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Watts Bar 1 – Quarterly Plant Inspection Findings

4Q/2017 – Plant Inspection Findings

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Initiating Events

Significance: G Aug 11, 2017

Identified By: Self-Revealing

Item Type: FIN Finding

Failure to Follow Procedure Results in Reactor Coolant Pump Failure to Transfer and Unit 1 Reactor Trip

A self-revealed Green finding was identified for the failure to follow procedure NPG-SPP-22.207, "Procedure Use and Adherence" Revision 4, which requires that applicable procedures are used for all activities controlled by a written procedure. The licensee entered this into their corrective action program as CR 1291140

The failure to follow procedure NPG-SPP-22.207, "Procedure Use and Adherence," Revision 4, was a performance deficiency. The performance deficiency was more than minor because it affected the Initiating Events Cornerstone attribute of Human Performance and adversely affected the cornerstone objective in that it resulted in two reactor trips. The inspectors determined that the finding was of very low safety significance (Green) because it did not cause a reactor trip and the loss of mitigation equipment. The finding was not assigned a cross-cutting aspect since none of the CCAs described in IMC 0310 corresponded to an apparent cause or most significant causal factor of the performance deficiency.

Inspection Report# : 2017002 (*pdf*)

Significance: G May 12, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Maintain the Abnormal Operating Instruction for Tornados

Green. An NRC-identified non-cited violation (NCV) of Technical Specification (TS) 5.7.1.1.a, "Procedures," was identified for a failure to maintain procedure 0-AOI-8, Tornado Watch or Warning. The entry criteria were inadequate to ensure that the required actions for a tornado watch or warning would be performed in a manner such that potential

plant impact from a tornado would be mitigated or prevented. The violation was entered into the licensee's corrective action program (CAP) as condition report (CR) 1280644. The licensee's immediate corrective action was to install a weather radio in a continually manned security area with instructions for the security personnel to notify the control room for any tornado watch or warning declaration in Rhea County, TN.

The failure to maintain procedure 0-AOI-8 was a performance deficiency. The performance deficiency was more than minor because it adversely affected the procedure quality attribute of the Initiating Events Cornerstone objective, in that failure to take required actions in accordance with 0-AOI-8 after a tornado watch is issued could result in the inability to perform those actions if the watch is upgraded to a warning resulting in potential equipment failure. The inspectors determined that this finding was of very low safety significance (Green) because the finding did not cause a reactor trip, involve the complete or partial loss of mitigation or support equipment, or impact the frequency of a fire or internal flooding event. The finding has a cross-cutting aspect in the Identification component of the Problem Identification and Resolution area because the licensee had not identified procedure 0-AOI-8 inadequate entry criteria despite past issues with timely entry. [P.1].

Inspection Report# : 2017001 (*pdf*)

Mitigating Systems

Significance: **G** Nov 22, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Inadequate Procedure for Unit Cooldown from Hot Standby to Cold Shutdown

An NRC-identified non-cited violation (NCV) of Technical Specification (TS) 5.7.1.1 a, "Procedures," was identified for the failure to maintain TVA procedures 1-GO-6 and 2-GO-6, both titled Unit Shutdown from Hot Standby to Cold Shutdown. The licensee failed to update the procedures prior to commencing dual unit operation to include steps that would shut down the running motor driven auxiliary feedwater pump prior to starting a third emergency raw cooling water (ERCW) pump during the time period where the opposite unit has been shut down less than 48 hours. The licensee's immediate corrective actions included revising both procedures to add the required steps. This violation was documented in the licensee's corrective action program as CR 1318176.

The performance deficiency was more than minor because it affected the Mitigating Systems Cornerstone attribute of Equipment Performance and adversely affected the cornerstone objective in that failure to maintain the procedures resulted in a situation where the emergency diesel generator would have been overloaded and rendered inoperable in response to a design basis event. The inspectors determined that this finding was of very low safety significance (Green) because the finding did not represent an actual loss of function of a single train for greater than its TS allowed outage time. The finding had a cross-cutting aspect in the Avoid Complacency attribute of the Human Performance area because engineering missed a critical aspect of the required procedure changes associated with design change notice 62151 when performing the prompt determination of operability and the review process was unsuccessful at identifying the error [H.12].

Inspection Report# : 2017003 (*pdf*)

Significance:  Nov 22, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Maintain Procedures for Response to a Loss of Coolant Accident

An NRC-identified non-cited violation (NCV) was identified for the failure to maintain written procedures for emergencies. Emergency procedure 1-E-1, Revision 7 and 2-E-1 Revision 0, both titled Loss of Reactor or Secondary Coolant, were updated to include steps directing inappropriate actions that would have affected ERCW supply flow during an accident. The immediate corrective action was to remove the inappropriate steps. This violation was documented in the licensee's corrective action program (CAP) as CR 1331422.

