

Saint Lucie 2

2Q/2004 Plant Inspection Findings

Initiating Events

Significance:  Mar 27, 2004

Identified By: Self Disclosing

Item Type: FIN Finding

Condensate Pump Lower Motor Bearing Failure Due to Inadequate Lubrication Resulted in Manual Reactor Trip

A self-revealing finding was identified due to human error that resulted in the misidentification of the 2A condensate pump lower motor bearing as a sealed bearing which did not require lubrication.

The finding is greater than minor because if left uncorrected could result in unnecessary and increased challenges (e.g., reactor trips) to safety significant systems. The finding affected the initiating event cornerstone, and was considered to be of very low safety significance according to the SDP Phase 1 worksheet since there was no increase in the likelihood that mitigation equipment or functions would not be available. (Section 40A3.1)

Inspection Report# : [2004003\(pdf\)](#)

Significance: N/A Mar 06, 2004

Identified By: NRC

Item Type: FIN Finding

Supplemental Inspection 95001

This supplemental inspection was conducted to assess the licensee's individual and collective evaluations associated with a Unit 2 White performance indicator (PI) in the initiating events cornerstone of the reactor safety strategic performance area. The White PI performance indicator involved crossing the threshold from Green to White for the Unplanned Scrams per 7,000 Critical Hours Performance Indicator in the fourth quarter of calendar year 2003. More specifically, Unit 2 experienced four reactor trips during the last three quarters of 2003. The first reactor trip, which occurred on April 1, 2003, was a manual trip from 100 percent power due to the loss of main condenser vacuum caused by a degraded air removal system. The second reactor trip, which occurred on June 11, 2003, was an automatic trip from approximately 22 percent power initiated by equipment failures of the 2A steam generator (SG) low power and full power main feedwater (MFW) bypass flow control valves. The third reactor trip, which occurred on December 4, 2003, was a manual trip from approximately 60 percent power initiated by a loss of the 2A condensate pump due to sudden, catastrophic failure of the lower motor bearing. And, the fourth reactor trip, which occurred on December 20, 2003, was an automatic reactor trip from 100 percent power caused by the loss of main generator excitation due to failure of a voltage regulator control module.

The licensee's problem identification, root cause and extent-of-condition evaluations, and corrective actions for the four specific reactor trips were generally thorough and complete. Although the collective evaluation did conclude that degraded material condition of critical secondary system equipment was an apparent common contributor, it did not identify any specific risk-significant common cause(s) linking all four reactor trips

Inspection Report# : [2004008\(pdf\)](#)

Mitigating Systems

Significance:  Jun 26, 2004

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Follow Procedures per TS 6.8.1.(a)

The inspectors identified two examples of a non-cited violation (NCV) of Technical Specification 6.8.1.(a) for failure to follow procedures in maintaining and reactivating SRO licenses. This resulted in two senior reactor licensed operators standing watch without the appropriate qualifications.

The finding, which involves the mitigating systems cornerstone, is greater than minor because it is associated with human performance attributes that affect the availability, reliability, and capability of licensed operators to respond to initiating events to prevent undesirable consequences. The NRC considers the maintenance and proficiency of licensed operators an element of the defense in depth philosophy, and the compliance with procedures which implement the requirements of 10 CFR 55.53(f), to be significant. (Section 1R11)

Inspection Report# : [2004004\(pdf\)](#)

Significance:  Mar 27, 2004

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Inadequate Cause Determination and Ineffective Corrective Actions to Preclude Repetitive Overspeed Failures of the 2C AFW Pump

A self-revealing, non-cited violation of Criterion XVI of 10 CFR 50, Appendix B, Corrective Action was identified for the licensee's failure to determine the cause, and implement appropriate corrective action to preclude repetitive overspeed trips of the 2C auxiliary feedwater (AFW) pump.

