

## Browns Ferry 3

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### Initiating Events



**Significance:** Sep 23, 2000

Identified By: Self Disclosing

Item Type: FIN Finding

#### **An Inadequate Procedure Results in a Unit 3 Automatic Reactor Scram**

A Unit 3 automatic reactor scram, that was caused by a pressure perturbation on the variable leg of a non-safety-related reactor vessel level instrumentation, revealed an inadequate procedure, that did not contain sufficient detail to assure that the level instrument was returned to service without perturbing the reactor instrument sensing lines. The finding had very low safety significance because all mitigation systems remained operable and barrier integrity was not challenged.

Inspection Report# : [2000004\(pdf\)](#)



**Significance:** Jun 24, 2000

Identified By: NRC

Item Type: NCV NonCited Violation

#### **FAILURE TO MEET REACTOR MODE SWITCH TECHNICAL SPECIFICATION**

A non-cited violation of Technical Specification (TS) 3.3.1.2 was identified for operators placing the Unit 3 reactor mode switch out of the shutdown position to perform reactor mode switch testing with less than the required number of operable source range monitors (SRMs). The finding had very low safety significance because the requirements of TS 3.10.2 (i.e., no core alterations and all control rods inserted) were maintained at all times during reactor mode switch testing. In addition, the required TS surveillance required for SRM operability was subsequently completed satisfactorily on the A, B, and D SRMs.

Inspection Report# : [2000003\(pdf\)](#)



**Significance:** Jun 24, 2000

Identified By: Licensee

Item Type: NCV NonCited Violation

#### **FAILURE TO MEET CONTROL ROD TESTING TECHNICAL SPECIFICATION**

A non-cited violation of Technical Specification 3.9.4 was identified for operators' failure to comply with the action statement requiring insertion and disarming of a control rod with a malfunctioning "full in" position indicating light during control rod testing on Unit 3. The finding had very low safety significance because administrative controls were in place to prevent more than one control rod from being withdrawn at any given time during the test.

Inspection Report# : [2000003\(pdf\)](#)

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### Mitigating Systems

**Significance:** SL-IV Sep 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

#### **FAILURE TO MEET 10 CFR 50.59 REQUIREMENTS.**

The inspectors identified a Severity Level IV non-cited violation for failure to meet 10 CFR 50.59 requirements, in that the safety evaluation conducted as required by 10 CFR 50.59 did not adequately provide the basis that a procedure change would not result in more than a minimal increase in the likelihood of occurrence of a malfunction of equipment important to safety previously evaluated in the Updated Final Safety Analysis Report. The finding's underlying technical issue was evaluated and determined to be of very low safety significance because in the worst case scenarios only a single train of equipment would malfunction because of, for example, a severe pipe failure, and the Technical Specifications would govern.

Inspection Report# : [2001003\(pdf\)](#)



**Significance:** Sep 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

#### **ERROR IN ANALYSIS OF RHR SYSTEM RESULTS IN FAILURE TO MEET APPENDIX R, CRITERION III.L.2.B**

The inspectors identified a non-cited violation for failure to meet 10 CFR 50, Appendix R, Criterion III.L.2.b requirements for alternative shutdown involving loss of the residual heat removal (RHR) function following certain postulated fires. The RHR function would have been lost due to inadvertent closure of the RHR pump minimum flow control valves due to fire damage to control cables, because the cables were not protected as required by 10 CFR 50, Appendix R. This finding was of very low safety significance because the initiating event was of relatively low frequency and that fire suppression systems and diverse systems for core heat removal remained available.

Inspection Report# : [2001003\(pdf\)](#)



**Significance:** Mar 24, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

#### **INADEQUATE EVALUATION OF RHR SYSTEM FLOW RATE TEST RESULTS**

A non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI (Test Control) was identified for not properly evaluating quarterly residual heat removal (RHR) system flow rate test results on Units 2 and 3. Flow rate tests performed since the implementation of temporary alterations on July 27, 2000, which maintained the systems' minimum flow bypass valves in the open position during normal operations, were not properly evaluated to ensure that Technical Specification (TS) required system parameters would be satisfied with the systems in service. This finding was considered to be of very low safety significance because subsequent evaluation of the test data showed that TS surveillance requirements were satisfied and no loss of safety function of the RHR system occurred.

Inspection Report# : [2000006\(pdf\)](#)

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## Barrier Integrity



**Significance:** Dec 22, 2001

Identified By: NRC

Item Type: NCV NonCited Violation

#### **FAILURE TO OBTAIN REQUIRED PERMITS TO BLOCK OPEN RESTRICTED DOORS**

The inspectors identified a non-cited violation for failure to meet Technical Specification 5.4.1.a (Procedures). A barrier door for the control room pressure envelope was not maintained closed. The door was blocked open for over three hours, resulting in both trains of the control room emergency ventilation system being out-of-service in excess of the allowed TS outage time. The finding affected the integrity of the control room envelope, but was considered to be of very low safety significance because it represented a degradation of the radiological barrier function provided for the control room only.

