

# Farley 2

## 3Q/2008 Plant Inspection Findings

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### Initiating Events

**Significance:**  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Adequately Assess Risk Resulting in Unit 2 Reactor Trip**

The NRC inspectors identified a Green NCV for inadequate risk assessment which resulted in a Unit 2 reactor trip when performing switchyard relay testing. This event has been entered into the licensee's corrective action program (CAP) as Condition Report (CR) 2007109659.

The inadequate risk assessment for the Unit 1 main generation differential lockout relay testing is a performance deficiency. The inspectors determined this finding was more than minor because it was associated with the procedure quality attribute of the Initiating Events cornerstone and adversely affected cornerstone objective in that loss of power to the 2A startup transformer resulted in a reactor trip. The inspectors determined that a Phase 2 risk analysis was required because the finding contributes to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions will not be available. A regional Senior Reactor Analyst performed a Phase 3 risk analysis and concluded that the finding was of finding of very low safety significance (Green). This finding involved human performance cross-cutting aspect of complete, accurate and up-to-date design documentation, procedures, and work packages, and correct labeling of components.

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

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### Mitigating Systems

**Significance:**  Apr 04, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Fire Procedure Credits Unreliable Indication**

The team identified a non-cited violation of Technical Specification 5.4.1, Procedures, in that Units 1 and 2 post-fire safe shutdown abnormal operating procedures AOP 28.1, Fire or Inadvertent Fire Protection System Actuation in the Cable Spreading Room, and AOP 28.2, Fire in the Control Room, credited diagnostic instrumentation that would have been potentially unreliable due to fire damage from a postulated fire in the control room or cable spreading room. The finding was entered into the licensee's corrective action program as Condition Report 2005103665.

This issue is a performance deficiency because the safe shutdown procedure relies on an indication which was not protected from fire damage. The finding is more than minor because it is associated with the procedure quality attribute of the Mitigating Systems cornerstone and it affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors assessed the finding using Inspection Manual Chapter 0609, Appendix F, "Fire Protection Significance Determination Process." The finding was assigned a low degradation rating because it was determined to be a minor procedural deficiency that is compensated by operator experience or familiarity. Because the finding was assigned a low degradation rating, the team determined that this finding was of very low safety significance (Green).

Inspection Report# : [2008006](#) (*pdf*)

**Significance:**  Apr 04, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Areas Where OMAs Are Performed Did Not Have ELUs Installed**

The team identified a non-cited violation of Farley Unit 2 Operating License Condition 2.C.(6), for the licensee's failure to fully implement the approved fire protection program, in that emergency lighting units (ELUs) were not installed in all areas where local operator manual actions were required to support post-fire safe shutdown. Specifically, the team determined that there were no ELUs installed to illuminate the front panels of the Reactor Coolant Pump (RCP) switchgear, located in the Train 'A' switchgear room, where post-fire safe shutdown local operator manual actions were required to trip the RCP 4160 Volt alternating current breakers. The finding was entered into the licensee's corrective action program under Condition Reports 2008103335, 336, and 337.

The finding is greater than minor because it is associated with the reactor safety Mitigating Systems cornerstone attribute of protection against external factors (i.e., fire) and it affects the cornerstone attribute of ensuring reliability and capability of systems that respond to initiating events. Specifically, the finding adversely affected the ability to perform local operator manual actions required to achieve and maintain safe shutdown conditions following a fire in the cable spreading room. The inspectors assessed the finding using IMC 0609, Appendix F, Fire Protection Significance Determination Process. The team determined that this finding was of very low safety significance (Green) because the operators had a high likelihood of completing the task using flashlights, which operators are directed to carry with them by procedure while performing local actions.

Inspection Report# : [2008006](#) (*pdf*)

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**Significance:** Apr 04, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **ELU Test Failures Were Not Documented In CRs As Required By Procedure**

The team identified a non-cited violation of Farley Unit 2 Operating License Condition 2.C.(6), for the licensee's failure to fully implement test control requirements incorporated in approved plant procedures associated with the periodic testing of emergency lighting units. As a consequence, condition reports (CRs) were not initiated as required, when battery conductance measurements did not meet acceptance criteria. The finding was entered into the licensee's corrective action program as Condition Report 2008103290.

