

## Saint Lucie 2

# 4Q/2012 Plant Inspection Findings

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## Initiating Events

**Significance:**  Apr 20, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to correct a LPSI pump design deficiency**

An NRC-identified Green NCV of 10 CFR Part 50 Appendix B, Criterion XVI, Corrective Actions was identified for the licensee's failure to correct an identified condition adverse to quality associated with Low Pressure Safety Injection (LPSI) pump casing distortion. Specifically, the licensee failed to implement corrective actions to address an identified LPSI pump design deficiency, which resulted in failure of the 2A LPSI pump in March 2009. This issue was documented in the licensee's corrective action program as condition report 2009-16124.

This finding was more than minor because it was associated with the equipment reliability attribute of the Mitigating Cornerstone and it adversely affected the associated cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the failure to correct the LPSI pump design deficiency impacts the availability, reliability, and capability of the LPSI system to respond to plant events. In accordance with NRC Inspection Manual Chapter 0609.04, Significant Determination Process – Phase 1 screening, the finding was determined to be of very low safety significance (Green) because the finding did not result in a loss of system safety function or a loss of safety function of a single train for greater than allowed Technical Specification allowed outage time. The finding did not represent an actual loss of safety function for greater than its technical specification allowed outage time.

The finding had a cross-cutting aspect in the area of work practices, resources because the licensee failed to ensure that equipment is available and adequate to assure nuclear safety. Specifically, the licensee failed to maintain long term plant safety by minimizing longstanding LPSI pump design issues. [H.2(a)] (Section 40A2.a(3)(ii))

Inspection Report# : [2012007](#) (*pdf*)

**Significance:**  Mar 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to Follow Reactor Protection System Surveillance Procedure Resulting in Reactor Plant Trip**

Green. A Green, self-revealing, non-cited violation (NCV) of Technical Specification (TS) 6.8.1 was identified which requires that written procedures be established, implemented, and maintained covering activities referenced in NRC Regulatory Guide 1.33, Revision 2, dated February 1978, including safety related activities carried out during operation of the reactor plant. Licensee surveillance test procedure 2-OSP-63.01, "Unit 2 RPS Logic Matrix Test," was not complied with as written when a Reactor Protection System (RPS) logic matrix switch was inadvertently placed out of position resulting in an unplanned reactor trip. The licensee entered this violation in their corrective action program as condition report 1657802.

The licensee's failure to fully implement RPS testing procedure 2-OSP-63.01, "Unit 2 RPS Logic Matrix Test," as written is a performance deficiency. The finding was determined to be of more than minor significance because it resulted in a reactor trip and is similar to NRC Manual Chapter 0612 Appendix E, example 4.b. 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 contribute to both the likelihood of a reactor trip and the likelihood that mitigation equipment or functions would not be available. The finding involved the cross-cutting area of human performance, in the component of work practices and the aspect of procedural compliance (H.4.b), in that the licensee failed to ensure

that personnel followed procedure requirements to prevent unexpected results.

Inspection Report# : [2012002](#) (pdf)

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## Mitigating Systems

**Significance:**  Dec 31, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

### **Failure to follow seismic restraining procedures on ladders located near safety-related equipment**

An NRC identified non-cited violation (NCV) of Technical Specification 6.8.1, was identified which requires that written procedures be established, implemented, and maintained covering activities referenced in NRC Regulatory Guide 1.33, Revision 2, dated February 1978. The licensee's procedures for seismic restraint of ladders: MA-AA-100-1008, Station Housekeeping and Material Control; QI-13-PSL, Housekeeping and Cleanliness Controls Methods St. Lucie Plant; ADM-04.02, Industrial Safety Program; and ADM-27.11, Scaffold Control, were not implemented as written on ladders that were installed near safety-related equipment. The inspectors identified four examples of ladders not seismically restrained in accordance with the licensee's procedures. During the licensee's extent of condition review, 24 additional examples of ladders not in compliance with procedure requirements were identified. The licensee's repeated failure to comply with procedures to seismically restrain ladders was a performance deficiency. Immediate corrective actions included completing a site-wide walkdown of the safety-related systems to identify and bring into procedural compliance any ladders that were not seismically restrained. The licensee entered this violation into the corrective action program as action request 1829233.

