

Watts Bar 1

1Q/2004 Plant Inspection Findings

Initiating Events



Significance: Mar 27, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Follow Procedure for Reactor Protection System Testing

Green. Licensee technicians failed to follow a reactor protection system surveillance instruction and caused a reactor trip.

This finding was a self-revealing non-cited violation of Technical Specifications (TS) 5.7.1. This finding was more than minor because it affected the initiating events cornerstone by causing a reactor trip. It was of very low safety significance because it did not contribute to the likelihood of a primary or secondary system loss of coolant accident (LOCA) initiator, did not contribute to a loss of mitigation equipment functions, and did not increase the likelihood of a fire or internal/external flood. The cause of the finding is related to the cross-cutting element of human performance.

Inspection Report# : [2004002\(pdf\)](#)



Significance: Apr 05, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Define the Root of the Weld or Root Pass in G-29 General Welding Procedure Specification.

Green. A licensee welding procedure was determined to be inadequate because it defined the root pass of a weld as up to two layers, while applicable codes and standards defined a pass as a single layer. This allowed the licensee to perform Liquid Penetrant (PT) examinations on the second layer of welds instead of the first layer or root of the weld. This practice could mask defects existing in the root pass or root of the weld.

An inspector-identified, non-cited violation of 10 CFR 50, Appendix B, Criteria IX, Control of Special Processes, was identified. This finding is greater than minor because it affected the objective of the Initiating Events cornerstone. Failure to perform a PT on the root pass of certain welds could allow weld defects in the root pass to remain undetected. Undetected defects could develop into cracks or other problems later and impact component or system safety. The issue was determined to be of very low safety significance based upon no actual failure of welds.

Inspection Report# : [2003002\(pdf\)](#)



Significance: Apr 05, 2003

Identified By: Self Disclosing

Item Type: FIN Finding

Inadequate Preventative Maintenance of C-phase Main Transformer Potential Device.

Green. A self-revealing finding was identified for inadequate preventative maintenance (PM) work instructions for an electrical connection associated with the potential device on the C-phase main transformer. Problems with the PM caused a ground fault which resulted in a reactor trip.

This self-revealing finding is greater than minor because it resulted in a perturbation in plant stability by causing a reactor trip. The finding was of very low safety significance because, although it caused a reactor trip, it did not increase the likelihood of a primary or secondary system loss of coolant accident (LOCA) initiator, did not contribute to a combination of a reactor trip and loss of mitigation equipment functions, and did not increase the likelihood of a fire or internal/external flood. The finding was not a violation of regulatory requirements because it occurred on nonsafety-related secondary plant equipment.

Inspection Report# : [2003002\(pdf\)](#)

Mitigating Systems

G**Significance:** Mar 27, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Surveillance Instruction Resulting in Gas Accumulation in ECCS Piping

Green. The inspectors identified an inadequate procedure involving the control of emergency core cooling system (ECCS) venting. The performance deficiency resulted in an unexpected accumulation of gas in the RHR system

This finding was a non-cited violation of TS Surveillance Requirement (SR) 3.5.2.3. It is more than minor because it degraded the residual heat removal injection function of the mitigating system cornerstone by allowing a significant accumulation of gas in the injection lines. This finding is of very low safety significance because it did not result in a loss of function per Generic Letter 91-18, did not represent an actual loss of safety function, and was not potentially risk-significant due to external events.

Inspection Report# : [2004002\(pdf\)](#)G**Significance:** Mar 27, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Corrective Action to Control ECCS Venting

Green. The inspectors identified that the licensee's corrective actions for previous venting ECCS problems were inadequate.

This finding is a non-cited violation of 10 CFR, Part 50, Appendix B, Criterion XVI, Corrective Action. This finding is more than minor because it affected the mitigating system cornerstone. A resultant accumulation of gas adversely impacted the capability of the B safety injection pump to perform its accident mitigation function. This finding is of very low safety significance because it did not result in an actual loss of safety function, and was not potentially risk-significant due to external events. The cause of the finding is related to the cross-cutting element of problem identification and resolution.

