UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

October 13, 2005

Florida Power and Light Company
ATTN: Mr. J. A. Stall, Senior Vice President
Nuclear and Chief Nuclear Officer
P. O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: ST. LUCIE NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT 05000335/2005004 AND 05000389/2005004

Dear Mr. Stall:

On September 30, 2005, the US Nuclear Regulatory Commission (NRC) completed an inspection at your St. Lucie Units 1 and 2. The enclosed integrated inspection report documents the inspection findings, which were discussed on October 4, 2005, with Mr. Jefferson and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the inspectors identified two findings of very low safety significance (Green). These findings were determined to involve violations of NRC requirements. However, because of the very low safety significance and because they were entered into your corrective action program, the NRC is treating these violations as non-cited violations (NCVs), in accordance with Section VI.A of the NRC's Enforcement Policy. Additionally, a licensee-identified violation which was determined to be of very low safety significance is listed in Section 4OA7 of this report. If you contest these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Senior Resident Inspector at the St. Lucie facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's

document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Joel T. Munday, Chief
Reactor Projects Branch 3
Division of Reactor Projects

Docket Nos.: 50-335, 50-389
License Nos.: DPR-67, NPF-16

Enclosure: Inspection Report 05000335/2005004, 05000389/2005004
w/Attachment - Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	50-335, 50-389
License Nos.:	DPR-67, NPF-16
Report Nos.:	05000335/2005004, 05000389/2005004
Licensee:	Florida Power & Light Company (FPL)
Facility:	St. Lucie Nuclear Plant, Units 1 & 2
Location:	6351 South Ocean Drive Jensen Beach, FL 34957
Dates:	July 01 - September 30, 2005
Inspectors:	T. Hoeg, Senior Resident Inspector S. Sanchez, Resident Inspector M. Giles, Region I Senior Resident Inspector M. Bates, Operations Engineer (Section 1R11.2) R. Aiello, Senior Operations Engineer (Section 1R11.2)
Approved by:	Joel Munday, Chief Reactor Projects Branch 3 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000335/2005-04, 05000389/2005-04; 07/01/2005 - 09/30/2005; St. Lucie Nuclear Plant, Units 1 & 2; Equipment Alignment and Temporary Plant Modifications.

The report covered a three month period of inspection by resident inspectors and regional licensed operator examiners. Two Green non-cited violations (NCVs) were identified. One licensee-identified finding is documented in Section 4OA7. The significance of most findings is identified by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. NRC- Identified and Self-Revealing Findings

Cornerstone: Initiating Events

- Green. 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)

Cornerstone: Mitigating Systems

- Green. The inspectors identified a non-cited violation (NCV) of TS 6.8.1.a and Regulatory Guide 1.33, for the licensee failing to implement administrative procedure ADM-17.18, Temporary System Alteration, Revision 6, when the control rod position circuit for control element assembly (CEA) 63 was altered to simulate the control rod position was at the upper electrical limit (UEL).

The finding was greater than minor because it is associated with the configuration control attribute of the mitigating systems cornerstone and affected the cornerstone objective of ensuring the reliability and capability of the rod control system. The finding was determined to be of very low safety significance in accordance with NRC Inspection Manual Chapter 0609, Appendix A, Attachment 1, the SDP Phase 1 screening worksheet because it did not represent an actual loss of the rod control system safety function and only affected one CEA in the entire rod control system. (Section 1R23)

B. Licensee-Identified Violations

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken by the licensee have been entered in the licensee's corrective action program. The violation and corrective actions are listed in Section 4OA7 of this report.

Report Details

Summary of Plant Status

Unit 1 operated at or near full power the entire inspection report period.

Unit 2 operated at full power until August 11, 2005, when the unit was manually tripped due to a partial loss of feedwater event. The unit was restarted on August 12 and returned to full power on August 13 where it remained through the end of this inspection period.

1. REACTOR SAFETY
Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection

Impending Adverse Weather: Hurricane Katrina

a. Inspection Scope

During the week of August 22, the inspectors verified the status of licensee actions in accordance with procedure AP-0005753, Severe Weather Preparations, as Hurricane Katrina approached south Florida. This verification included physical walkdowns of the licensee's property and discussions with responsible licensee personnel regarding systems, structures, and components (SSCs) vulnerable to high winds and potential flooding during a hurricane. During the licensee's implementation of severe weather preparations for hurricane Katrina, the inspectors specifically examined the state of preparation and readiness of the following systems and structures for hurricane conditions:

- Emergency Diesel Generator (EDG) Rooms
- Intake Cooling Water Structures
- Switchyard Area
- Equipment Laydown and Staging Areas Within the Protected Area

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial Equipment Walkdowns

The inspectors conducted four partial equipment alignment verifications of the safety-related systems listed below to review the operability of required redundant trains or backup systems while the other trains were inoperable or out of service (OOS). These inspections included reviews of applicable Technical Specifications (TS), plant lineup procedures, operating procedures, and/or piping and instrumentation drawings (P&ID),

which were compared with observed equipment configurations to identify any discrepancies that could affect operability of the redundant train or backup system. The inspectors also reviewed applicable reactor control operator (RCO) logs; out of service and operator work around (OWA) lists; active temporary system alterations (TSA); and any outstanding CRs regarding system alignment and operability.

- 2A Auxiliary Feedwater (AFW) System
- 1B Intake Cooling Water (ICW) System
- Unit 1 Instrument Air System
- 2B Component Cooling Water (CCW) System

b. Findings

Introduction. A Green Non-Cited violation was identified by the inspectors 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.

