Watts Bar 1
3Q/2012 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Develop and Implement Corrective Actions for Probable Maximum Precipitation Drainage Path Impact on Unit 1
The inspectors identified an NCV of 10 Code of Federal Regulations (CFR) 50 Appendix B, Criterion XVI, Corrective Action, for the licensee's failure to develop and implement corrective actions to address the unauthorized placement of temporary structures supporting Unit 2 construction in the probable maximum precipitation (PMP) drainage path. Problem Evaluation Report (PER) 206105, initiated by the licensee on October 28, 2009, identified that Unit 2 temporary structures had been placed inside the plant protected area surrounding Unit 1 and 2 without verifying impacts to the PMP critical flood elevation of 729 feet. The PER required a corrective action plan (CAP) due date of February 14, 2010. The condition as it then existed was bounded by a functional evaluation which expired February 28, 2010. The inspectors determined that the corrective actions had not been implemented and that the original adverse condition had worsened due to the addition of other temporary structures. Based on this observation, the licensee reentered the issue into the corrective action program as PER 413818 and also initiated PER 417148 to address the continuing plant impact from the addition of more temporary structures.
Inspection Report# : 2011005 *(pdf)*

Mitigating Systems

Significance: G Sep 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to follow scaffold procedure threatens ERCW pump operability
The inspectors identified a NCV of Technical Specification 5.7.1, Procedures, for the licensee's failure to properly implement Maintenance Procedure MMTP-102, Erection of Scaffolds/Temporary Work Platforms and Ladders, Revision 7. Specifically, a temporary scaffold erected in close proximity to an essential raw cooling water (ERCW) pump was not adequately restrained to prevent interaction with the pump motor during a seismic event. The licensee entered the issue into the corrective action program as Problem Evaluation Report (PER) 588895, removed the subject scaffold, and implemented corrective actions to inspect all scaffolding in Seismic Category I areas for similar conditions.
The licensee's failure to erect the scaffold in accordance with procedures in the vicinity of safety-related equipment was a performance deficiency. The inspectors reviewed IMC 0612 and determined that the finding was more than minor because, if left uncorrected, scaffold interaction with the pump motor during a seismic event could render the pump inoperable. The finding was associated with the Mitigating Systems Cornerstone. Using the Phase I screening worksheet of IMC 0609, the inspectors determined that the finding was of very low safety significance (Green) because no actual loss of safety function occurred and the finding did not screen as potentially risk significant due to

external events. The cause of the finding had a cross-cutting aspect in the area of effective supervisory/management oversight in the Work Practices component. It was directly related to the licensee not ensuring adequate supervisory and management oversight of work activities, including contractors that erected the scaffold and licensee engineering personnel that reviewed and approved the deficient scaffold installation that could adversely affect nuclear safety. (H.4 (c)). (See Section 1R01).

Inspection Report# : 2012004 *(pdf)*

Significance: G Sep 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate corrective actions for the C ERCW pump breaker
The inspectors identified a NCV of 10 Code of Federal Regulations (CFR) 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to correct an identified deficiency in the C-A ERCW pump breaker on July 25, 2012. This uncorrected deficiency led to the inability of the breaker to trip and is 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 the failure of the C-A ERCW pump to load shed on a loss of offsite power. Additionally, the finding was associated with the equipment performance attribute of the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using the Phase I screening worksheet of IMC 0609, the inspectors determined that the finding was of very low safety significance (Green) because the associated shutdown board is a Unit 2 board and is lightly loaded. Additionally, the failure of the C-A ERCW pump breaker to trip and thus be immediately loaded onto 2A emergency diesel generator is within the transient capability of the emergency diesel generator. The cause of the finding was directly related to the cross-cutting aspect for appropriate corrective actions to address safety issues in a timely manner commensurate with their safety significance and complexity in the corrective action program component of the cross-cutting area of Problem Identification and Resolution, in that the licensee failed to take adequate corrective actions to repair the C-A ERCW breaker when the initial deficiency was discovered on July 25, 2012. (P.1(d)). (See Section 4OA2)
Inspection Report# : 2012004 *(pdf)*

Significance: G Jun 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to maintain steam generator blowdown isolation valves in the environmental qualification program
The team identified a Green non-cited violation (NCV) of 10 Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion III, "Design Control", for the licensee's failure to maintain steam generator blowdown (SGBD) isolation valves 1-FCV-1-181, 182, 183, and 184 in the environmental qualification (EQ) program. Removing the valves from the EQ database resulted in internal components (lower bottom gasket and reed switch) in the SGBD valves exceeding their qualified life and replacement intervals as stated in the licensee's existing EQ and revised EQ calculations. The licensee entered this issue into their corrective action program as problem evaluation report (PER) 495239 and service request (SR) 562298, and performed additional analyses and evaluations to provide reasonable assurance of operability of components.