The finding is greater than minor finding because if left uncorrected could result in the 2C AFW being unable to perform its safety function to mitigate certain design basis accidents (e.g., station blackout, loss of all feedwater). The finding was determined to be associated with the mitigating systems cornerstone. A Significance Determination Process (SDP) Phase 3 evaluation was performed for this event. The likelihood of successful recovery of the Unit 2 turbine-driven AFW pump after an overspeed trip was found to be better than the generic value for operator recovery used in the Phase 2 SDP sheets. This reduced the calculated risk impact of the event to a value below that determined in the Phase 2 analysis. As a result of this change, the Phase 3 analysis determined the finding's change in risk to be less than 1E-6. (Section 40A3.3)

Inspection Report# : [2004003\(pdf\)](#)

Significance:  Oct 31, 2003

Identified By: NRC

Item Type: NCV NonCited Violation

Failure to Evaluate Combustible Loading of Silicone Oil-Filled Transformers in the FHA and the Effect on SSD Capability

A Green non-cited violation (NCV) of 10 CFR 50.48 and St. Lucie Unit 2 Operating License Condition 2.C.(20) was identified for the licensee's failure to comply with the approved fire protection program. Specifically, three transformers, each containing approximately 380 gallons of combustible silicone dielectric insulating fluid, were not identified or evaluated in the Unit 2 fire hazards analysis combustible loading. The three transformers were located in the Train B switchgear room (Fire Area C). As a result, the transformers' contribution to combustible loading, fire ignition frequency, and their effects on safe shutdown capability had not been assessed as required by the Fire Protection Program. This finding was entered into the licensee's corrective action program as Condition Report 03-0637.

The finding is more than minor because it affected the mitigating systems cornerstone objective to ensure the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The finding is of very low safety significance because postulated fire scenarios indicated that the potential effects of a fire, involving either of the three silicone oil-filled transformers in Fire Area C, would not likely be of sufficient intensity to damage the cables of safe shutdown equipment to the point where it would have an adverse impact on the ability to safely shut down the plant. (Section 1R05.1.b)

Inspection Report# : [2003013\(pdf\)](#)

Significance:  Sep 27, 2003

Identified By: Self Disclosing

Item Type: NCV NonCited Violation

Improper Implementation Of Off-Normal Operating Procedure During Loss Of MFW Event

A self-revealing finding was identified as a non-cited violation of Technical Specification 6.8.1.a for failing to properly implement Off-Normal Operating Procedure (ONOP) 2-0700030, Main Feedwater, during a loss of feedwater event.

This finding is greater than minor because if left uncorrected could result in more significant safety consequences and it also affected an attribute and objective of the Mitigating Systems Cornerstone. Failure to follow an ONOP could affect the capability to mitigate abnormal plant conditions and to prevent undesirable consequences in response to initiating events. The finding is of very low safety significance in accordance with the SDP Phase 1 worksheet because no actual loss of safety function occurred. (Section 1R14)

Inspection Report# : [2003006\(pdf\)](#)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Public Radiation Safety

Physical Protection

[Physical Protection](#) information not publicly available.

Miscellaneous

Significance: N/A Feb 27, 2004

Identified By: NRC

Item Type: FIN Finding

Problem Identification and Resolution

The inspectors determined that the licensee was generally effective in identifying problems and entering them into the Corrective Action Program. In general, the threshold for initiating Condition Reports (CRs) was low and employees were encouraged by management to initiate CRs.

The inspectors concluded that the Quality Assurance (QA) audits were comprehensive, were well conducted, and had identified numerous performance problems. For example, licensee Quality Assurance identified that not all self assessments or quarterly CR rollups scheduled for performance in 2003, were actually performed as required by plant procedures. Quality Assurance also identified that there has been a lack of emphasis on completing corrective actions as exemplified by an increasing backlog of overdue Plant Management Action Items (PMAIs). At the time of this inspection there was a backlog of 360 overdue PMAIs of varying importance. Additionally, the inspectors observed that a recent revision to procedure ADM-07.01, PMAI Corrective Action Tracking Program removed all time limits for closure of PMAIs.

The inspectors did not identify any reluctance by the plant staff to report safety concerns. The inspectors concluded that the employee concerns program, Speakout, was functioning well.

Inspection Report# : [2004007\(pdf\)](#)

Last modified : September 08, 2004