

# Browns Ferry 2

## 2Q/2008 Plant Inspection Findings

---

### Initiating Events

---

### Mitigating Systems

**Significance:**  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Identify and Correct Deficiencies in Degraded Flood Protection Doors**

The NRC identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, for the licensee's failure to identify and correct deficiencies in watertight doors that protect the safety-related Residual Heat Removal Service Water pumps and Emergency Equipment Cooling Water pumps from external flooding. The licensee issued work orders to correct the conditions and entered the issue into their corrective action program as Problem Evaluation Reports 133891 and 134346.

This finding was more than minor because it affects the External Factors (Flood Hazard) attribute of the Mitigating Systems Cornerstone. It impacted the cornerstone objective of ensuring the availability, reliability, and operability of safety-related pumps to perform their intended safety function during a design basis flooding event. A Significance Determination Process Phase 3 analysis determined that the finding was of very low safety significance because of the low likelihood of the design basis flood. The finding was directly related to the cross-cutting aspect of procedural compliance of the work control component of the cross-cutting area of Human Performance. Mechanics were not complying with quarterly work orders and maintenance procedure to assure functionality of the watertight doors (H.4 (b)).

Inspection Report# : [2008003](#) (*pdf*)

**Significance:**  May 02, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to prevent recurrence of stem-to-disc separation events in residual heat removal service water heat exchanger outlet valves**

The inspectors identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, for the licensee's failure in March, 2000, to take action to preclude repetition of stem-to-disc separation events in residual heat removal heat exchanger service water outlet valves.

The finding is more-than-minor, because if left uncorrected the condition would become a more significant safety and regulatory concern. In Phase 1 of the SDP, described in IMC 0609, Attachment 4, this finding screened as Green because it affected the Mitigating Systems cornerstone and was a design deficiency confirmed not to result in loss of operability or functionality. The finding has a cross-cutting aspect in the area of problem identification and resolution (P.1(c)) because the licensee did not thoroughly evaluate a problem such that the resolutions addressed causes and extents of condition (P.1(c)).

Inspection Report# : [2008009](#) (*pdf*)

**Significance:**  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Inadequate Corrective Actions To Ensure Sufficient Alternate Shutdown Cooling Flow During Appendix R Events**

The inspectors identified a Green non-cited violation of Unit 2 License Condition 2.C (14), and Unit 3 License Condition 2.C (7), Fire Protection Report, Appendix R Safe Shutdown Program, for failing to establish the required compensatory measures to provide equivalent safe shutdown capability in lieu of the incorrect operating pressure band specified by the Safe Shutdown Instructions for Alternate Shutdown Cooling. A Priority 1 Operator Work Around was initiated and the station's Safe Shutdown Instructions were subsequently revised to incorporate the correct pressure band. This finding was entered into the licensee's corrective action program as Problem Evaluation Reports 109829 and 133483.

This finding was considered more than minor because if left uncorrected it could result in a more significant safety concern regarding the operator's ability to safely shutdown the plant and maintain adequate shutdown cooling during an Appendix R fire. This finding is also associated with the Protection Against External Factors attribute of the Reactor Safety/ Mitigating Systems cornerstone. According to IMC 0609, Appendix F, Fire Protection SDP, Phase 1 this finding was determined to be of very low safety significance because the assigned Degradation Rating was considered to be Low since Alternate Shutdown Cooling flow was minimally impacted even with an inaccurate operating pressure band due to the inherent plant design. The cause of this finding was directly related to the aspect of appropriate and timely corrective action in the cross-cutting area of Problem Identification and Resolution (Corrective Action component) because the licensee did not take appropriate corrective actions to address a safety issue by failing to incorporate the required interim actions into an Operator Work Around (P.1(d)).

Inspection Report# : [2007005](#) (pdf)

**Significance:**  Dec 14, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Perform ASME Inspections of Safety-Related Piping.**

The inspectors identified a Green non-cited violation of 10 CFR 50.55a(g)4 Codes and Standards. Specifically, the licensee failed to perform required code inspections of accessible portions of safety-related piping. The licensee entered this issue into their corrective action program.

