Watts Bar 1
1Q/2014 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Mar 31, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to correct a condition adverse to quality
An NRC-identified non-cited violation (NCV) of 10 Code of Federal Regulations (CFR) 50 Appendix B, Criterion XVI, Corrective Action, was documented for the licensee's failure to correct a condition adverse to quality associated with the inadequate performance of a safety related maintenance instruction. Specifically, the licensee closed Problem Evaluation Report (PER) 858636 which documented the failure to perform step 6.3 of procedure 0-MI-0.007, without taking corrective actions to correct the condition. The licensee has entered this issue into their corrective action program as PER 867402.

The performance deficiency was determined to be more than minor because it adversely affected the objective of the Mitigating Systems cornerstone to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the failure to correct a condition adverse to quality associated with the licensee's ability to trend valve degradation reduced the licensee's ability to ensure the reliability and capability of plant safety systems. Using the screening worksheet of IMC 0609, Appendix A, Exhibit 2 – Mitigating Systems Screening Questions, the inspectors determined that the finding was of very low safety significance (Green) because the essential air system remained functional following the maintenance activity. The cause of the finding was directly related to the cross-cutting aspect of Problem Identification and Resolution, Corrective Action Program, because the licensee did not thoroughly evaluate this problem, identify the causes, develop appropriate corrective actions, and evaluate the extent of condition. [P.2] (Section 4OA2.2)

Inspection Report# : 2014002 *(pdf)*

Significance: G Mar 31, 2014
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to comply with technical specification 3.7.5, auxiliary feedwater system
A self-revealing NCV of TS 3.7.5, Auxiliary Feedwater (AFW) System, was documented for the licensee's failure to ensure that three fully qualified, independent trains of AFW were operable in Modes 1, 2 and 3. Specifically, the licensee failed to ensure the safety-related air supply to 1- LCV-3-156 and 1-LCV-3-164, for the1A AFW train was available, from October 22, 2012, until January 24, 2014. The licensee restored operability of the valves and entered this issue into their corrective action program as PER 838494.

The performance deficiency was determined to be more than minor because it would have the potential to lead to a more significant safety concern if left uncorrected, in that, isolation of control air from the level control valves left the

nitrogen supply system as the motive force for the valves which did not meet all of the necessary design qualifications required to maintain operability of the 1A AFW train. This finding was evaluated using the SDP Phase 1 screening criteria and IMC 609 Appendix A, Exhibit 2 – Mitigating Systems Screening Questions, and was determined to be of very low safety significance because the finding did not involve the total loss of system or function and the affected 1A train valves fail to the open position. The cause of the finding was directly related to the cross-cutting aspect in the Work Practices component of the area of Human Performance, in that the licensee failed to provide adequate supervisory and management oversight to ensure that the control air valves were placed in the correct position. [H.2] (Section 4OA3.3)

Inspection Report# : 2014002 *(pdf)*

Significance: G Dec 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to adequately Control Non-Conforming or Degraded Equipment
The NRC identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XV, for the licensee's failure to segregate three pressure switches to prevent their inadvertant use or installation. The inspectors determined that the finding was of very low safety significance (GREEN) because the switches were not installed and therefore did not cause a loss of function. The finding was assigned a cross-cutting aspect of H.4(b).
Inspection Report# : 2013005 *(pdf)*

Significance: G Sep 27, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to validate Appendix R abnormal operating instructions in accordance with station procedures
An NRC identified Green NCV of Technical Specification 5.7.1, Procedures, was identified for the licensee’s failure to validate Appendix R abnormal operating instructions (AOI) in accordance with station procedures. The issue was entered into the licensee’s corrective action program as problem evaluation report (PER) 787990.
The licensee’s failure to validate time critical operator actions for Appendix R AOIs as required by site procedures was a performance deficiency. The performance deficiency was considered more than minor because if left uncorrected, the issue had the potential to result in the failure to meet design bases operator action times during fire events. The significance of this finding was determined to be of very low safety significance (Green) because the identified deficiencies did not adversely affect the ability to reach and maintain safe shutdown. The cause of the finding involved the cross-cutting aspect of whether the licensee takes appropriate corrective actions to address safety issues within the Corrective Action Program component of the Problem Identification and Resolution area. Specifically, the licensee implemented inadequate corrective actions for PER 637443 which identified that Appendix R time critical actions were not performed as required by procedure TI-12.19. [P.1(d)] (Section 1R05.01)
Inspection Report# : 2013008 *(pdf)*

Significance: G Sep 27, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Inadequate compensatory actions to minimize the effects of impaired fire protection equipment on fire safe shutdown
An NRC identified Green NCV of Operating License Condition (OLC) 2.F was identified for the licensee’s failure to ensure that established operating requirements (ORs) for the high pressure fire protection (HPFP) system accounted 2 for affected and credited equipment as determined in the fire hazard analysis (FHA) and safe shutdown (SSD) analysis. The issue was entered into the licensee’s corrective action program as PER 786848, and implemented Shift