The performance deficiency was more than minor because it affected the Mitigating Systems Cornerstone attribute of Procedure Quality and adversely affected the cornerstone objective in that the reduced ERCW flow caused by the inappropriate steps affects the heat removal capability of the ERCW and component cooling systems (CCS) during a loss of coolant accident (LOCA). The finding was determined to require a detailed risk evaluation because it represented an actual loss of function of at least a single train for greater than its TS allowed outage time. The result was less than 1E-6 for each unit which would be a finding of very low significance (Green). The risk was mitigated because the performance deficiency would affect operation only when a LOCA occurred and the simultaneous loss of two shutdown boards. The finding has a cross-cutting aspect in the documentation attribute of the Human Performance area because the licensee did not maintain the accuracy of 1-E-1 through its revisions and did not maintain procedure 2-E-1 accurate at its creation. (H.7)

Inspection Report# : 2017003 (*pdf*)

Significance:  Aug 07, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Replace Namco Limit Switch Gasket to Maintain EQ Qualification

The NRC identified a Green non-cited violation (NCV) of title 10 Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to implement instructions to replace Namco limit switch gaskets as required to maintain environmental qualification. The licensee entered this issue into their corrective action program as CR 1309040.

The performance deficiency was determined to be more than minor because it was associated with the Equipment Performance attribute of Mitigating Systems cornerstone 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, not maintaining the main steam header isolation valve limit switches in their qualified condition impacted their reliability. The inspectors determined the finding to be of very low safety significance (Green) because the finding was a deficiency affecting the qualification of a mitigating structure, system, or component (SSC), and the SSC maintained its operability or functionality. Because the finding was indicative of current licensee performance, the inspectors assigned the cross-cutting aspect of Documentation in the area of Human Performance [H.7] because the procedure did not contain accurate instructions related to the replacement of the gaskets.

Inspection Report# : 2017007 (*pdf*)

Significance:  Aug 07, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Maintain an Adequate Record of Qualification

The NRC identified a Green NCV of 10 CFR 50.49(j), for the licensee's failure to maintain a complete record of qualification for Brand-Rex cables under environmental qualification binder WBNEQ-CABL-050. Specifically, the licensee could not produce a certificate of conformance related to thermal aging test data obtained from Brand-Rex.

The licensee entered this issue into their corrective action program as CR 1310230.

The performance deficiency was determined to be more than minor because it was associated with the Design Control attribute of the Mitigating Systems Cornerstone and adversely affected the cornerstone objective of ensuring the availability, reliability, and capability of the safety related cable systems. Specifically, the irretrievable loss of

quality records that demonstrate the equipment is qualified for its application in conformance to Appendix B requirements, impacted the reliability and capability of safety-related cable systems. The inspectors determined the finding was of very low safety significance (Green) because the finding was a deficiency affecting the

qualification of a mitigating SSC and the SSC maintained its operability or functionality. This finding was not assigned a cross-cutting aspect because the issue did not reflect current licensee performance.

Inspection Report# : 2017007 (*pdf*)

Significance: G Mar 10, 2017

Identified By: NRC

Item Type: FIN Finding

Failure Implement the Program Requirement to Enter Issues into the CAP

The NRC identified a Finding for the licensee's failure to consistently implement the program requirements of the CAP. Specifically, the licensee failed to implement NPG-SPP-22.301, section 3.2.2 which required the licensee's staff to initiate a Condition Report (CR) to enter various items into their CAP. The licensee placed this issue into their corrective action program. The performance deficiency was more than minor because, if left uncorrected, issues would remain unanalyzed that could represent a more significant safety concern. The performance deficiency was screened using IMC 0609, Appendix A, Exhibit 2 Mitigating Systems Cornerstone dated June 19, 2012. The finding screened to Green because none of the examples were related to any structure, system, component, (SSC) 3 exceeding its technical specification allowed outage time. A cross cutting aspect of Identification was assigned because the licensee's threshold for identifying and entering issues into their CAP was not low enough as defined by their procedures. (P.1)

Inspection Report# : 2016013 (*pdf*)

Barrier Integrity

Significance: G Aug 11, 2017

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Failure to Implement Clearance on Containment Isolation Valve Results in TS 3.6.3 Violation

A self-revealed finding and associated non-cited violation of Technical Specification (TS) 3.6.3, "Containment isolation Valves," was identified for a failure to properly implement a clearance for containment isolation valve surveillance testing. Clearance 1-30-1011-WW removed fuses from a different valve than the one specified in the clearance. The licensee entered this issue into their corrective action program as CR 1245529.

The failure to comply with NPG-SPP-10.2, Steps 3.1.2.B.5 and 6, was a performance deficiency. The performance deficiency was more than minor because it adversely affected the configuration control attribute of the Barrier Integrity Cornerstone because the incorrectly placed clearance resulted in the inoperability of the containment isolation valve for longer than its TS allowed outage time, reducing assurance that the containment function assumed

in the safety analyses would be maintained. The inspectors performed an initial screening of the finding in accordance with NRC IMC 0609, Appendix A, and determined that this finding was of very low safety significance (Green) because the finding did not represent an actual open pathway in the physical integrity of reactor containment and did not involve an actual reduction in function of hydrogen igniters. The finding has a cross-cutting aspect in the Avoid Complacency component of the Human Performance area as defined in NRC IMC 0310, because multiple personnel failed to recognize and plan for the possibility of mistakes and error reduction tools, such as concurrent verification, were not appropriately implemented [H.12].

