Saint Lucie 2
2Q/2006 Plant Inspection Findings

Initiating Events

Significance: G Dec 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Control Tooling for Use Only on Stainless Steel
The inspectors identified a NCV of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures and Drawings. Licensee activities affecting quality were not accomplished in accordance with site procedures GMP-05, ADM 02.01, and QI 13/PSL2, in that a steel file that had been previously used on carbon steel material was used during weld preparation on FT-08-1A, Unit 2 Main Steam flow transmitter, which is a stainless steel, ASME Class 2, pressure boundary component. Licensee procedures specifically prohibit the use of carbon steel contaminated tools on stainless steel. The licensee failed to meet procedural requirements by not maintaining control of files, wire brushes, and grinding wheels issued from the tool room inside the Radiation Controlled Area. The licensee immediately entered the finding into their corrective action system, and conducted stand-down meetings with site welding personnel regarding the procedure requirements. The licensee decided to not install the contaminated tubing, and made new repair welds with new stainless steel base material, new wire brushes, and other new tools.

This finding is greater than minor because if the finding was left uncorrected, it could become a more significant safety concern in that the contamination of the stainless steel base metal and weld with carbon steel particles could lead to localized outside diameter initiated pitting corrosion that would increase the likelihood of a through-wall pressure boundary leak. Additionally, the finding affected the equipment performance attribute of the Reactor Safety / Initiating Event Cornerstone objective to limit the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. This finding was determined to be of very low safety significance based on the IMC 0609, Appendix A, Phase 1 SDP worksheet and is associated with the initiating event cornerstone. The carbon steel contamination of FT-08-1A did not contribute to the increased likelihood of a primary or secondary loss of coolant accident (LOCA), and the finding did not contribute to either the likelihood of a reactor trip or the likelihood that mitigation equipment or functions will not be available; therefore, the finding screened as Green. A contributing cause of the finding is related to the cross-cutting element of human performance. (Section 1R08)

Inspection Report# : 2005005*(pdf)*

Significance: G Sep 30, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to adequately identify and report conditions potentially adverse to plant safety involving the 1C ICW pump discharge isolation valve
The inspectors identified a Non-Cited violation of 10 CFR 50, Appendix B Criterion XVI, Corrective Action, for the licensee's failure to enter a condition adverse to quality in the corrective action program and implement adequate corrective actions. Valve SB21206, 1C ICW Pump Discharge Isolation Valve was caution tagged as being unable to be closed, yet the licensee had not implemented appropriate compensatory measures to ensure that the 1C ICW pump could be started, if required, in accordance with station procedure 1-0640030, Off-Normal Operating Procedure, Intake Cooling Water System.

This NRC-identified finding was greater than minor because it is associated with the configuration control attribute of the initiating events cornerstone and affected the cornerstone objective of ensuring the reliability and capability of the ICW system. The inability to start the standby ICW pump in accordance with the off-normal procedure could have resulted in an emergent power reduction, had one of the two normally running ICW pumps tripped, based upon the insufficient heat removal capability of the remaining pump. During such an event, plant systems and components could have been challenged. The finding was determined to be of very low safety significance (Green) in accordance with NRC Inspection Manual Chapter 0609, Appendix A, Attachment 1, Significance Determination Process (SDP), Phase 1 screening worksheet because the ICW system could still perform its safety function, but was degraded. (Section 1R04)

Inspection Report# : 2005004*(pdf)*

Mitigating Systems

Significance: G Mar 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation

Unit 1 and 2 Containment Building ECCS Sump Design Control
The inspectors identified an NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for failure of the licensee to evaluate the potential consequences of unfiltered debris migrating from the reactor cavity sump to the Emergency Core Cooling System (ECCS) sump via floor drain and equipment drain lines located within the containment sump area. The licensee took prompt corrective action and modified the Unit 1 containment sump and performed an engineering analysis for both Units 1 and 2 which concluded the amount of debris that will bypass the screen is inconsequentially small as the debris will have settled outside the zone of flow influence surrounding the ECCS pump suction lines and there was reasonable assurance that the amount of debris swept into the suction lines would not prevent the ECCS from performing its design functions.

