

# Saint Lucie 1

## 3Q/2011 Plant Inspection Findings

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### Initiating Events

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### Mitigating Systems

**Significance:**  Mar 31, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

#### **Failure to Follow Procedures and Guidelines to ensure RAB Doors are Completely Dogged Closed**

A NRC identified NCV of Technical Specification (TS) 6.8.1, which requires that written procedures be established, implemented, and maintained covering the activities in NRC Regulatory Guide 1.33, "Quality Assurance Program Requirements (Operation)," Appendix A, for the licensee's failure to follow posted and published guidelines per ADM-17.25, "Plant Barrier Control" and 0-NOP-99.02, "Watchstation General Inspection Guidelines," Rev. 13A was identified. The failure to follow posted and published guidelines per ADM-17.25, "Plant Barrier Control," and 0-NOP-99.02, "Watchstation General Inspection Guidelines," Rev. 13A, is a performance deficiency.

The finding was determined to be of more than minor significance because it affected the mitigating systems cornerstone attribute of equipment performance to ensure the availability and reliability of the ECCS ventilation system to perform its intended safety function during a design basis event; and closely parallels IMC 0612, Appendix E, Example 3.j, in that there was reasonable doubt regarding the capability of the system to perform its intended function pending reanalysis (i.e. testing). Specifically, not fully securing the RAB doors via the dog latches could adversely affect the operability of the ECCS ventilation system to perform its safety functions. The inspectors evaluated the risk of this finding using IMC 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings." The inspectors determined that the finding was of very low safety significance because it did not result in an actual loss of operability to the ECCS ventilation system. The finding involved the cross-cutting area of human performance, the component of work practices and the aspect of human prevention techniques and peer checking (H.4.a), in that, the licensee failed to practice their human prevention techniques specifically, peer checking to ensure that personnel followed procedures and postings which required the RAB doors to be completely dogged closed. (Section 40A5)

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

**Significance:**  Dec 31, 2010

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

#### **Failure to Identify and Correct a Condition Adverse to Quality that Resulted in the 1C-AFW Pump Being Out of Service for Greater Than Its Allowed Outage Time**

A self-revealing Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the licensee's failure to promptly identify and correct a condition adverse to quality (CAQ) that resulted in the 1C Auxiliary Feedwater (AFW) pump being inoperable for greater than its Technical Specifications (TS) allowed outage time (ACT). Specifically, in December 2009, the licensee identified a concern with housekeeping in both Unit 1 and Unit 2 AFW pump areas that could affect the pump motor, bearings, seals, and turbine controls and linkages. Then in June 2010, these same housekeeping issues combined with extended operation of the atmospheric dump valves (ADV5) caused failure of the 1 C AFW pump to reach rated speed during its scheduled surveillance test.

The finding was determined to be more than minor because it is similar to Example 4.f in IMC 0612, Appendix E, in that the failure to adequately correct a CAQ affected the 1C-AFW pump's operability and affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capacity of systems that respond to initiating events to prevent undesirable consequences. The finding was evaluated in accordance with IMC 0609.04, Significance Determination Process (SDP) Phase 1 screening worksheets. Because it represented an actual loss of safety function of a single train for greater than its TS ACT, SDP Phase 2 worksheets were evaluated. The phase 2 notebook produced an overly conservative result for a short exposure time (less than 2 week duration), and consequently a phase 3 SDP evaluation was performed. The resultant core damage frequency (CDF) was <1E-6 Green. The inspectors determined that the cause of this finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not take appropriate corrective actions to address safety issues and adverse trends in a timely manner, commensurate with their safety significance and complexity (IMC 0310 Aspect P.1 .d). (Section 40A2.2)  
Inspection Report# : [2010005](#) (*pdf*)

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## Barrier Integrity

**Significance:**  Dec 31, 2010

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Take Timely and Effective Corrective Actions for ECCS Fan Damper Failures**

The inspectors identified a NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee failing to take timely and effective corrective actions for Emergency Core Cooling System (ECCS) area exhaust fan damper louver failures resulting in TS Limiting Conditions for Operation (LCO) entries for an inoperable ECCS area exhaust air filter train. Specifically, multiple damper failures occurred over at least a two year period where the root cause of the failures was not identified and corrected to prevent recurrence.

