

# Surry 2

## 1Q/2011 Plant Inspection Findings

---

### Initiating Events

**Significance:**  Mar 31, 2011

Identified By: Self-Revealing

Item Type: FIN Finding

#### **Failure to Determine the Correct Cause and Prevent Recurrence for a Significant Event**

A Green, self-revealing finding was identified for the licensee's failure to comply with the standards established in their corrective action program (CAP) to determine the correct cause and take corrective action to prevent recurrence (CAPR) for a significant event, specifically, an automatic reactor trip following the failure of a Unit 2 'C' reactor coolant loop isolation valve. The licensee entered this issue into their CAP as condition report 412345.

The inspectors determined that the failure to determine the correct cause and take corrective action to prevent recurrence for a significant event was contrary to the requirements of the licensee's CAP procedures and was, therefore, a performance deficiency. The inspectors reviewed IMC 0612, Appendix B, and determined the performance deficiency was more than minor because it adversely affected the equipment performance attribute of the Initiating Events cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. The inspectors reviewed IMC 0609, Attachment 4 and determined that the finding was of very low safety significance, or Green, because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. The cause of this finding involved the cross-cutting area of problem identification and resolution, the component of operating experience, and the aspect of implementing operating experience, P.2(b), because the licensee failed to implement and institutionalize operating experience.

Inspection Report# : [2011002](#) (*pdf*)

---

### Mitigating Systems

**Significance:**  Mar 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

#### **Failure to Correct Multiple Conditions Adverse to Fire Protection**

A Green, self-revealing non-cited violation of Condition 3.I to the Surry Unit 1 and Unit 2 Updated Facility Operating Licenses, DPR-32 and DPR-37, was identified for the licensee's failure to take corrective action for degraded conditions adverse to the fire protection program. The licensee entered this issue into their corrective action program as condition report 398628.

The inspectors found that the failure to take action to correct multiple oversized breakers constituted a performance deficiency. The finding is more than minor because it adversely affected the external factors attribute (fire) of the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the Unit 2 '1B' RWST chiller motor and the Unit '2B' hydrogen recombiner breakers were the most susceptible to fire due to their size; also a cable fault could potentially damage safety related cables routed nearby. In addition, the Unit 1 '2B' charging component cooling water pump is safety related and its cable was also unprotected. The inspectors reviewed IMC 0609, Appendix F, Attachment 1, and determined the category of post fire safe shutdown was affected and the finding required a phase 3 analysis. A phase 3 risk analysis was performed by a regional SRA in accordance with IMC 0609 Appendix F, NUREG/CR6850, NUREG/CR 6850 supplement 1, and utilizing the latest NRC Surry SPAR probabilistic risk

analysis model and determined that the risk increase in core damage frequency was <1E-6, a finding of very low risk significance, Green. The cause of this finding involved the cross-cutting area of human performance, the component of work control, and the aspect of work planning, H.3(a), because the licensee failed to appropriately prioritize, schedule, and complete work activities consistent with risk insights and the safety significance of the equipment.

Inspection Report# : [2011002](#) (pdf)

**Significance:** G Jun 30, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to Demonstrate that the Reliability of Systems or Components were effectively controlled per 10 CFR 50.65 (a)(2)**

The NRC identified a Green Non-Cited Violation of 10CFR50.65 a(2) for the licensee's failure to demonstrate that the reliability of High Safety Significant (HSS) systems and Low Safety Significant (LSS) systems in stand-by was being effectively controlled through the performance of appropriate preventative maintenance, such that the systems or components remain capable of performing their function. Specifically, the licensee's MR program would not demonstrate that a system should remain in category a(2) as defined by regulatory requirements.

The inspectors determined the licensee's MR program could not demonstrate that reliability of High Safety Significant (HSS) systems and Low Safety Significant (LSS) systems in stand-by were being effectively controlled through the performance of appropriate preventative maintenance, such that the systems or components remain capable of performing their function is a performance deficiency. Specifically, the monitoring established by the license did not effectively demonstrate that systems in a(2) were being effectively controlled through performance of appropriate preventative maintenance. This masking of poor equipment performance does not allow the licensee to determine if a system should be in increased monitoring of a(1).

The finding was more than minor because it adversely affected the equipment performance attribute of the reactor safety mitigating systems cornerstone, and adversely affected the cornerstone objective to ensure the availability, reliability, and capability of HSS and LSS systems to perform their functions when required. Specifically, multiple HSS and LSS systems could have a high probability of failure, because poor equipment performance would not be recognized by the licensee. This could prevent a poor performing system from being placed into the a(1) category when required and appropriate corrective action would not be taken.

The finding was evaluated using MC-0609, Attachment 4, "Phase 1 – Initial Screening and Characterization of Findings," and determined to be of very low safety significance (Green), because the finding did not involve an actual failure of equipment. This finding had a crosscutting aspect in the area of human performance and resources because the licensee did not ensure that personnel, procedures, and other resources were available and adequate to assure proper implementation of MR program. The MR personnel did not have the training required to implement the program within the required industry regulations and guidelines (H.2.b).

Inspection Report# : [2010003](#) (pdf)

---

## Barrier Integrity

---

## Emergency Preparedness

---

## Occupational Radiation Safety

---

# Public Radiation Safety

---

## 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

Last modified : June 07, 2011