

Watts Bar 1

1Q/2007 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Mar 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Promptly Correct an Identified Equipment Malfunction

A finding of very low safety significance and an associated non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, was identified by the inspectors. The licensee failed to investigate and correct, in a timely manner, an interlock failure associated with the containment sump to B-train containment spray pump suction flow control valve's control circuit. As a result, the B-train containment spray pump was inoperable in excess of the time limits prescribed by the associated Technical Specification Limiting Condition for Operation. The licensee entered the issue into their corrective action program and repaired the control circuit interlock.

The finding is more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and adversely affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was determined to be of very low safety significance because the containment spray system's mitigating system function was available from the A-train and the finding was not a contributor to large early release frequency. The cause of the finding is related to the thorough evaluation of identified problems aspect of the problem identification and resolution cross-cutting area, in that, the licensee failed to properly classify, prioritize, and evaluate the condition for impact on equipment operability.

Inspection Report# : [2007002](#) (*pdf*)

Significance:  Mar 16, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

Violation of Technical Specification 5.7.1 for TVA's failure to develop a procedure that will provide tornado depressurization protection of the DGB

The team identified a [Green non-cited] violation of Technical Specification 5.7.1 associated with failure to develop a procedure that will provide tornado depressurization protection of the emergency diesel generator building. The finding involves a tornado in which the Emergency Diesel Generator ventilation system would not be properly aligned to prevent inoperability of the Diesel Generators. Abnormal Operating Instruction - 8 does not provide guidance on how to provide pressure equalization for mitigating atmospheric depressurization associated with tornadic conditions during weather when temperatures are below 68 degrees Fahrenheit.

[This finding was more than minor because it is associated with the Mitigating Systems Cornerstone attribute of Procedure Quality. It impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. A Significant Determination Process Phase 3 analysis determined that the finding was of very low safety significance primarily due to the low likelihood of an onsite tornado.]

Inspection Report# : [2007006](#) (*pdf*)

Significance:  Oct 06, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Fire Header Inoperable Due to Failure to Follow Procedure

The inspectors identified a non-cited violation of the Fire Protection Report Operating Requirement which requires that fire watches be established when portions of the fire protection system are disabled. As a result of improper procedure implementation, the diesel generator building corridor automatic sprinkler system was isolated for approximately five days without the required fire watches being established. The licensee promptly restored the system to operable status and entered the problem into their corrective action program.

The finding is more than minor because it is associated with the protection against external factors attribute of the Mitigating Systems Cornerstone and adversely affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events, such as fires. This finding is of very low safety significance because of the low number of potential fire ignition sources in the affected areas and also because of the duration that the sprinkler system was isolated. This finding has a cross-cutting aspect in the area of human performance because test personnel did not follow established test procedures.

Inspection Report# : [2006004](#) (*pdf*)

Significance:  Oct 06, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedure During Preventive Maintenance

The inspectors identified a non-cited violation of Technical Specification (TS) 5.7.1 for failing to follow procedures while performing maintenance on an essential raw cooling water valve which supports the A-train electric boardroom (EBR) chiller. This deficiency rendered the A-train EBR chiller inoperable. The licensee entered the deficiency into their corrective action program for resolution.

The finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems Cornerstone in that it affected the availability of the A train EBR chiller. This finding was determined to be of very low safety significance because there was no design or qualification deficiency, no loss of system safety function, no actual loss of safety function, and the finding was not potentially risk significant due to external events. This finding is associated with the cross-cutting area of human performance because maintenance personnel did not follow an established maintenance procedure.

Inspection Report# : [2006004](#) (*pdf*)

Significance:  Oct 06, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Inappropriate Crediting of Operator Restoration Actions Causes Inadequate Risk Assessment

The inspectors identified a non-cited violation of 10 CFR 50.65(a)(4) for failure to perform an adequate risk assessment for maintenance and testing activities affecting the emergency gas treatment system (EGTS) and auxiliary building gas treatment system (ABGTS). The licensee inappropriately credited EGTS as being available when restoration actions for EGTS were not contained in a written procedure or work order. This resulted in the licensee being in a Yellow risk condition requiring risk management actions. The licensee entered the deficiency into their corrective action program for resolution.

This finding is more than minor per MC 0609 Appendix E, example 7.e, because the licensee failed to perform an adequate risk assessment prior to conducting online maintenance. When correctly assessed, the risk would have put the plant into a higher risk category and require risk management actions. The licensee's risk assessment inappropriately credited EGTS restoration actions which were not proceduralized. The finding is of very low safety significance because the incremental large early release probability deficit was less than 1 E-7. The cause of this finding affected the cross-cutting aspect of human performance because the licensee did not appropriately plan work activities using risk insights by depending on restoration actions that were not proceduralized to reduce risk.

Inspection Report# : [2006004](#) (*pdf*)

Significance:  Oct 06, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Have an AFW Autostart Signal on Loss of All MFW Pumps During Plant Startup

The inspectors identified a non-cited violation of Technical Specifications (TS) 3.0.4 for entering Modes 1 and 2 with the automatic auxiliary feedwater start signal for a loss of normal feedwater (TS 3.3.2.6.e) inoperable. The licensee inappropriately concluded this function was operable when a turbine-driven main feedwater pump trip bus was energized even though the pump was not running and supplying feedwater to the steam generators.