The finding was more than minor because it affected the mitigating system cornerstone attribute of "Design Control." Specifically, the licensee did not account for the unfiltered debris flow from the reactor cavity sump following a Loss of Coolant Accident (LOCA) and Recirculation Actuation Signal (RAS) in its initial design. This finding was of very low safety significance and screened out using the SDP Phase 1 worksheet because the licensee's evaluation determined that the unfiltered flow from the reactor cavity sump would not prevent the ECCS from performing its design function. A contributing cause of the finding is related to the cross-cutting element of problem identification, specifically identification, in that the licensee had multiple opportunities to identify this issue during previous inspections and maintenance. (Section 1R15.1)

Inspection Report# : 2006002*(pdf)*

Significance: G Mar 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Take Adequate Corrective Actions for EDG Air Start Motor Failures
The inspectors identified a Green NCV of 10 CFR Part 50, Appendix B, Criterion XVI, “Corrective Action,” for failure to take timely and effective corrective actions to prevent recurrence of Emergency Diesel Generator (EDG) air start motor failures. On January 31, 2006, while performing periodic maintenance on the 2B EDG, four of eight air start motors were found seized and unable to rotate. Disassembly of the failed air start motors revealed an excessive amount of internal rust and corrosion. The corrosion was responsible for binding the motors and indicated that the starting air supplied to the motors had a high moisture content. A nearly identical failure occurred on the 2A EDG in May of 2004, when four of eight air start motors did not rotate when tested. The only corrective action taken as a result of this failure was to replace the motors, and no analysis or apparent cause was performed.

The finding was more than minor because if left uncorrected, could become a more significant safety concern by affecting additional air start motors and challenging performance of the EDG. The finding is also associated with the equipment performance attribute of the mitigating systems cornerstone. However, the finding was determined to be of very low safety significance in accordance with NRC Inspection Manual Chapter 0609, Appendix A, Attachment 1, SDP Phase 1 screening worksheet because it did not represent an actual loss of the EDG system safety function. A contributing cause of the finding was related to the corrective action aspect of the problem identification and resolution cross-cutting area. (Section 4OA2.2)

Inspection Report# : 2006002*(pdf)*

Significance: G Dec 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Loss of FME Integrity When Material Was Found in RCB Which Was Not on the FME Log
A NCV was identified by the inspectors for the failure to comply with 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures and Drawings. As a result of plant personnel failing to follow site procedures, a bucket containing sheets of paper, tools, and other miscellaneous items were brought inside the Unit 2 reactor containment buliding (RCB), and were not listed in the foreign material exclusion (FME) log book. Upon identification of this deficiency, the licensee immediately entered the RCB and logged the bucket and all of its contents in the FME log book. Licensee management also conducted a detailed containment close out inspection prior to the restart of Unit 2.

This finding is more than minor because foreign material left inside containment can be transported to the containment sump and cause restriction of the ECCS pump suction during LOCA conditions. Additionally, this finding is associated with the equipment performance attribute of the Mitigating Systems Cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). This finding was determined to be of very low safety significance (Green) based on the IMC 0609, Appendix A, Phase 1 SDP worksheet. This loss of FME control was not a design or qualification deficiency confirmed to result in loss of ECCS function per GL 91-18, nor did it represent an actual loss of a system safety function or the loss of a single train; therefore, the finding screened as Green. The inspectors determined that the human error which resulted in failure to properly document the material in the FME log was related to the human performance cross-cutting area. (Section 1R20)
Inspection Report# : 2005005*(pdf)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G Dec 31, 2005
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Implement Required HP Controls for U1 Pressurizer Valve Work
A self-revealing NCV of Technical Specification (TS) 6.11 was identified for failure to implement adequate radiological controls for work near contaminated pressurizer components as required by Health Physics Procedure (HPP)-3, High Radiation Areas, Rev. 17A. On November 25, 2005, two individuals entered the Unit 1 (U1) pressurizer cubicle to perform a visual inspection of valve V1249 and subsequently became contaminated due to failure to follow Radiation Work Permit (RWP) requirements and inadequate Health Physics Technician (HPT) coverage.