Inspection Report# : [2004002\(pdf\)](#)G**Significance:** Dec 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Operability Evaluation Results in Exceeding the OR Time Limit for Returning Electric Driven Fire Pumps to Operable Status

The inspectors identified that the Fire Protection Report Operating Requirement (OR) bases were incorrectly interpreted to allow the electric-driven fire pumps (EDFPs) to be considered operable with the automatic start circuit disabled. As a result, the licensee failed to return the EDFPs to an operable status within the time specified by the FPR.

This finding is a more than minor non-cited violation of OR 14.2.3 because it affected the mitigating systems cornerstone by degrading fire suppression equipment capability. The EDFPs would have to be manually started by the control room operators to respond to a fire. The finding is of very low safety significance (Green) because the diesel-driven fire pump was available, the fire detection system was not degraded, and fire brigade performance has been effective. In addition, the main control room operators were aware that the automatic start feature was disabled and the EDFPs could be manually started from the main control room. The cause of the finding is related to the cross-cutting element of human performance.

Inspection Report# : [2003005\(pdf\)](#)G**Significance:** Dec 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Seal Not Installed in a Cable Conduit Penetrating a Fire Barrier

The inspectors identified that a seal was not installed in a conduit penetrating a fire barrier in the Fifth Vital Battery Room.

This finding is a non-cited violation of Fire Protection Report Operating Requirement 14.2.8. It is more than minor because it affected the mitigating system cornerstone by adversely impacting the capability of the wall to provide the required fire resistance. It was of very low safety significance (Green) because the Fifth Vital Battery was not continuously used, the fire detection and suppression systems were not degraded and fire brigade performance has been effective.

Inspection Report# : [2003005\(pdf\)](#)

G**Significance:** Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure to Implement Contingency Actions

The use of a non-quality procedure, TI-124, with a note to implement required contingency actions for a Unit 1 diesel generator planned outage of greater than 72 hours resulted in a failure to adequately implement the contingency actions.

The inspectors identified a NCV of 10 CFR, Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings. The finding is more than minor in that, if left uncorrected, it would become a more significant safety concern. The inspectors referred to MC 0609, Significance Determination Process (SDP), Appendix A, and determined the finding was of very low safety significance.

Inspection Report# : [2003004\(pdf\)](#)G**Significance:** Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedure for ESF Testing

The 18-Month Loss of Offsite Power with Safety Injection Test of DG 1A-A, was not accomplished in accordance with procedure 0-SI-82-3. Consequently, the unit experienced an interruption of core cooling which resulted in the Loop 4 hot leg temperature increasing approximately 17 degrees Fahrenheit over a period of approximately 10 minutes.

The inspectors identified a non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Section V, Instructions, Procedures, and Drawings. The finding is more than minor in that it affects the mitigating systems cornerstone objective and degrades the attribute of protection against loss of coolant for the core. The finding is of very low safety significance based on the low duration during which the flow was lost and the small increase in hot leg temperature during that period.

Inspection Report# : [2003004\(pdf\)](#)G**Significance:** Jun 28, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Adequately Perform a Post-Maintenance Test

Green. The inspectors identified a non-cited violation of Technical Specification (TS) 5.7.1, Procedures, which requires that written procedures be implemented covering programs such as TS 5.7.2.11, In-service Testing Program. Standard Programs and Processes (SPP)-6.3, Pre-/Post-Maintenance Testing (PMT), specifies the process for an adequate PMT and references the inservice testing program. Contrary to this, the procedure used to rebuild the component cooling system thermal barrier booster pump (TBBP) 1A did not specify the required inservice flow test prior to returning the pump to service. The licensee consequently failed to specify and perform a required flow test PMT prior to returning the pump to service.

The finding is more than minor in that it affects the mitigating systems cornerstone objective and the attribute of protection against the external factor of fire (the pump is credited for response). In addition, a continuation of similar deficient PMTs on this component would become a more significant safety concern in that the absence of a PMT flow test would not allow the detection of an internal pump problem. The finding is of very low safety significance based on the low fire ignition frequencies in the areas that require use of TBBP 1A, the availability of TBBP 1B, and the short duration of time between the return to service of the pump and subsequent completion of a successful flow test.

Inspection Report# : [2003003\(pdf\)](#)G**Significance:** May 02, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate corrective action for a previous NCV.