The team determined that the failure to maintain SGBD isolation valves 1-FCV-1-181, 182, 183, and 184 in the EQ program, which resulted in two subcomponents in these valves exceeding their qualified life and replacement interval, is a performance deficiency. In addition, the licensee failed to perform an adequate functional evaluation to confirm operability of these valves after the NRC identified that the reed switch was not included in the original functional evaluation. The revised EQ calculation performed by the licensee to address the lower bottom gasket indicated the reed switch had exceeded its qualified life of 13.5 years; however, this was not addressed in the licensee's functional

evaluation until identified by the NRC. This performance deficiency was more than minor because it affected the Mitigating System Cornerstone attribute of design control to ensure the availability, reliability, and capability of safety systems that respond to initiating events to prevent undesirable consequences. In addition, this performance deficiency also closely parallels Inspection Manual Chapter 0612, Appendix E, example 3.j because the error resulted in a condition where there was a reasonable doubt of the operability of safety related components as a result of the revised EQ calculation. The team screened this finding in accordance with NRC IMC 0609, "Initial Screening and Characterization of Findings," Attachment 4, Phase 1, and determined the finding was of very low safety significance (Green). The team determined that no cross-cutting aspect was applicable because this finding was not indicative of current licensee performance. (Section 1R17)

Inspection Report# : 2012003 *(pdf)*

Significance: G Jun 30, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to identify degraded auxiliary charging pump and initiate corrective actions
The inspectors identified a Green NCV of 10CFR50 Appendix B Criterion XVI for failure to identify that the 1A auxiliary charging pump (ACP) was degraded based on previous questionable testing results. The inspectors determined that no acceptable testing had been performed which verified the functionality of 1A and 1B ACP until March 23, 2012. During subsequent testing, only the 1B ACP met its acceptance criteria. This system relies on the capability of these pumps to support Technical Requirement 3.7.2, Flood Mode Protection Plan.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Equipment Performance, and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the 1A ACP was unable to perform its function in the event of severe external flooding for > 1 year. The inspectors performed a Phase 1 evaluation per Inspection Manual Chapter 0609, Attachment 4 and determined that the finding was potentially risk significant due the degradation of equipment specifically designed to mitigate external events (e.g., flooding mitigation). Consequently a Phase 3 analysis was performed by a Senior Reactor Analyst. The analyst determined that the risk significance of the issue was very low (i.e., ?CDF < 1.0E-7). The dominant sequence was a significant flooding event which would require the licensee to implement their Flood Mode Mitigation strategy, with the subsequent failure of a single train of ACP pumps for the system. The finding directly involved the cross-cutting area of 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)). (Section 4OA2)
Inspection Report# : 2012003 *(pdf)*

Significance: G May 15, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Establish Test Procedures to Assure Satisfactory auxiliary control air subsystem (ACAS) Performance during Design Basis Accidents
The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for failure to perform capacity (volumetric flow) testing on the safety-related auxiliary control air subsystem (ACAS). The licensee had documented that, for worst case environmental conditions, the air compressor capacity had little margin when compared to required air demand, even for single unit operation. This issue was entered into the licensee's corrective action program as problem evaluation report 501941 for further evaluation of corrective actions.
Inspection Report# : 2012008 *(pdf)*

Significance: G May 15, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Adequately Test the AFW Discharge Check Valves
The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to establish a test program that demonstrated the adequacy of the auxiliary feedwater (AFW) discharge check valves. Specifically, the licensee failed to develop a test program that would provide assurance that back leakage through the AFW discharge check valves would not prevent the system from providing design flowrates to the steam generators. This issue was entered into the licensee's corrective action program as problem evaluation report 499950. The licensee performed a functional evaluation and determined that the AFW system was operable based on the pumps not currently being degraded to the design limits, and the existence of additional conservatisms in the licensee's design basis hydraulic analysis. (Green NCV).
Inspection Report# : 2012008 *(pdf)*

