

# Watts Bar 1

## 3Q/2007 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:**  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Promptly Correct an Identified Procedural Deficiency Prior to Subsequent Maintenance**

Green. The inspectors identified 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. The licensee failed to correct, in a timely manner, a procedural deficiency associated with the setup of HFA relays. As a result, the B-train safety injection pump (SIP) was inoperable in excess of the time limits prescribed by the associated technical specification limiting condition for operation. The licensee has entered the issue into their corrective action program and revised the associated maintenance procedure.

The finding is more than minor because it is 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 of the duration that the B Train SIP was unavailable and the availability of the A Train SIP. The finding directly involved the cross-cutting area of Problem Identification and Resolution under the appropriate and timely corrective actions aspect of the Corrective Action Program component; in that, prior to subsequent maintenance on safety-related equipment, the licensee failed to revise a maintenance instruction that had been previously determined to be inadequate (P.1(d)). (Section 1R12)

Inspection Report# : [2007004](#) (*pdf*)

**Significance:**  Sep 30, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Promptly Correct the Failure of Safety Injection Relief Valves to Reseat after Actuation**

Green. The inspectors identified 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. The licensee failed to identify incorrect as-found nozzle ring settings on safety injection relief valves. The as-found settings were significantly incorrect as to effect the proper reseal pressure for the relief valves. The licensee has identified a long-standing condition of safety injection relief valves failing to reseat while the Safety Injection Pumps (SIPs) are running. Failure of the relief valves to reseat has required the licensee to reduce the assumed margin in the peak cladding temperature by 120° Fahrenheit. The licensee has entered the failure to identify nozzle ring configuration control into the 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 and adversely affects the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events and, if left uncorrected, could have a more significant impact on core peak cladding temperature. The inspectors evaluated this finding using IMC 0609, Appendix A, and determined it to be of very low safety significance (Green). The finding directly involved the cross-cutting area of Problem Identification and Resolution under the implementation and institutionalizing of Operating Experience aspect of the Operating Experience component; in that, the licensee failed to properly implement and institutionalize operating experience through changes to station procedures (P.2(b)).(Section 4OA2.3)

**Significance:**  Jun 30, 2007

Identified By: NRC

Item Type: FIN Finding

**Inadequate Risk Assessment for Work In Progress (Section 1R13)**

Green. The inspectors identified a finding associated with 10 CFR 50.65 (a)(4), Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants, for the licensee's failure to perform an adequate risk assessment which resulted in an underestimation of the risk associated with performing a planned maintenance activity on the 1B residual heat removal pump. The licensee entered the issue into their corrective action program for resolution as Problem Evaluation Report (PER) 124269.

The finding is more than minor because, when assessed correctly, the planned maintenance would put the plant into a higher licensee-established risk category. The inspectors determined that the finding was of very low safety significance because of the duration of the inadequate risk assessment. The inspectors concluded the cause of the finding had no definitive cross-cutting aspect that was reflective of current licensee performance. (Section 1R13)

Inspection Report# : [2007003](#) (pdf)

**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.]

**Significance:**  Oct 31, 2006

Identified By: NRC

Item Type: NCV NonCited Violation

**Fire Header Inoperable Due to Failure to Follow Procedure**

The inspectors identified a non-cirted 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.

**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)

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## **Barrier Integrity**

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## **Emergency Preparedness**

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## **Occupational Radiation Safety**

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## **Public Radiation Safety**

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## **Physical Protection**

Although the NRC is actively overseeing the Security cornerstone, the Commission has decided that certain findings pertaining to security cornerstone will not be publicly available to ensure that potentially useful information is not provided to a possible adversary. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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## **Miscellaneous**

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