Green. The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, for a failure to correct problems in the post maintenance test program that had resulted in a previous non-cited violation. Corrective actions for the previous violation called for lessons learned to be issued so that specific test conditions would be used on work orders. However, in April 2003, the licensee used non-specific conditions, such as, normal operating temperature and pressure, in the work order for testing a diesel generator jacket water temperature switch. The technician subsequently did the test without waiting for the jacket water to fully warm to operating temperature. The team also identified numerous similar examples in other work orders.

This finding is greater than minor because, if left uncorrected, it would at some time result in more significant occurrences of testing under incorrect conditions. The finding was of very low safety significance because the diesel jacket water testing was later successfully done at the correct conditions and the other work orders did not actually test under incorrect conditions.

Inspection Report# : [2003008\(pdf\)](#)

Barrier Integrity

**Significance:** Dec 27, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Failure to Meet TS 3.0.4 Requirements for an Inoperable 1B-B Containment Spray System

The licensee changed plant modes from Mode 5 to Mode 1 with the 1B-B containment spray (CS) pump inoperable, contrary to Technical Specification (TS) requirements.

This finding was a self-revealing non-cited violation for failing to comply with the requirements of Technical Specification 3.0.4. It is more than minor because if the 1B-B CS pump would not have started if called upon to fulfill its safety functions. The finding therefore affected the mitigating system and barrier integrity cornerstones. This finding was of very low safety significance (Green) because the opposite train CS pump was available and operator action to rack in the breaker could be credited. Additionally, because the net change in core damage frequency was low, the Large Early Release of Fission Products (LERF) change was of very low safety significance. The cause of the finding is related to the cross-cutting element of human performance.

Inspection Report# : [2003005\(pdf\)](#)**Significance:** Sep 27, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Procedure and Failure to Follow Procedure for Control of Containment Penetrations

Technical Instruction (TI)-68.002, Containment Penetrations and Closure Control, was implemented as a contingency action during periods of elevated risk for the containment barrier during refueling outages. However, TI-68.002 was inadequately implemented in that Appendix B forms for containment penetration breaches had insufficient information to perform an evaluation for approval or were not appropriately handled per procedure.

The inspectors identified a NCV of Technical Specifications (TS) 5.7.1 which requires that written procedures be implemented and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2. The finding is more than minor in that, if left uncorrected, a more significant safety concern involving degraded control of containment closure and consequential loss of the containment barrier could occur. The finding is of very low safety significance in that subsequent evaluation of penetration closure locations either determined that containment penetrations could be closed within the required time or were approved by the responsible operations personnel and documented as required.

Inspection Report# : [2003004\(pdf\)](#)

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

Miscellaneous

Significance: N/A May 02, 2003

Identified By: NRC

Item Type: FIN Finding

Biennial Problem Identification & Resolution (PI&R) Inspection Results

The team determined that the licensee was identifying plant deficiencies at an appropriately low level and effectively entering them into their corrective action program. After review of numerous items and several tracking databases, the team was only able to identify a few deficiencies that had not been previously self-identified. The team also determined that the licensee was generally prioritizing and evaluating issues properly. The team concluded, however, that the licensee's selection of the proper corrective actions to fix problems and the follow-through on those actions could be improved. The team found several performance deficiencies in this area. Except for one finding associated with the failure to correct problems in the post-maintenance testing program, the licensee was generally providing effective corrective actions. On the basis of interviews conducted during this inspection, workers at the site felt free to put safety findings into the corrective action program.

Inspection Report# : [2003008\(pdf\)](#)

Significance: SL-II Jun 16, 2001

Identified By: NRC

Item Type: VIO Violation

EMPLOYEE PROTECTED ACTIVITY

On February 7, 2000, a Severity Level II violation with a proposed civil penalty was issued to the licensee. The violation related to corporate activities and involved employment discrimination contrary to the requirements of 10 CFR 50.7, "Employee Protection," in that the licensee did not select a former employee to a competitive position in the corporate chemistry organization in 1996, due, at least in part, to his engagement in protected activities. On January 22, 2001, the licensee denied the violation and on May 4, an Order was issued sustaining the violation and imposing the civil penalty. On June 1, TVA requested an enforcement hearing on the Order.

Inspection Report# : [2001002\(pdf\)](#)

Last modified : May 05, 2004