Significance: G May 15, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Acceptance Criteria in Maintenance and Surveillance Procedures (5 Examples)
The team identified five examples of a non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to correctly translate vendor specifications and design calculations into maintenance and surveillance procedures. The five examples were entered into the licensee's corrective action program. (Green NCV)
Inspection Report# : 2012008 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Procedure AOI-30.2 C.36, Fire Safe Shutdown Room 737-A1A, Non-feasible Operator Manual Action.
The inspectors identified an NCV of 10 Code of Federal Regulations (CFR) 50 Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to ensure that an operator manual action for fire safe shutdown (FSSD) could be feasibly performed under the current physical plant configuration. Specifically, post-fire safe shutdown procedure Abnormal Operating Instruction (AOI)-30.2 C.36, Fire Safe Shutdown Room 737-A1A, Revision 3, contained instructions for an operator manual action for FSSD that could not be feasibly performed following implementation of a plant design change. A temporary scaffold which was previously installed as a corrective action compensatory measure was removed without authorization. The licensee entered this issue into the corrective action program as Problem Evaluation Report (PER) 485043.
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 31, 2012
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Comply with Technical Specification 3.4.12 by Allowing a Safety Injection Pump to inject into the RCS in Mode 5.
A Green, self revealing NCV of Technical Specification (TS) 3.4.12 was identified for failure to ensure that no safety injection pump was capable of injecting into the reactor coolant system while in Mode 5. The finding was determined to be greater than minor because it was associated with the human performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that

respond to initiating events to prevent undesirable consequences. This finding was evaluated using the significance determination Phase 1 screening criteria in accordance with Inspection Manual Chapter (IMC) 0609 “Significance Determination Process,” Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,”and was determined to require review in accordance with IMC 0609 Appendix G, Shutdown Operations Significance Determination Process. This finding was determined to have a cross-cutting aspect in the area of human performance associated with the work practices component. The licensee failed to
adequately implement human error prevention techniques, such as self and peer checking, to ensure that the work activity was being performed on the correct component. [H.4(a)].
Inspection Report# : 2012002 *(pdf)*

Significance: G Mar 31, 2012
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Comply with Technical Specification 3.8.4, 3.8.5 and 3.0.3 by failing to recognize Vital Batteries III and IV degradation.
A Green, NRC-identified NCV of TS 3.8.4, DC Sources Operating, was identified. The licensee’s failure maintain TS operability by accurately identifying that vital battery III was approaching end-of-life was a performance deficiency. It is more than minor because, if left uncorrected, it could lead to a more serious safety concern, that of loss of functionality. Additionally, the finding was associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Using IMC 0609, “Significance Determination Process,” Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to be of very low safety significance (Green), because subsequent functional testing by the licensee, witnessed by the inspectors, showed that vital
batteries III and IV would meet all design basis analysis requirements.

This finding was determined to have a cross-cutting aspect in the area of human performance associated with the decision-making component. The licensee failed to use conservative assumptions in decision making and to adopt a requirement to demonstrate that the proposed action is safe in order to proceed rather than a requirement to demonstrate that it is unsafe in order to disapprove the action. [H.1(b)].
Inspection Report# : 2012002 *(pdf)*

Significance: G Dec 31, 2011
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Store Transient Combustible Materials in a Safety-Related/Critical Area of the Auxiliary Building in Accordance With the Approved Fire Protection Plan
An NCV of the Unit 1 Operating License Condition 2.F was identified for the licensee’s failure to store transient combustible materials in a safety-related/critical area of the auxiliary building in accordance with the approved Fire Protection Plan (FPP). Specifically, an excessive amount of combustible trash and laundry was stored on the auxiliary building refueling floor. The stored combustible material was approximately two and a half times the allowable limit, and the amount in excess of that limit was stored without an approved transient combustible evaluation, as required by the FPP. As a result, this was an unapproved increase in fire loading due to an increase in the volume of the combustible material in the area. The licensee took immediate corrective action to issue a transient combustible evaluation and then remove the excess combustibles from the area.
Inspection Report# : 2011005 *(pdf)*

Significance: G Dec 31, 2011

Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate Procedures for Identifying Accumulated Gas in ECCS Systems
The inspectors identified a Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to establish adequate procedures to identify accumulated gas in emergency core cooling systems (ECCS). Specifically, the operations surveillance test procedures could allow accumulated gases inside ECCS to be vented without being quantified and evaluated for potential adverse impacts on system operability. The licensee entered this in their corrective action program as PER 478095.
Inspection Report# : 2011005 *(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the cover letters to security inspection reports may be viewed.

Miscellaneous

Last modified : November 30, 2012