Inspection Report# : [2001004\(pdf\)](#)

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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

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## Miscellaneous

**Significance: N/A** Jun 24, 2000

Identified By: NRC

Item Type: FIN Finding

### SUPPLEMENTAL INSPECTION TO ASSESS LICENSEE EVALUATION OF UNIT 3 HEAT REMOVAL SYSTEM UNAVAILABILITY PERFORMANCE INDICATOR

A supplemental inspection was conducted in accordance with Inspection Procedure 95001, Inspection for One or Two White Inputs in a Strategic Area. The purpose of the inspection was to assess the licensee's evaluation associated with a Unit 3 White PI [Safety System Unavailability for the Heat Removal System, Reactor Core Isolation Cooling (RCIC)]. On December 30, 1998, during a manual start of the Unit 3 RCIC to perform a TS surveillance, there was no turbine speed indication in the control room, although there was indication of pump flow and pressure. A broken connector was found on the wiring to the turbine speed sensor. The licensee considered the sensor cable connector failure to have been an isolated, random failure, with possible damage due to personnel working in the area with the connector disconnected and hanging loose (the connector was not as vulnerable when assembled). The licensee stated that it could not determine the exact cause of the failure because the internal parts of the connector could have been broken for an extended period and the connector still could perform its function, as long as the pins were making contact. Although Unit 2 was not inspected at the time of the identification on Unit 3, subsequent disassembly and inspection on January 14, 2000, not related to the Unit 3 failure, did not identify any degradation of the connector on the Unit 2 RCIC. The licensee's corrective actions were appropriate for the circumstances.

Inspection Report# : [2000003\(pdf\)](#)

**Significance: SL-III** Jun 24, 2000

Identified By: NRC

Item Type: VIO Violation

### FAILURE TO IMPLEMENT MEASURING AND TEST EQUIPMENT PROCEDURES

An apparent violation of Technical Specification (TS) 5.4.1 was identified for apparent deliberate failure to implement measuring and test equipment (M&TE) control procedures which resulted in approximately 500 nonconformance evaluations either not being issued or completed for M&TE which had been identified as out-of-tolerance or otherwise meeting the criteria for evaluation. [A Severity Level III Violation was issued in a Notice of Violation enclosed in an NRC letter to the licensee, dated October 27, 2000, for the failure to adhere to the licensee's procedures as required by TS 5.4.1, related to out-of-tolerance M&TE.]

Inspection Report# : [2001004\(pdf\)](#)

Inspection Report# : [2000003\(pdf\)](#)

**Significance: N/A** Dec 21, 2001

Identified By: NRC

Item Type: FIN Finding

### IDENTIFICATION AND RESOLUTION OF PROBLEMS

The licensee was effective at identifying problems and placing them into the corrective action program. The licensee's effectiveness at problem identification was evident by the relatively few deficiencies identified by external organizations, including the NRC, that had not been previously identified by the licensee. Corrective actions were generally implemented in a timely manner and effective in correcting the equipment deficiencies. Audits and assessments were found to be thorough and self-critical. Findings and problems identified by the audits and assessments were consistent with the inspectors' observations. The use of problem evaluation reports (PERs) to identify lower threshold problems (level "D" PERs) and place them into the trending program was considered generally adequate to monitor problems before they resulted in a more significant one. However the inspectors found instances where low level personnel contamination events (PCEs) were not being reported via the corrective action program (i.e., level D PER) for trending. The inspection did not identify significant differences between the licensee's assessment of their overall condition of the corrective action program and the NRC program assessment. A safety conscious work environment was evident.

Inspection Report# : [2001007\(pdf\)](#)

**Significance: SL-II** Jun 23, 2001

Identified By: NRC

Item Type: VIO Violation

### EMPLOYEE PROTECTED ACTIVITY

On February 7, 2000, a Severity Level II violation with civil penalty was issued to the licensee. The violation was not site-specific 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\(pdf\)](#)

**Significance: N/A** Jan 26, 2001

Identified By: NRC

Item Type: FIN Finding

### IDENTIFICATION AND RESOLUTION OF PROBLEMS

The licensee was effective at identifying problems and placing them into the corrective action program. The licensee's effectiveness at problem identification was evident by the relatively few deficiencies identified by external organizations, including the NRC, that had not been previously identified by the licensee. The licensee appropriately evaluated individual problems based on risk significance when establishing schedules for

implementing corrective actions. Corrective actions were generally implemented in a timely manner. Findings and problems identified by licensee audits and assessments were consistent with the inspectors' observations. A safety conscious work environment was evident.  
Inspection Report# : [2000007\(pdf\)](#)

Last modified : March 29, 2002