This finding is greater than minor because it is associated with the Occupational Radiation Safety Cornerstone attribute of exposure/contamination control 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 operations. The failure to implement required RWP controls for high radiation area or highly contaminated area work activities could result in unintended exposures. The finding was determined to be of very low safety significance because the individuals were monitored for exposures from external radiation fields and from internally deposited radionuclides, as appropriate; and no individuals exceeded either internal or external exposure limits. The finding involved the cross-cutting aspect of Human Performance because the contamination events were a direct result of worker and HPT failures to implement required radiological controls. The licensee entered this finding in its corrective action program (CAP) as CR 2005-32859. (Section 2OS1).
Inspection Report# : 2005005*(pdf)*

Public Radiation Safety

Significance: G Dec 31, 2005
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Appropriate DOT Type A Package Closure Requirements
The inspectors identified a NCV of 10 CFR 71.5 for failure to follow Department of Transportation (DOT) regulations for proper closure of Type A shipping packages. Specifically, for Type A packages containing in-core instrument cutting equipment shipped on October 3, 2003 and February 17, 2005, the licensee failed to prepare the package closures in accordance with the container vendor specifications as required by DOT 49 CFR 173.475 (e).

The finding was more than minor because it is associated with the Public Radiation Safety Cornerstone program and process attribute involving transportation procedures. The cornerstone objective to ensure adequate protection of public health and safety from exposure to radioactive material released into the public domain was affected because the identified issue involved shipments of radioactive material that were contrary to NRC and DOT regulations. The finding is of very low safety significance (Green) because it did not involve a radiation limit being exceeded or a package being breached. This finding also involved the cross-cutting aspect of problem identification and resolution regarding implementation of Operating Experience (OE). Although the licensee had reviewed OE 19531 associated with lid bolting torque for a Type A package they did not enter this OE into their CAP process and implement actions to prevent similar occurrences. After inspector identification of the issue, the licensee entered this finding into the CAP as CR 2005-25727 (Section 2PS2).

Inspection Report# : 2005005*(pdf)*

Physical Protection

Physical Protection information not publicly available.

Miscellaneous

Significance: N/A Jan 14, 2005
Identified By: NRC
Item Type: FIN Finding
Special Inspection's Findings and Observations Related with Breaker Failures
• After two safety-related 4160 volt circuit breakers failed to close, the licensee developed and performed sufficient tests to verify the ability of the remaining safety-related 4160 volt circuit breakers to operate.

• While the initial operability tests ensured that a breaker would cycle once, the licensee did not take into consideration breakers that must operate multiple times in performing various design functions. As a result, for any breaker cycled after passing an initial voltage verification test, but before operability was confirmed by a smooth operation check of the spring charging motor limit switch bracket, the licensee did not have reasonable assurance that the breaker would perform its safety function until a second successful voltage verification test was completed.

• The licensee's root cause evaluation was sufficient to identify the cause of the breaker failures associated with the 1A and 1C Component Cooling Water Pump Breakers. However, it did not examine the following potential programmatic or organizational causes of the breaker failures: inadequate receipt inspection for the 1A Component Cooling Water Pump Breaker evidenced by the failure to identify the bent limit switch bracket; failure to refurbish the 1C Component Cooling Water Pump Breaker within the time frame identified in the maintenance program, or to identify the technical basis for extending the refurbishment cycle by 25%; and failure of the preventive maintenance procedure to identify the degraded performance of the 1C Component Cooling Water Pump Breaker.

• The licensee did not fully implement industry related operating experience in two areas; post-refurbishment receipt inspection of the Westinghouse DHP 4160 volt breakers and effects of hardened grease on 4160 volt breaker operation.
Inspection Report# : 2004011*(pdf)*

Last modified : August 25, 2006