This issue is a performance deficiency because the licensee did not properly document ELU test failures on CRs for trending and evaluation in accordance with the surveillance test procedures. The finding involved systems or components (i.e., emergency lights) required for post-fire safe shutdown of the reactor. The finding is greater than minor because it is associated with the reactor safety Mitigating Systems cornerstone attribute of protection against external factors (i.e., fire) and it affects the cornerstone attribute of ensuring reliability and capability of systems that respond to initiating events. The team determined that this finding was of very low safety significance (Green) because the operators had a high likelihood of completing the task using flashlights, which operators are directed to carry with them by procedure while performing local actions.

Inspection Report# : [2008006](#) (*pdf*)

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**Significance:** Mar 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Installation of a Maintenance Jumper for the 2C CCW Pump Cell Switch**

The NRC identified a Green NCV of 10 CFR 50 Appendix B, Criterion III for failing to implement measures to verify design adequacy resulting in the installation of a maintenance jumper on the cell switch for the Unit 2 2C Component Cooling Water (CCW) pump. This resulted in a condition unknown to the licensee at the time of installation, allowing simultaneous start of both the 2C and 2B CCW pumps in response to a loss of offsite power (LOSP) or safety injection (SI) sequencer signal. This finding has been entered into the licensee's CAP as Condition Report (CR) 2007112315.

Failure to verify design adequacy for safety-related components is a performance deficiency. This finding is more than minor because inadequate design evaluations challenged the operability of the A train of CCW. Subsequently, the A CCW train was shown to be operable following additional engineering evaluations. The finding affects the design control attribute of the Mitigating Systems cornerstone. The cornerstone objective of ensuring the availability, reliability, and capability of systems responding to initiating events to prevent undesirable consequences was not met. The Phase 1 screening performed by the NRC concluded the finding is of very low safety significance

Inspection Report# : [2008002](#) (*pdf*)

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**Significance:** Dec 31, 2007

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

#### **Failure to Maintain Two ECCS Trains Operable Due to Gas Accumulation in the Charging Pump Suction Piping**

A self-revealing NCV was identified for gas binding of the 2A CCP that resulted in a failure to maintain the 'A' train of HHSI in an operable condition, in accordance with T.S. 3.5.2, ECCS. This event has been entered into the licensee's CAP as CR 2005112351.

Performing an inadequate evaluation of external plant operating experience involving gas intrusion events resulting in inoperable HHSI pumps is a performance deficiency. This finding was more than minor because it affected the equipment performance attribute of the Mitigating Systems cornerstone and adversely impacted the cornerstone objective in that gas accumulation in the 2A HHSI pump suction piping rendered ECCS systems unavailable and unreliable. A Phase 3 risk analysis determined the finding was of very low safety significance (Green). This finding involved Problem Identification and Resolution (PI&R) cross-cutting aspects associated with the attribute of the licensee implementing available operating experience through changes to plant processes, procedures, equipment and training to control pressure fluctuations in the volume control tank in order to prevent the formation of gas in HHSI pump suction piping.

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

## 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

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

Identified By: NRC

Item Type: FIN Finding

### **Biennial Identification and Resolution of Problems Inspection Results**

One finding of very low safety significance (Green) was identified. The licensee was generally effective in identifying problems at a low threshold and entering them into the corrective action program. The licensee properly prioritized issues entered into the corrective action program (CAP) and routinely performed evaluations that were technically accurate and of sufficient depth to address the issue documented in the condition reports (CRs). Overall, corrective actions were effective; however, minor examples of inadequate condition report broadness reviews and documentation issues related to the closure of action items were identified. In general, operating experience was found to be used both proactively and reactively by personnel involved in the corrective action program; however, an example of industry operating experience was identified in which the licensee did not completely develop interim compensatory measures for a condition to which Farley was vulnerable. The licensee's programmatic self-assessments and audits were generally effective in identifying weaknesses in the corrective action program; however, a missed opportunity in the trending of issues which could result in adverse effects on safety-related plant components was identified. The inspectors also concluded that the workers at Farley felt free to report safety concerns.

Inspection Report# : [2007006](#) (*pdf*)

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