The finding is more than minor because it is associated with the Mitigating Systems Cornerstone and affected the cornerstone objective of ensuring that the operability, availability, reliability, or function of systems that respond to initiating events to prevent undesirable consequences is maintained. The licensee entered Modes 1 and 2 and operated up to 18% power without an auxiliary feedwater start signal for a loss of main feedwater when the stand-by main feedwater pump was the sole source of feedwater. Using MC 0609, Appendix A, the finding was determined to be of very low safety significance because the finding did not represent a loss of system safety function, did not represent actual loss of safety function of a single train for greater than its TS allowed outage time, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

Inspection Report# : [2006004](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Comply with Technical Specification Required Actions for Two Inoperable Containment High Range Radiation Monitors

An NRC-identified non-cited violation of Technical Specification 3.3.3, "Post Accident Monitoring (PAM) Instrumentation," was identified for failure to take the required actions when the containment high range radiation monitors were not restored to operable status within the allowed outage time. The licensee has entered this violation into their corrective action program for resolution.

The finding is more than minor because it is associated with the facilities and equipment attribute of the Emergency Preparedness Cornerstone and affects the cornerstone objective planning standard of 10 CFR 50.47(b)(8). The finding is of very low safety significance because the performance deficiency was a failure to comply with a non-risk significant planning standard and no planning standard function failure occurred. The cause of the finding is related to the cross-cutting element of problem identification and resolution, in that, the licensee failed to adequately evaluate the condition for impact on equipment operability.

Inspection Report# : [2006003](#) (*pdf*)

Significance:  Jun 30, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to perform air quality test for compressors used to supply emergency preparedness SCBA breathing air tanks

An NRC-identified non-cited violation of 10 CFR 50.47(b)(8) was identified for the failure to maintain respiratory protection equipment required for emergency response activities. Specifically, from October 2004 through April 2006, the licensee failed to conduct semiannual breathing air quality surveillances for the Service Building high pressure compressor used to fill self-contained breathing air tanks maintained to support emergency preparedness activities.

This finding is greater than minor because it is associated with the response organization performance attribute of the Emergency Preparedness Cornerstone and adversely affects the cornerstone objective of ensuring the licensee is capable of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Failure to maintain respiratory protective equipment for emergency response personnel could result in the impairment of

individuals performing their specified emergency response functions. This finding was evaluated using the Emergency Preparedness Significance Determination Process and was determined to be of very low safety significance because there were no maintenance activities for the compressor system during the subject period that could potentially affect air quality, and subsequent breathing air test results conducted in April 2006 met Grade D air standards. The licensee has entered this finding in its corrective action program as Problem Evaluation Report Number 100604 and is evaluating corrective action to be taken.

Inspection Report# : [2006003](#) (*pdf*)

Occupational Radiation Safety

G

Significance: Jun 30, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to establish controls in such a way as does not prevent individuals from exiting a high radiation area

A self-revealing non-cited violation of 10 CFR 20.1601(d) was reviewed by the inspectors for failure to establish controls in a way that does not prevent individuals from exiting a high radiation area. This event involved workers being locked inside the containment.

The finding is greater than minor because it is associated with the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affects the cornerstone objective of ensuring the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. Failure to maintain a means of egress from a posted high radiation area could result in radiation exposures that are only limited by the actual dose rates and the period of time that the individuals remain in the area. This finding was evaluated using the Occupational Radiation Safety Significance Determination Process and was determined to be of very low safety significance because the individuals were able to wait in a relatively low dose waiting area and the period in which they were locked in was relatively short (25 minutes). The licensee has entered this finding in its corrective action program as Problem Evaluation Report Number 96865 and has established corrective actions which should reduce the likelihood of reoccurrence.

Inspection Report# : [2006003](#) (*pdf*)

G

Significance: Jun 30, 2006

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to use procedural controls to control occupational exposure

A self-revealing non-cited violation of 10 CFR 20.1101(b) was reviewed by the inspectors for failure to use, to the extent practical, procedural and engineering controls based on sound radiation protection principles to achieve occupational doses that are as low as reasonably achievable. The Radiation Work Permit (RWP) used for setting the reactor head was not revised to reflect a change in work scope and radiological conditions. The workers were allowed to exceed their electronic dosimeters dose and dose rate alarm settings which resulted actual dose received greatly exceeding RWP allowances.

This finding is more than minor because it is associated with the program and process attribute of the Occupational Radiation Safety Cornerstone and adversely affects the cornerstone objective of ensuring the adequate protection of the worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The failure by radiation protection personnel to properly evaluate the change in work scope and conditions and to follow established procedural requirements resulted in three individuals exceeding RWP dose limits. This finding was evaluated using the Occupational Radiation Safety Significance Determination Process and was determined to be of very low safety significance because the individuals did not exceed regulatory dose limits and the licensee's three year rolling average for occupational exposure is less than 135 rem. The licensee has entered this finding in its corrective action program as Problem Evaluation Report Numbers 90814, 91648, and 92759 and has implemented corrective actions. The cause of the finding is related to the cross-cutting element of human performance, in that, individuals were allowed to continue working with dosimeters in alarm and outside RWP requirements for exposure control.

Inspection Report# : [2006003](#) (*pdf*)

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Last modified : June 01, 2007