

Saint Lucie 2

3Q/2009 Plant Inspection Findings

Initiating Events

Significance:  Jun 30, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Follow Procedure When Placing Shutdown Cooling In-service

A self-revealing NCV of Technical Specification (TS) 6.8.1.a and Regulatory Guide (RG) 1.33 was identified for the licensee failing to implement a written procedure for general plant operations. The normal operating procedure 2-NOP-03.05, "Shutdown Cooling," was not implemented as written when drain valve V7207 was mistakenly closed by a non-licensed building operator when it was required to be open when placing the 'A' shutdown cooling train in service. Specifically, the closing of valve V7207 removed a required drain path for known valve seat leakage past containment spray boundary valve 2-MV-07-03 which resulted in unplanned adjacent intersystem leakage into the containment spray system from the reactor coolant system. This issue was entered in the licensee's corrective action program as CR 2009-15198.

The finding was more than minor because it affected the Configuration Control attribute of the Initiating Events cornerstone and the valve misposition could be reasonably viewed as a precursor to a significant event. Using the NRC Manual Chapter 0609, ASignificance Determination Process, @ Appendix G, "Shutdown Operations Significance Determination Process," Checklist 3, the finding was determined to be of very low safety significance because Core Heat Removal, Inventory Control, Power Availability, Containment Control, and Reactivity Guidelines were all met. A contributing cause of the finding is related to the cross-cutting area of Human Performance, with a work practices component. Specifically, the operator failed to implement expected human error prevention techniques such as procedure place keeping and self-checking to ensure the valve was positioned properly, [H.4(a)]. (Section 4OA2.2)

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Have a Fully Qualified and Active Licensed Operator at the Control Boards During Reactivity Manipulations

A self-revealing Non-Cited Violation (NCV) of 10 CFR 50.54(i), Conditions of Licenses, for failure to have a fully qualified and active licensed operator at the control boards during reactivity manipulations. On June 7, 2008, the Shift Manager (SM) of record allowed an inactive licensed Senior Reactor Operator (SRO) to manipulate the controls that directly affected a reactor's power level / reactivity. The SM understood that the available licensed SRO was in an inactive status and decided that the inactive licensed SRO would conduct reactivity manipulations under the direct observation of an active reactor operator while the Unit Supervisor directed these activities. Since the inactive licensed SRO had not performed the functions of an SRO for a minimum of seven 8-hour shifts or five 12-hour shifts per calendar quarter, as required by 10 CFR 55.53(e), he was ineligible to perform or direct licensed activities. The issue was documented in the licensee's corrective action program as CRs 2008-19417 and 19830.

The finding was more than minor because it affected the Human Performance attribute of the Initiating Events cornerstone and allowing the inactive SRO to be involved in power changes/reactivity manipulations without having an active license could be reasonably viewed as a precursor to a significant event. Additionally, if left uncorrected, this deficiency has the potential to lead to a more significant safety concern. The finding was evaluated using the NRC Manual Chapter 0609, ASignificance Determination Process, @ Appendix M, and was determined to be of very low

safety significance because the finding did not involve any negative events as a result of SM being in an inactive status. No cross-cutting aspect associated with this finding was identified. (Section 4OA5.3)

Inspection Report# : [2009003](#) (pdf)

Significance:  Mar 31, 2009

Identified By: Self-Revealing

Item Type: NCV NonCited Violation

Failure to Implement Adequate Process Controls during Maintenance Activities Resulted in a Manual Reactor

A self-revealing finding was identified for failure to implement adequate process controls to minimize risk during maintenance on the Unit 2, 5B feedwater heater high level limit switch resulting in a manual reactor trip on June 4, 2008. No violations of NRC requirements were identified because the feedwater heater drain system is non-safety related. The licensee entered the issue into the corrective action program as condition report (CR) 2008-18858. Corrective actions included development of specific procedural direction for controlling and insulating energized control circuit leads during work evolutions using the risk management process, design modifications to address vulnerability when performing maintenance on level switches, and evaluation of industry best practices for training and handling of energized leads.

The finding was more than minor because it resulted in a manual reactor trip. The finding was associated with the human performance attribute and affected the Initiating Events cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as at power operations. Using the NRC Manual Chapter 0609, A Significance Determination Process, @ Attachment 609.04, Phase 1 screening worksheet, the finding was determined to be of very low safety significance because it was a transient initiator but did not increase the likelihood that mitigation equipment would not be available. The cause of the finding is related to the cross-cutting area of Human Performance, with a work control component. Specifically, the licensee did not adequately plan work activities to minimize the risk of grounding the energized leads (H.3(a)).

Inspection Report# : [2009002](#) (pdf)

Mitigating Systems

Significance:  Jun 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Inadequate Risk Assessment When Performing Weekly Pump Venting

The inspectors identified NCV of 10 CFR 50.65 (a)(4) when the licensee did not perform an adequate risk assessment which resulted in an underestimation of the associated risk while performing weekly Emergency Core Cooling System (ECCS) pump venting. On April 20, 2009, the inspectors were reviewing the Unit 2 control room chronological logs and noted that during the weekly High Pressure Safety Injection (HPSI) pump venting, the assessed risk using the Online Risk Monitor (OLRM) was recorded as green (low) instead of the required yellow (medium). During the venting evolution, the HPSI pump hand switch is taken to STOP rendering the pump incapable of performing its safety-related function to automatically inject water into the RCS, thereby requiring entry into the associated TS Action Statement and yellow OLRM risk determination. The issue was entered in the licensee's corrective action program as CR 2009-12037.

The finding was more than minor because it affected the Human Performance attribute of the Mitigating Systems cornerstone and using MC 0612, Appendix E, Example 7.e, because if the overall risk had been correctly assessed, it would have placed both units' into a higher risk category. The finding was evaluated in accordance with MC 0609, Appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process (SDP)," and determined to be of very low safety significance (Green), using Flowchart 1. This determination was based on the incremental core damage probability deficit being less than 1E-6 for the given condition of the HPSI pumps being out of service during the weekly pump venting. This finding has a crosscutting aspect in the area of human performance, component of work control because the licensee did not incorporate appropriate risk insights when planning

maintenance that effects the OLRM value. [H.3(a)]. (Section 1R13).

Inspection Report# : [2009003](#) (*pdf*)

Significance:  Apr 30, 2009

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Correct Conditions Adverse to Quality

The team identified two examples of a non-cited violation of St. Lucie's Unit 1 and Unit 2 Operating License Conditions 3.E for the licensee's failure to promptly correct conditions adverse to quality. The first example involved failure to take prompt corrective action for a noncompliance that was identified during the 2006 triennial fire protection inspection (Inspection Report 05000335, 389/2006010). Specifically, the licensee did not implement corrective actions to perform surveillance tests on the Unit 1 eight-hour battery powered portable emergency lights. The second example identified by the team during the 2009 inspection, involved four eight-hour battery powered fixed emergency lights that failed an annual surveillance test and were not repaired or replaced. The licensee initiated Condition Reports 2009-4010, -4056 and -4220 to implement corrective actions to address these issues.

The licensee's failure to correct the above conditions adverse to quality involving fire protection, as required, was a performance deficiency. The finding is more 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 objective 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. This performance deficiency is associated with the cross-cutting area: Human Performance, Work Control: H.3(b). The finding was directly related to the licensee not planning and coordinating work activities to support long-term equipment reliability and their maintenance scheduling was more reactive than preventive. (Section 1R05)

Inspection Report# : [2009007](#) (*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 : December 10, 2009