Orders FPU-13-018 and 13-071 which required the establishment of fire watches for the affected areas.
The licensee's failure to ensure that established ORs for the HPFP water supply system were supported by the FHA and SSD analysis was a performance deficiency. The performance deficiency was more than minor because it was associated with the protection against external events (fire) attribute of the Mitigating Systems Cornerstone and it adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The significance of this finding was determined to be of very low safety significance (Green) because the affected fixed fire suppression systems would be able to suppress a fire such that no additional equipment important to safety would be affected by a fire. The inspectors determined that no cross cutting aspect was applicable to this performance deficiency because this finding was not indicative of current licensee performance. (Section 1R05.10
Inspection Report# : 2013008 *(pdf)*

Significance: G Jun 30, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to meet a critical drill objective in accordance with the approved fire protection plan
Green. The inspectors identified a Green NCV of the Unit 1 Operating License Condition 2.F for the licensee's failure to implement procedures required for fire protection program implementation in accordance with the approved Fire Protection Plan (FPP). Specifically, the licensee failed to meet a critical objective on April 30, 2013, during a fire drill as required by TVA-SPP-17.16, Conduct and Evaluation of Fire Drills, Revision 0. The licensee initiated problem evaluation report (PER) 742499 to address the inspector-identified deficiency.

The licensee's failure to implement procedures required for fire protection program implementation in accordance with the approved FPP was a performance deficiency. The inspectors reviewed IMC 0612 and determined that the finding was more than minor because the lack of adequate fire drill performance could negatively affect the fire brigade's capability to combat a fire. Using the Initial Characterization of Findings guidance of IMC 0609, the inspectors determined that the finding was of very low safety significance (Green) because the defense-in-depth attribute of the fire brigade was minimally affected. The fire brigade demonstrated the ability to meet the required time for fire extinguishment for the fire drill scenario, and the finding did not significantly affect the ability of the fire brigade to respond to a fire. The finding was directly related to the cross-cutting aspect in the area of Problem Identification and Resolution because of inadequate oversight and self-assessment of fire operations activities, specifically fire brigade training. (P.3 (a)) (See NCV 05000390/2012003, Section 1R05)

Inspection Report# : 2013003 *(pdf)*

Significance: G Jun 29, 2013
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Corrective Actions to Identify and Evaluate Effects of Harmonics on Degraded Voltage Relay Function
The NRC identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to implement corrective actions to identify and evaluate the effects of electrical system harmonics on safety-related undervoltage relays. This was a performance deficiency. The licensee entered this issue into their corrective action program as Problem Evaluation Reports 515413 and 703444. The licensee also established a preventative maintenance program to monitor motors powered from the 6.9 kilovolt shutdown boards for harmonic distortion until further monitoring and evaluation of harmonic distortion on the 6.9 kilovolt shutdown board degraded voltage relays can be completed.

The performance deficiency was more than minor because it affected the design control attribute of the Mitigating

Systems cornerstone and adversely impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, at the time of identification, there was reasonable doubt as to whether the degraded voltage scheme would perform as required by the Watts Bar 1 Technical Specifications during design basis conditions. The inspector determined the finding to be of very low safety significance (Green) because the finding was a deficiency affecting the design or qualification of a mitigating structure, system, or component, and the structure, system, or component maintained its operability and functionality. Because the opportunity to identify the impact of harmonics on degraded voltage relay performance occurred in 1993, the inspector determined that no cross-cutting aspect was applicable because the finding was not indicative of current licensee performance.
Inspection Report# : 2013010 *(pdf)*

Barrier Integrity

Significance: G Mar 31, 2014
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to follow plant procedures for replacement of NAMCO limit switches
A self-revealing non-cited violation of Units 1 and 2 Technical Specification 6.8.1.a, Administrative Controls (Procedures), was documented for the licensee's failure to establish an adequate clearance in preparation for maintenance activities on the B station air compressor. Implementation of this inadequate clearance on February 21, 2014, resulted in a reduction of control air pressure and a plant transient which challenged control room operators. Immediate corrective action was to revise the clearance to establish an adequate boundary. The licensee entered the issue into the corrective action program (CAP) for resolution as PER 850331.

The performance deficiency was more than minor because it was associated with the configuration control and human performance attributes of the initiating events cornerstone and adversely affected the cornerstone's objective to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the inadequate clearance caused a plant transient during power operations that without operator action would have resulted in a loss of air operated plant components and ultimately require the operators to trip both units. The finding was determined to be of very low (green) safety significance based on Exhibit 1, "Initiating Events Screening Questions," found in Inspection Manual Chapter 0609, "Significance Determination Process," Appendix A, "Significance Determination Process for Findings At-Power," because the finding did not result in a complete or partial loss of a support system that contributed to the likelihood of, or cause, an initiating event and affected mitigation equipment. The inspectors determined the cause of this finding was associated with a cross cutting aspect of Work Management in the Human Performance area. Specifically, the licensee failed to implement their clearance process such that nuclear safety was the overriding priority. (H.5) (Section 4OA3)

Inspection Report# : 2014002 *(pdf)*

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 : May 30, 2014