The performance deficiency was determined to have more than minor significance because if left uncorrected, the failure to comply with station procedures to ensure adequate restraining of seismically controlled ladders, could lead to a more significant safety concern. Specifically, seismically unrestrained ladders could impact safety-related equipment during a design basis seismic event. The inspectors evaluated the risk of this finding using Manual Chapter 0609 Appendix A, Significance Determination Process for Findings At-Power, Exhibit 2- Mitigating Systems Screening questions. The inspectors determined that the finding was of very low safety significance because it did not require a quantitative assessment as determined in Exhibit 2. The finding involved the cross-cutting area of human performance, in the component of resources and the aspect of complete and accurate procedures (H.2.c) in that, the licensee failed to ensure complete, accurate, and up-to-date procedures were available for licensee personnel to ensure ladders were restrained to prevent seismic interaction with safety-related systems during a design basis seismic event. (Section 4OA2.2)

Inspection Report# : [2012005](#) (pdf)

**Significance:**  Dec 18, 2012

Identified By: NRC

Item Type: NCV NonCited Violation

### **Inadequate Procedure for Severe Weather Mitigation**

The team identified a non-cited violation of Technical Specification 6.8, "Procedures and Programs," for an inadequate technical specification required procedure to combat a loss of feedwater or feedwater system failure. Abnormal operating procedure 1-AOP-09.02, "Auxiliary Feedwater," Attachment 5, "Supplying Unit 1 AFW Pumps from the Unit 2 CST," could not be performed as written with respect to ensuring the availability of the Auxiliary Feedwater (AFW) pumps. The licensee promptly issued a standing night order to ensure that the AFW pumps would remain available and initiated action requests 1816711 and 1826000. The licensee has subsequently modified the procedure to rectify the issue.

The licensee's failure to provide an adequate procedure to mitigate a design basis event was a performance deficiency. The performance deficiency affected the Mitigating Systems Cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, procedure 1-AOP-09.02, secured all suction sources to the AFW pumps without ensuring that the motor

driven auxiliary feedwater (MDAFW) pumps would not auto start if an auxiliary feedwater actuation signal was received. The performance deficiency was determined to have more than minor safety significance because if left uncorrected, the failure of the MDAFW pumps could lead to a more significant safety concern as a result of the plant not being able to sustain short-term decay heat removal under specific conditions. The procedure steps created a condition that could have resulted in the inoperability of both MDAFW pumps. In accordance with NRC Inspection Manual Chapter 0609.04, "Initial Screening and Characterization of Findings," the team determined that a detailed risk evaluation was required because the finding screened as potentially risk-significant due to a severe weather initiating event. A bounding Significance Determination Process Phase 3 analysis was performed by a regional senior risk analyst which determined the performance deficiency was a Green finding of very low safety significance. The inspectors determined that no cross cutting aspect was applicable to this performance deficiency because this finding was not indicative of current licensee performance.  
Inspection Report# : [2012008](#) (pdf)

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## Barrier Integrity

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## Emergency Preparedness

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## Occupational Radiation Safety

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## Public Radiation Safety

**Significance:** G Sep 30, 2012

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

### **Failure to ship radioactive material in accordance with DOT regulations**

A self-revealing, Green non-cited violation (NCV) of 10 CFR 71.5 was identified for the licensee's failure to ship radioactive material in accordance with Department of Transportation (DOT) requirements as specified in 49 CFR Parts 171-180. Specifically, upon receipt at its destination, a radioactive shipment classified as an "excepted package for limited quantities" was found to have external surface package dose rates exceeding the limit of 0.5 millirem per hour (mrem/h) as specified in 49 CFR 173.421(a)(2). The package recipient identified a maximum dose rate of 3.95 mrem/h on the exterior surface of the package and notified the licensee of the discrepancy. The licensee entered the event into their corrective action program as Action Request (AR)-01628106.

The performance deficiency was more than minor because it was associated with the "Program & Process Procedures" attribute (DOT package limits) of the Public Radiation Safety Cornerstone. The inspectors determined the cornerstone's objective was adversely affected based on the fact that shipment of radioactive material in excess of DOT limits in the public domain is contrary to NRC and DOT regulations. Assurance that the public will not receive unnecessary dose is decreased if packages are not prepared so that dose rates in accessible areas remain below regulatory limits during transit. The finding is of very low safety significance (Green) because there was little to no risk to members of the public.

This finding involved the cross-cutting area of Human Performance with the aspect of conservative decision-making, in that the licensee assumptions failed to ensure that equipment packaged for shipment would not exceed DOT limits during transport. [H.1(b)] (Section 2RS8)

## Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

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## Miscellaneous

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