

Watts Bar 1 2Q/2014 Plant Inspection Findings

Initiating Events

Significance: G Jun 30, 2014

Identified By: NRC

Item Type: FIN Finding

Failure to comply with design drawing results in a reactor trip

An NRC-identified finding was documented by the inspectors for the licensee's failure to comply with a design drawing during a modification resulting in a trip of Unit 1 reactor.

The inspectors determined that the licensee's failure to properly implement Design Change Notice (DCN) 52295, complete bus differential wiring for main bus 2, as required by NPG-SPP-09.3, Revision 17, Plant Modifications and Engineering Change Control, was a performance deficiency. The performance deficiency was determined to be more than minor because it adversely affected the objective of the Initiating Events cornerstone to limit the likelihood of events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Specifically, the failure to correctly translate design drawings to implementing work order 08-816022-006 resulted in Unit 1 experiencing a 100% load rejection and reactor trip. Using the screening worksheet of IMC 0609, Appendix A, Exhibit 1 - Initiating Events Screening Questions, the inspectors determined that the finding was of very low safety significance (Green) because the resulting transient was within the design basis for Unit 1 and all plant systems functioned as required to place the unit in a stable, hot standby condition. The cause of the finding was directly related to the aspect of work management in the Human Performance cross-cutting area because the licensee failed to implement a process of planning, controlling, and executing work activities such that nuclear safety was the overriding priority. [H.5] (Section 40A3)

Inspection Report# : [2014003](#) (*pdf*)

Mitigating Systems

Significance: G Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to correct a condition adverse to quality

An NRC-identified NCV of 10 Code of Federal Regulations (CFR) 50 Appendix B, Criterion XVI, Corrective Action, was documented for the licensee's failure to adequately identify a condition adverse to quality associated with the installation of 480 volt breaker 0-BKR-548-0021-S with non-conforming parts which was in service in safety-related 480 volt shutdown board 1B1.

The inspectors determined that the licensee's failure to adequately identify a condition adverse to quality associated with the installation of non-conforming parts as required by 10 CFR 50 Appendix B, Criterion XVI, was a performance deficiency. 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 identify the condition adverse to quality led to an additional six months that this non-conforming condition existed thus reducing 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 deficiency only affected the qualification of the breaker. The cause of the finding was directly related to the aspect of identification in the Problem Identification and Resolution cross-cutting area because the licensee did not identify this issue completely, accurately, and in a timely manner in accordance with the program. [P.1] (Section 4OA2.3)

Inspection Report# : [2014003](#) (pdf)

Significance:  Jun 30, 2014

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to evaluate a condition adverse to quality

A NRC-identified non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, Corrective Action, was documented for the licensee's failure to adequately identify a condition adverse to quality associated with the installation of relief valve 1-RFV-67-1026D, Upper Containment Cooler 1D, an ASME Class III component.

The inspectors determined that the licensee's failure to adequately identify a condition adverse to quality associated with the non-conformance of relief valve 1-RFV-67-1026D, as required by 10 CFR 50 Appendix B, Criterion XVI, was a performance deficiency. 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 the condition adverse to quality in a timely manner led to an additional 4 years that this non-conforming condition existed prior to evaluation thus reducing 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 there existed an additional relief valve in the IST program that could protect the piping and cooler from over pressurization with appropriate compensatory measures. The cause of the finding was directly related to the aspect of evaluation in the Problem Identification and Resolution cross-cutting area because the licensee did not adequately evaluate this issue to ensure that an adequate resolution addressed the condition commensurate with its safety significance. [P.2] (Section 4OA2.4)

Inspection Report# : [2014003](#) (pdf)

Significance:  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:  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 the 1A 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:  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 inadvertent 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:  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:  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*)

Barrier Integrity

Significance:  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

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