preclude the temporary door failure repetition was a performance deficiency. The inspectors reviewed IMC 0612 and determined that the finding was more than minor because, if left uncorrected, it would have the potential to lead to a more significant safety concern, specifically for loss of the secondary containment boundary. Additionally, the finding was associated with the design control attribute of the Barrier Integrity cornerstone and adversely affected the cornerstone objective of providing reasonable assurance that physical design barriers, such as the secondary containment boundary, protect the public from radionuclide releases caused by accidents or events. Using the phase I screening worksheet of IMC 0609, the inspectors determined that the finding was of very low safety significance (Green) because it only represented a degradation of the radiological barrier function provided for the auxiliary building. The cause of the finding had a cross-cutting aspect in the area of problem identification and resolution associated with the corrective action program component. It was directly related to the licensee thoroughly evaluating problems such that resolutions address the problem's causes. [P.1(c)]. Specifically, during the investigation of the May 27, 2009, ABSCE door failures, the licensee failed to address the inadequate design of temporary doors R002 and R003. (Section 4OA3.1.b.2)

Inspection Report# : [2009004](#) (pdf)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Significance:  Jun 26, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

failure to follow plant procedures for cancelling preventative maintenance

Green. A self-revealing NCV of Technical Specification 5.7.1 was identified for the licensee's failure to follow plant procedures which resulted in the failure of the Unit 1 Shield Building Vent Radiation Monitor System, an effluent radiation monitor.

The inspectors determined the licensee's failure to follow site procedures for PM cancellation was a performance deficiency and a finding. The inspectors reviewed Inspection Manual Chapter (IMC) 0612 and determined that the finding is more than minor because the finding is associated with the plant facilities/equipment and instrumentation attribute (reliability of process radiation monitors) of the radiation safety cornerstone (public radiation safety) and adversely affected the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian use. The finding was assessed using the IMC 0609, Appendix D, Public Radiation SDP, and because there was no failure to implement the effluent program, the finding was determined to be of very low safety significance (Green). No cross-cutting aspect was assigned to this finding because the direct cause was not considered indicative of current performance. (Section 4OA2.a.3.ii)

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: SL-IV Dec 31, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Update the UFSAR for the Removal of the Additional Diesel Generator Unit.

The inspectors identified an NCV of 10 CFR 50.71(e) for failure to adequately update the Updated Final Safety Analysis Report (UFSAR) to reflect that the additional diesel generator unit (ADGU) was never completed and made available for use as described in the UFSAR. The licensee entered these issues into the CAP as PER 175830. This finding was considered as traditional enforcement because it had the potential for impacting the NRC's ability to perform its regulatory function. The inspectors used the NRC Enforcement Policy, Supplement I, to determine that the issue was more than minor because including references of incomplete equipment in the UFSAR would have a material impact on licensed activities associated with the onsite emergency AC power distribution system. This issue was considered a SL-IV violation because the inaccurate information was not used to make any change to the facility. No cross-cutting aspect was identified

Inspection Report# : [2009005](#) (pdf)

Significance: N/A Jun 26, 2009

Identified By: NRC

Item Type: FIN Finding

Watts Bar PI&R Summary

The team concluded that, in general, problems were properly identified, evaluated, prioritized, and corrected. Generally, the threshold for initiating problem evaluation reports (PERs) was appropriately low, as evidenced by the types of problems identified and large number of PERs entered annually into the Corrective Action Program (CAP). Employees were encouraged by management to initiate PERs. However, the team determined that recently there have been some conditions adverse to quality identified by the resident inspectors that were not appropriately entered into the CAP.

Generally, prioritization and evaluation of issues were consistent with the licensee's CAP guidance, formal root cause evaluations for significant problems were adequate, and corrective actions specified for problems were acceptable. Overall, corrective actions developed and implemented for issues were generally timely, effective, and commensurate with the safety significance of the issues.

The team determined that, overall, audits and self-assessments were adequate in identifying deficiencies and areas for improvement in the CAP, and appropriate corrective actions were developed to address the issues identified. Operating experience usage was found to be generally acceptable and integrated into the licensee's processes for performing and managing work, and plant operations.

Based on discussions and interviews conducted with plant employees from various departments, the inspectors determined that personnel at the site felt free to raise safety concerns to management and use the CAP to resolve those concerns.

Inspection Report# : [2009006](#) (pdf)

Last modified : March 01, 2010