Inspection Report# : 2017002 (*pdf*)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Security

The security cornerstone is an important component of the ROP, which includes various security inspection activities the NRC uses to verify licensee compliance with Commission regulations and thus ensure public health and safety. The Commission determined in the staff requirements memorandum (SRM) for SECY-04-0191, "Withholding Sensitive Unclassified Information Concerning Nuclear Power Reactors from Public Disclosure," dated November 9, 2004, that specific information related to findings and performance indicators associated with the security cornerstone will not be publicly available to ensure that security-related information is not provided to a possible adversary. Security inspection report cover letters will be available on the NRC Web site; however, security-related information on the details of inspection finding(s) will not be displayed.

Miscellaneous

Significance: N/A Aug 11, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Report Multiple Examples of a Loss of Safety Function in accordance with 10 CFR 50.72 and 50.73

Severity Level IV. The inspectors identified a Severity Level IV non-cited violations of 10 *Code of Federal Regulations* (CFR) 50.72 and 50.73, with multiple examples due to the licensee's failure to make the required eight hour non-emergency notification and submit a Licensee Event Report (LER) to the NRC within 60 days for conditions that, at the time of discovery, could have prevented fulfillment of a safety function. These issues have been entered into the licensee's corrective action program as condition report (CR) 1310096.

The inspectors determined that the licensee's failure to comply with 10 CFR 50.72(b)(3)(v) and 50.72(a)(2)(v) was a performance deficiency. This performance deficiency was dispositioned under traditional enforcement because the failure to make a non-emergency notification and submit an LER within the time requirements may impact the ability of the NRC to perform its regulatory oversight function. The violation was assessed using Sections 2.2.4 and 6.9.d.9 of the NRC's Enforcement Policy and determined to be a SL IV violation. Traditional enforcement violations are not assessed for cross-cutting aspects. (4OA5.2)

Inspection Report# : 2017002 (*pdf*)

Significance: N/A Mar 10, 2017

Identified By: NRC

Item Type: AV Apparent Violation

Failure to Implement Confirmatory Order Requirement for Adverse Employment Action

The NRC identified an Apparent Violation of Confirmatory Order Modifying License, (EA-09-009,203) Dated December 22, 2009 (ML093510993) for the licensee's failure to; (1) implement a process to review proposed licensee adverse employment actions at Watts Bar Nuclear plant before actions were taken to determine whether the proposed action comports with employee protection regulations, and whether the proposed actions could negatively impact the SCWE; and (2) implement a process to review proposed significant adverse employment actions by contractors performing services at TVA's nuclear plant sites before the actions were taken to determine whether the proposed

action comports with employee protection regulations, and whether the proposed action could negatively impact the SCWE. The NRC determined this violation constituted a more than minor traditional enforcement violation associated with failure to implement actions required by Confirmatory Order Modifying License, (EA-09-009,203). The ROP's significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance. Therefore, it is necessary to address violations which impede the NRC's ability to regulate using traditional enforcement. The inspector determined that the licensee's failure to implement the requirements of the Confirmatory Order had the potential to impede or impact the regulatory process, and therefore subject to traditional enforcement as described in the NRC Enforcement Policy, dated November 1, 2016. The NRC has not made an enforcement decision on this matter.

Inspection Report# : 2016013 (*pdf*)

Significance: N/A Mar 10, 2017

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Provide Accurate information

The NRC identified a Non-cited Violation (NCV) of 10 CFR 50.9, "Completeness and Accuracy of Information" for the licensee's failure to provide accurate information in all material respects to the Commission. The team determined on April 22, 2016, the licensee provided inaccurate information in a letter to the NRC titled, RESPONSE TO NRC LETTER CONCERNING A CHILLED WORK ENVIRONMENT FOR RAISING AND ADDRESSING SAFETY CONCERNS AT THE WATTS BAR NUCLEAR PLANT (ML16113A228). This information was material because the NRC relied on this information to conclude that TVA was in compliance with CO-EA-09-009/203 requirements. The licensee placed this issue into their corrective action program. The NRC determined this violation constituted a more than minor traditional enforcement violation associated with failure to provide accurate information. The ROP's significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance. Therefore, it is necessary to address violations which impede the NRC's ability to regulate using traditional enforcement. The inspector determined that the licensee's failure to provide accurate information was a violation of 10CFR50.9 which had the potential to impede or impact the regulatory process, and therefore subject to traditional enforcement as described in the NRC Enforcement Policy, dated November 1, 2016. This violation is characterized as a Severity Level IV violation because it was similar to Example Section 6.9.d.1 of the NRC Enforcement Policy.

Inspection Report# : 2016013 (*pdf*)

Current data as of : February 01, 2018

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