This finding is more than minor because if left uncorrected it would become a more significant safety concern. The failure to perform required inspections of safetyrelated piping could have allowed undetected through-wall flaws to remain in-service. These undetected flaws could grow in size until leakage from the piping degrades system operation, or if sufficient general corrosion occurs, a gross rupture or collapse of the piping could occur. The finding is of very low safety significance because the finding did not represent a loss of safety function. The cause of the finding is related to the cross-cutting element of problem identification and resolution under the operating experience aspect of the corrective action component [P.2(b)].

[Section 1R21.4]

Inspection Report# : [2007007](#) (pdf)

**Significance:**  Dec 14, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

**Corrective Actions for Cable Submersion Were Not Effective.**

The inspectors identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. Specifically, the licensee failed to correct a cable submergence issue which resulted in the failure of a safety-related cable.

This finding is more than minor because it is associated with the equipment performance attribute of the 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. The finding is of very low safety significance because the finding was not a design or qualification deficiency, and did not represent a loss of safety function because the redundant train was available. The cause of the finding is related to the cross-cutting element of problem identification and resolution under the licensee thoroughly evaluates problems aspect of the corrective action component [P.1(c)].

Inspection Report# : [2007007](#) (pdf)

---

# Barrier Integrity

---

## Emergency Preparedness

---

## Occupational Radiation Safety

---

## Public Radiation Safety

**Significance:**  Jun 30, 2008

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Failure to Secure Stored Radioactive Material from Unauthorized Removal**

A Green, self-revealing non-cited violation of 10 CFR 20.1801 was identified for the licensee's failure to secure stored radioactive material from unauthorized removal. On August 14, 2007, a shipment of "clean" scrap metal from Browns Ferry alarmed the truck monitor at a vendor recycling facility. Using a hand-held survey instrument, the vendor identified the contaminated item to be a small (4 ounces) metal can containing pipe threading compound. Subsequently, upon arrival at the site, licensee personnel retrieved the item and performed radiation surveys as necessary. The finding was entered into the licensee's corrective action program as Problem Evaluation Report 128870.

This finding was more than minor because it was associated with the Public Radiation Safety cornerstone attribute of program and process and it affected the associated cornerstone objective because the failure to secure stored radioactive material from removal did not ensure the adequate protection of public health and safety from exposure to radiation. The finding was evaluated using the Public Radiation Safety Significance Determination Process and was determined to be of very low safety significance because the failure to secure radioactive material from removal was a finding in the radioactive material control program that did not result in a public exposure exceeding 5 mrem. The cause of this finding was related to the evaluation of identified problems cross-cutting aspect in the corrective action component of the Problem Identification and Resolution cross-cutting area because evaluations performed by the licensee subsequent to previous radioactive material control events had failed to thoroughly evaluate and identify the weaknesses in the radioactive material control program (P.1(c)).

Inspection Report# : [2008003](#) (*pdf*)

---

## 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.

---

## Miscellaneous

**Significance:** N/A Aug 24, 2007

Identified By: NRC

Item Type: FIN Finding

### **Problem Identification and Resolution**

The licensee was effective in identifying problems at a low threshold and entering them into the CAP. Issues were typically properly characterized and evaluations such as root causes were sufficiently thorough and detailed. Strong management oversight of the CAP was evident. Initial prioritization of issues and corrective actions appeared to be appropriate to risk and program guidance; however, numerous delays in completion of corrective actions had led to increased backlogs in closure of Problem Evaluation Reports (PERs). Recent management attention had resulted in the backlogs beginning to decrease at the time of this inspection. In addition, the inspectors concluded that the licensee had been slow to effect significant improvement in equipment reliability based on the number of equipment problems and timeliness of corrective actions. Also, some repeat problems, such as, adequacy of corrective action implementation were noted; however, these problems were improved from previous inspections.

The licensee was effective in evaluating internal and external industry operating experience items for applicability and taking appropriate action.

Based on review of the licensee's Concerns Resolution Program (CRP), discussions conducted with plant employees from various departments, and review of many PERs, the inspectors did not identify any reluctance to report safety concerns. The inspectors concluded that licensee management routinely emphasized the need for all employees to identify and report problems using the appropriate methods established within the administrative programs.

Inspection Report# : [2007008](#) (*pdf*)

Last modified : August 29, 2008