Saint Lucie 2
1Q/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 4OA3.1)
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 calender 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: 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 4OA3.3)

Inspection Report# : 2004003*(pdf)*

Significance: G 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: G 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

Significance: G Apr 05, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure To Meet 10 CFR 50.54(q) Change Requirements Which Resulted In A Decrease Of Emergency Plan Effectiveness
Green. A change made to the Emergency Action Limit (EAL) for Reactor Coolant System (RCS) leakage requiring an Unusual Event declaration resulted in a decrease in the effectiveness of the Emergency Plan.

A non-cited violation of 10 CFR 50.54(q) was identified by the NRC inspector. This finding is greater than minor because changing commitments in the Radiological Emergency Plan (REP) which decrease its effectiveness without prior approval potentially impacts the NRC's ability to perform its regulatory function, and potentially creates an ineffective response to a radiological emergency. The safety significance of the finding is very low because, although the Unusual Event declaration could be delayed as a result of the change made to the EAL, criteria for declaration of an Alert and subsequent response, remained unchanged.

Inspection Report# : 2003004*(pdf)*

Occupational Radiation Safety

Significance: G Jun 28, 2003
Identified By: Self Disclosing
Item Type: NCV NonCited Violation
Failure Of A Designated Standby Rescue Person To Maintain Continuous Communication With Worker Provided With Supplied-Air Hood Respiratory Equipment (Section 2OS1.1)
Green. A self-revealing non-cited violation of 10 CFR 20.1703 (f) was identified for the failure of the designated standby rescue person to maintain continuous communication with a worker provided with supplied-air hood respiratory equipment during reactor head maintenance activities.

This finding is greater than minor because the failure to maintain continuous communication between the worker and the designated rescue person potentially could decrease timeliness in providing assistance to the worker whose air supply failed in this case, or for any other reason that the individual may have required relief from distress. The finding is of very low safety significance because an indirect communication channel was available between the affected worker and the standby rescue person and, following the loss of breathing air event, was used to request appropriate assistance in a timely manner (Section OS1.1).

Inspection Report# : 2003005*(pdf)*

Public Radiation Safety

Physical Protection

Significance: G Jun 28, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure To Search New Fuel Containers Prior To Entering The Protected Area (Section 1R20).
Green. A non-cited violation was identified for the licensee's failure to comply with Section 3.3.6 of the Physical Security Plan. On March 4, 2003, security personnel allowed a shipment of new fuel containers to enter the Protected Area (PA) without performing an adequate search.

This finding is greater than minor because allowing new fuel storage containers, with inadequate seals, to enter the PA without being searched could have adversely affected the licensee's ability to provide adequate assurance that the physical protection program can protect against the design basis threat of radiological sabotage. This finding was evaluated using the Interim Physical Protection Significance Determination Process and determined to be of very low safety significance. The finding was a vulnerability in the implementation of PA search requirements that did not involve a malevolent act, and there had not been two similar findings in four quarters. (Section 1R20)
Inspection Report# : 2003005*(pdf)*

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 : May 05, 2004