

# Harris 1

## 3Q/2008 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:**  Jun 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Properly Categorize Maintenance Rule Functional Failures**

The inspectors identified a non-cited violation (NCV) of 10 CFR 50.65 (a)(2) for the licensee's failure to categorize two failures of the condenser vacuum pump effluent radiation monitor (REM-3534) as maintenance rule functional failures and accordingly, failed to monitor the component as required by 10 CFR 50.65 (a)(1). The licensee entered this issue into the Corrective Action Program (CAP) as Condition Report 283579.

The finding is greater than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and affects the cornerstone objective of ensuring the availability, reliability, and capability of systems which responds to initiating events to prevent undesirable consequences. In addition, Example 7.b provided in Manual Chapter 0612, Appendix E, states that violations of Paragraph 10 CFR 50.65 (a)(2), failure to demonstrate effective control of performance or condition and not putting the affected Systems, Structures, and Components (SSCs) in (a)(1), are not minor because they necessarily involve degraded SSC performance or condition. The inspectors determined this finding is of very low safety significance because the REM-3534 is not a risk-significant component and a back-up means of detecting a primary to secondary leak, the steam generator blowdown radiation monitor, was functional during the time periods when REM-3534 was not functional. The finding occurred because of the two missed failures in 2005. All of the failures of REM-3534 since 2005 have been properly counted. Therefore, the cause of this finding was not associated with a cross-cutting area because it is not reflective of current licensee performance.

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

**Significance:**  Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

#### **B Essential Services Chiller inoperable greater than TS allowed outage time**

A Green self-revealing non-cited violation (NCV) of Technical Specification (TS) 3.7.13 was identified when the B essential services chilled water (ESCW) chiller tripped 2 minutes after it was started on November 5, 2007. The chiller tripped on low refrigerant pressure. The low refrigerant pressure was the result of inadequate seating of the transfer tank isolation valve after maintenance on October 13, 2007. Also contributing to the inoperability of the chiller was the fact that the post maintenance test (PMT) for the maintenance failed to verify that no leakage was occurring through the valve that was operated during maintenance. Therefore, refrigerant slowly leaked from the chiller to the transfer tank, and eventually the amount of refrigerant in the chiller was insufficient for the chiller to operate.

This finding is greater than minor because it affected the availability and reliability objectives of the Equipment Performance attribute under the Mitigating System cornerstone. Since this finding represents an actual loss of safety function of a single train of technical specification equipment for greater than its allowed outage time, the finding was potentially greater than very low safety significance, and phase 2 and 3 analyses were required. A regional Senior Reactor Analyst performed the phase 3 evaluation under the Significance Determination Process for this performance deficiency. The results of this evaluation characterized the performance deficiency as of very low safety significance or Green. The NRC's SPAR model was used for the analysis with the test and maintenance basic event for the Division B Chilled Water Pump used as the surrogate for the performance deficiency. The basic event was set to TRUE or always failing. The dominant accident sequence was a Small Break Loss of Coolant Accident followed by a failure of the other division's Emergency Core Cooling System via various support system failures and a failure to provide alternate cooling to Division B's High Head/ Charging Pump. External event initiators were considered, but were eventually excluded from the final quantification due to the very low core damage frequency contribution from internal initiating events. The cause of this issue is associated with the Resources component of the cross-cutting area of Human Performance, in that the procedures for performing the chiller maintenance did not include adequate operator instructions regarding the proper operation of the isolation valve and adequate post maintenance testing necessary to ensure that the ESCW system would remain available following maintenance. Specifically, the incomplete procedures are related to the cross-cutting aspect of providing complete, accurate and up-to-date design documentation, procedures, and work packages, and correct labeling of components.

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

**G****Significance:** Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

**Inadequate clearance for SW-271**

A Green self-revealing NCV of TS 6.8.1., Programs and Procedures, was identified for an inadequate clearance order associated with engineering change 62848 on circuit 33 of power panel DP 1B-SB. As a result of the inadequate clearance, the discharge valve for the B emergency service water (ESW) pump, SW-271, would not automatically open when the B emergency service water pump was started. The clearance was inadequate because licensee operators failed to establish the proper plant equipment configuration to support hanging the clearance per procedure OPS-NGGC-1301, Equipment Clearance.