The finding was more than minor because it is similar to Example 4.f in IMC 0612, Appendix E, in that the failure to adequately correct a condition adverse to quality affected the 1-HVE-9A ECCS area exhaust fan's operability. The finding was evaluated in accordance with IMC 0609.04, Significance Determination Process (SDP) Phase 1 screening worksheets and determined to be of very low safety significance because the finding did not represent a degradation of the radiological barrier function provided for the auxiliary building, or represent a degradation of the control room barrier function, or an actual open pathway of containment, or a reduction in function of containment hydrogen ignitors. The inspectors determined that this finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program, because the licensee did not thoroughly evaluate the problem such that the resolution addressed causes, as necessary (IMC 0310 Aspect P.1.c). (Section 40A2.3).  
Inspection Report# : [2010005](#) (*pdf*)

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## Emergency Preparedness

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# Occupational Radiation Safety

**Significance:** G Mar 31, 2011

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

## **Failure to perform adequate surveys to identify potential radiological hazards during valve repair in the 1B WGDT room (**

A self-revealing non-cited violation (NCV) of 10 CFR Part 20.1501(a) was identified for failure to perform adequate surveys to verify radiological conditions within the Unit 1 “B” Waste Gas Decay Tank (WGDT) room prior to allowing workers to enter the area. This resulted in workers unknowingly entering an area with general area dose rates exceeding High Radiation Area (HRA) conditions, i.e., dose rates exceeding 100 millirem per hour (mrem/hr) at 30 centimeters (cm). Because of the potential for changing radiological conditions resulting from normal operation, radiation protection staff established controls for access to all WGDT rooms through administrative postings and locked entry doors to ensure monitoring and establishment of appropriate radiological controls prior to worker entry into the areas. However, on October 4, 2010, two maintenance workers were allowed access to the 1B WGDT room without a Radiation Protection Technician (RPT) performing a survey prior to entry. One worker subsequently received a dose rate alarm on their Electronic Dosimeter (ED), maximum dose rate measurement of 77.5 mrem/hr which exceeded the ED dose rate alarm setpoint of 75 mrem/hr. Both workers exited the room and contacted the assigned RPT. Subsequent surveys measured HRA conditions adjacent to the 1B WGDT, maximum general area dose rates of 250 mrem/hr, resulting from operations venting gas to the subject tank several hours before the workers entered the room. Room postings and access controls were upgraded immediately for the identified HRA conditions. The licensee entered the issue into their corrective action program (CAP) as condition report (CR) number AR 585076.

This finding is greater than minor because it was associated with the Occupational Radiation Safety Cornerstone attribute of Program and Process (Monitoring and RP Controls) and adversely affects the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation from radioactive material during routine civilian nuclear reactor operation. The finding was evaluated using the Occupational Radiation Safety Significance Determination Process (SDP) and was determined to be of very low safety significance (Green) because it was not related to As Low As Reasonably Achievable (ALARA) Planning and the ability to assess dose was not compromised. In addition, it did not involve overexposure or substantial potential for overexposure because the maximum exposure rate within the 1B WGDT were not estimated to exceed Locked High Radiation Area (LHRA) conditions, WGDT room doors are administratively locked, keys only issued to RP personnel, and the entrances are posted “Radiation Area, Contact RP Prior to Entry.” The cause of this finding was directly related to the cross-cutting aspect of Conservative Assumptions in the Decision Making component of the Human Performance area because the RPT assumed that radiological conditions in the 1B WGDT room had not changed, even though additional administrative controls were in place due specifically to the identified potential for changing radiological conditions in the area when venting gas to the WGDT. [H.1(b)]. (Section 2RS1)

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

**Significance:** **SL-IV** Feb 26, 2011

Identified By: NRC

Item Type: NCV NonCited Violation

## **Failure to conduct and document RCA routine radiological surveys**

The NRC identified a non-cited violation of Technical Specification 6.8.1 requirements when it was determined that two St. Lucie Plant Radiation Protection Technician staff willfully failed to follow established Health Physics Procedures. As a result, between July 1, 2008, and September 30, 2009, 16 required Radiologically Controlled Area routine radiation surveys were not conducted, and subsequently were falsely documented as being completed. After the issue was identified by the licensee, it was entered into the licensee’s corrective action program for action and final resolution. Licensee actions included a determination of the impact of the missed surveys on occupational radiation safety, the extent of condition, and development of additional oversight of for future completed surveys.

This issue was dispositioned using traditional enforcement due to the willful aspects of the performance deficiency. In accordance with the NRC Enforcement Policy, Section 6.7 (d), this failure to maintain procedurally established surveillance activities over licensed material in an area posted as containing radioactive materials despite a functional

program to monitor licensed material including training and staff awareness of procedural and 10 CFR Part 20 Code requirements was identified as a Severity Level IV violation. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the NRC Enforcement Policy.

Inspection Report# : [2011008](#) (*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**

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