Saint Lucie 1
4Q/2006 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance: G Oct 20, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Test the Sound Powered Phones in Accordance With Surveillance Procedures
The team identified a non-cited violation of Unit 1 Operating License Condition 3.E for failure to perform tests on the sound powered phone system credited for post-fire safe shutdown in accordance with the approved Unit 1 fire protection program (FPP). The Unit 1 FPP (described in the Updated Final Safety Analysis Report, Appendix 9.5A) listed communications (which includes the sound powered phone system) as being subject to periodic inspections and/or testing. The annual surveillance test procedure for the sound powered phones, OP-1-0010125A, Schedule of Periodic Tests, Checks, and Calibrations, had not been performed since July 2004.

The finding is more than minor because, when the licensee initially performed the missed surveillance test, some of the sound powered phones did not work. This finding affects the ability of the licensee to maintain the communications system and is associated with the mitigating systems cornerstone and its respective attribute of protection against external factors (i.e., fire). The team determined that this finding was of very low safety significance (Green) because other communications systems (i.e., radios) credited in the FPP were verified to be available. The licensee initiated Condition Report (CR) 2006-28784 to address the issue of the missed surveillance test and CR 2006-29158 to address the deficiencies identified during the initial retest of the missed surveillance. The surveillance test was successfully performed during the inspection. (Section 1R05.08)

Inspection Report# : 2006010 *(pdf)*

Significance: G Sep 30, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Follow Procedure for Erection of Temporary Ladders and Structures On Or Around Safety Related Equipment
A Non-Cited Violation was identified for failing to implement administrative procedure ADM-27.11, Scaffold Control, on issues related to the erection of ladders and scaffold structures around safety related equipment. Specifically, over a short period of time (about a week) the inspectors identified four examples where either a structure or ladder was erected without an engineering evaluation being completed to ensure acceptability.

The finding is greater than minor because the failure to implement appropriate procedures to properly construct and seismically qualify scaffold in safety-related areas could become a more significant safety concern, if left uncorrected. The finding involved the attribute of equipment performance and affected the mitigating systems objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Using Manual Chapter 0609, Appendix A, Attachment 1, “Significance Determination Process,” Phase 1 Worksheet, the finding was determined to have very low safety significance because it only affected the mitigating systems cornerstone, and all subsequent engineering evaluations determined that there was no adverse effect to mitigating equipment. A contributing cause of the finding is related to the cross-cutting element of human performance, specifically work practices, in that personnel failed to follow procedures when erecting ladders and structures near safety-related components. (Section 1R17)

Inspection Report# : 2006004 *(pdf)*

Significance: G Mar 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Reset the 1C AFW Pump Mechanical Over Speed Trip Linkage
A Green self-revealing NCV was identified for the licensee failing to comply with 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings.” As a result of an inadequate procedure, a turbine driven auxiliary feed water (AFW) pump was returned to service without having its mechanical overspeed trip mechanism properly reset following a periodic surveillance test. The licensee performed a thorough root cause evaluation of the event and implemented interim corrective actions to prevent recurrence.

This finding is greater than minor because the improper resetting and engagement of the overspeed trip mechanism is associated with the reactor mitigating systems cornerstone attribute of equipment performance and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. In addition, if left uncorrected, this finding would result in a more significant safety concern. This finding was evaluated using the Significance Determination Process (SDP) and was determined to be of very low safety significance. A contributing cause of the finding is related to the cross-cutting element of human performance, specifically resources, in that the procedure was inadequate to accomplish the intended task. (Section 1R15.2)

Inspection Report# : 2006002 *(pdf)*

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)*

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance: G Dec 31, 2006
Identified By: Self-Revealing
Item Type: NCV NonCited Violation
Failure to Survey Unit 1 Control Room Outside Intake Air
. A self-revealing non-cited violation (NCV) of 10 CFR 20.1501(a) was identified for failure to conduct radiation surveys of the Unit 1 (U1) control room ventilation outside intake air. From March 31, 2006 to October 28, 2006, the 'B' U1 Control Room Outside Air Intake (CROAI) monitor sample pump was valved out of the monitor sample path due to a failed breaker. This monitor functions to survey the air supplied to the U1 control room for airborne radioactive contamination, and realigns the control room ventilation to a recirculating mode in the event of a high radiation alarm. This issue was entered into the licensee's corrective action program.

The finding is greater than minor because it is associated with the Occupational Radiation Safety Cornerstone attribute of Plant Facilities/Equipment and Instrumentation and it affected the cornerstone objective, in that not surveying control room air could result in increased operator exposure during accidents. Using the Occupational Radiation Safety Significance Determination Process (SDP), the inspectors determined that the finding was of very low safety significance (Green) because it did not involve a substantial potential for overexposure. Specifically, the U1 CROAI monitors and their automatic ventilation realignment function were not necessary to meet General Design Criteria (GDC) 19 for control room personnel doses as specified in Appendix A to 10 CFR Part 50 during accident conditions, and other operational radiation monitors remained available to provide an automatic actuation signal for the U1 ventilation system realignment.
Inspection Report# : 2006005 *(pdf)*

Public Radiation Safety

Significance: G Dec 31, 2006
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Calculate Accurate Airborne Effluent Doses to Members of the Public
The inspectors identified a NCV of 10 CFR 20.1302(b) for failure to perform accurate calculations of airborne effluent releases to demonstrate that the maximally exposed individual did not exceed the annual dose limit. Specifically, during the period of March 17, 2004 to October 4, 2006, the flow rate of the Unit 2 Fuel Handling Building (U2 FHB) exhaust fans exceeded that used to calculate the effluent release rate, resulting in a non-conservative dose calculation assessment for members of the public. This finding was entered into the licensee's corrective action program.

This finding is greater than minor because it is associated with the Public Radiation Safety Cornerstone attribute of Program and Process and affected the cornerstone objective of assuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operation. The finding was evaluated using the Public Radiation Safety SDP and was determined to be of very low safety significance (Green) because it did not prevent the licensee from assessing doses, and offsite doses from gaseous effluents during the time period in question did not exceed Appendix I to 10 CFR Part 50 criteria. This finding has a cross-cutting aspect in the area of human performance because the procedure used to calculate the effluent activity released did not contain accurate and up-to-date information regarding the U2 FHB ventilation flow rates, resulting in inaccurate calculation of effluent releases. (Section 2PS1)

Inspection Report# : 2006005 *(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 : March 01, 2007