The failure to establish the proper plant equipment configuration to support the equipment clearance for engineering change 62848 is greater than minor because it is associated with mitigating systems cornerstone attribute of configuration control and affects the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). Per NRC Manual Chapter 0609, Appendix G, Shutdown Operations Significance Determination Process, this finding is of very low safety significance (Green) because operators were able to manually open the B ESW pump discharge and valve and maintain it's functionality. This finding was related to the cross-cutting area of human performance and the associated aspect of work planning because the licensee failed to properly configure plant equipment to support the clearance for engineering change 62848.

Inspection Report# : [2007005](#) (*pdf*)**G****Significance:** Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

**Loss of Annunciation System Due to Operator Error During Surveillance Testing**

A Green self-revealing non-cited violation (NCV) was identified for the failure to properly implement operating procedures in accordance with TS 6.8.1. Operator error in procedure implementation of procedure OST-1858, "Remote Shutdown System Operability - Bus Drops Train A" led to the unexpected loss of power of the DP-1A-NNS bus and its associated loads, including the main control room annunciators.

The finding is greater than minor because it is associated with the Equipment Performance attribute of the Mitigating Systems cornerstones. The finding also affects the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e. core damage). The finding was evaluated using MC-0609, appendix G, significance determination for shutdown situations. The finding is considered to have very low safety significance (Green) because the finding did not require a quantitative assessment and therefore screened as green. A quantitative assessment was not required because the finding did not cause a loss of thermal margin, a loss of inventory, or degrade the ability to add inventory to the reactor coolant system. The finding was related to the work coordination aspect of the cross-cutting area of human performance because the licensee failed to properly configure plant equipment while work was performed on the DP-1A-NNS bus.

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

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## Barrier Integrity

**G****Significance:** Dec 31, 2007

Identified By: NRC

Item Type: NCV NonCited Violation

**Failure to correct cause of SW-233 local leak rate failures**

The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions" when licensee personnel failed to promptly correct a condition adverse to quality. Specifically, six local leak rate test (LLRT) failures occurred between 1989 and 2003 on a service water containment isolation check valve. After the sixth LLRT failure during refueling outage (RFO) 11 in 2003, the licensee initiated a corrective action to disassemble and clean the valve each refueling outage (RFO) as a preventative maintenance activity. This corrective action was not sufficient to correct the cause of the LLRT failures, because the valve failed LLRT's during RFO 13 in 2006 and during RFO 14 in 2007.

The failure to promptly correct the cause of the SW-233 LLRT failures is more than minor because it affected the Barrier Integrity cornerstone of assuring that physical design barriers (e.g. containment) protect the public from radio nuclide releases caused by accidents or events. It is also associated with the cornerstone attribute of system, structure, component and barrier performance. Manual Chapter 0609 Appendix A, Determining the Significance of Reactor Inspection Findings for At-Power Situations, was used to evaluate the significance of this finding. Since the service water supply piping to the non-safety containment air coolers had a second, redundant and functional containment isolation valve, and since this piping is a closed system within containment, the LLRT failure of SW-233 does not represent an actual open pathway in the physical integrity of reactor containment. This finding, therefore, was determined to be of very low safety significance (Green) using the phase 1 screening worksheet for barrier cornerstones. The finding was related to the timely corrective action aspect of the cross-cutting area of problem identification and resolution due to the delays in implementing effective corrective actions.

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

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## Emergency Preparedness

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## Occupational Radiation Safety

**Significance:**  Sep 30, 2008

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Maintain Control Over the Station's Very High Radiation Areas**

A self-revealing Green NCV was identified for the failure to maintain control of access to the station's very high radiation areas (VHRA), as required by 10 CFR 20.1602. The inspectors determined that the licensee failed to maintain sufficient controls of access to VHRAs from the fall of 2006 through January 2008, contrary to 10 CFR 20.1602 and station procedural requirements. Licensee corrective actions included the retrieval and disposition of the security guard master keys, and developing more specific procedural guidance for key control and issuance at the station.

Inspection Report# : [2008004](#) (*pdf*)

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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

Last modified : November 26, 2008