Description. On July 26, 2005, while performing a control board walkdown during maintenance activities to replace the 1B ICW pump, the inspectors noted a caution tag on the 1C ICW pump hand switch which stated the pump's discharge valve could not be closed. The inspectors questioned the need for the caution tag, which was hung on March 31, 2005, and discussed with control room operators the impact of this degraded condition as well as the accompanying compensatory operator actions, if required. Through these discussions, the inspectors learned that the 1C ICW pump was the normal standby ICW pump and is required to be started in accordance with station procedure 1-0640030, Off-Normal Operating Procedure, Intake Cooling Water System, in the event that one of the normally running pumps tripped and could not be restarted and the ICW header depressurized. During this event, valve SB21206, 1C ICW pump discharge valve is required to be throttled per operating procedure OP 1-0640020, ICW System Operation, prior to starting the 1C pump to prevent damage to the ICW system and associated components due to potential water hammer events. Upon review of Operations Department Policy OPS-513, Abnormal/Degraded Operating Conditions, the inspectors noted that the procedure stated that "when conditions arise that place plant systems in an abnormal operating condition or operation proceeds with degraded or unavailable plant equipment, pre-planning of compensatory measures and contingencies are required to ensure safe, conservative and reliable operation." Through further discussions with control room operators, the inspectors learned that a temporary change to the ICW system operating procedure had been made after this condition had been identified, which provided for an alternate valve to be used in lieu of valve SB21206 to throttle ICW flow when starting the 1C pump, however it was cancelled on April 22, 2005. At the time the inspectors reviewed this issue, a condition report had not been generated since the condition was identified on March 31, 2005. The inspectors concluded that although a temporary change had been written for an

interim period of time, failure to generate a condition report and appropriately enter this deficiency in the corrective action program challenged the licensee's ability to establish adequate corrective actions including effective compensatory actions, and maintain configuration control of the ICW system from April 22, 2005, to July 26, 2005.

As a result of this NRC-identified deficiency, the licensee entered this performance deficiency into their corrective action program as condition report (CR) 2005-20620. In addition, the licensee generated an OPS-513 attachment that established compensatory actions to be taken if the spare ICW pump was required to be placed in service in accordance with the ICW system off-normal procedure.

Analysis. The inspectors determined that the licensee's failure to generate a CR and enter this degraded condition into the corrective action program and thus establish and implement effective compensatory actions as required by their operations policy to be a performance deficiency. 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.

The inspectors identified that a contributing cause of this finding was related to the cross-cutting area of problem identification and resolution, specifically problem identification, because control room operators did not enter the degraded condition into the corrective action program.

Enforcement. 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, states, in part, that measures shall be established to assure that conditions adverse to quality, are promptly identified and corrected. The licensee meets this requirement, in part, by implementing nuclear administrative procedure NAP-204, Condition Reporting. NAP-204 requires in step 3.7, that site personnel are responsible for identifying and reporting conditions that are potentially adverse to plant safety. Contrary to the above, on March 31, 2005, a CR was not generated to document the degraded condition associated with valve SB21206. The violation represents a failure to assure that adequate corrective measures to conditions adverse to quality were taken in a timely manner. Although a temporary procedure was in place for approximately one month, a CR was not generated, and no compensatory actions existed from the time the temporary procedure was cancelled on April 22, 2005, until this issue was identified by the inspectors on July 26, 2005. Once identified by the inspectors, the licensee documented the issue in the corrective actions program and established effective compensatory measures. Because the failure to adequately identify and report conditions adverse to safety was of very low

safety significance and had been entered into the licensee's corrective action program as CR 2005-20620, this violation is being treated as an Non-Cited Violation, consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000335/2005004-01: Failure to Adequately Identify and Report Conditions Potentially Adverse to Plant Safety Involving the 1C ICW Pump Discharge Isolation Valve.

1R05 Fire Protection

Routine Inspections

a. Inspection Scope

The inspectors conducted tours of the following eight areas to verify they conformed with Administrative Procedure AP-1800022, Revision 38C, Fire Protection Plan. The inspectors specifically examined transient combustibles in the areas and ongoing hot work or other potential ignition sources. The inspectors also assessed whether the material condition, operational status, and operational lineup of fire protection systems, equipment and features were in accordance with the Fire Protection Plan. Furthermore, the inspectors evaluated the use of compensatory measures being performed in accordance with the licensee's procedures and Fire Protection Plan.

- Unit 1 Main Control Room
- Unit 2 AFW Pump Areas
- Unit 2 Main Control Room
- Unit 2 EDG Rooms
- Unit 1 Reactor Protection System Motor Generator Set Room
- Unit 1 Electrical Penetration Room
- Unit 2 Charging Pump Areas
- Unit 1 Fuel Handling Building

b. Findings

1R06 Flood Protection Measures

a. Inspection Scope

External Flooding

The inspectors reviewed lessons learned from previous hurricane events at St. Lucie including associated corrective actions to control external flooding that were generated and dispositioned within the last year as documented in condition report 2004-8214. The inspectors also performed detailed walkdowns of Unit 1 and Unit 2 Auxiliary Feedwater (AFW) pump areas and reviewed the applicable Updated Final Safety Analysis Report (UFSAR) section for flooding including specific plant design features to accommodate the maximum flood level. The inspectors reviewed UFSAR Section 13.8.2.3.1 requirements for beach dune inspections and verified the surveillance was completed after the last hurricane. The inspectors also reviewed ADM-04.01, Hurricane

Season Preparation, with regard to protective actions to prevent excessive flooding in the AFW Pump area; and reviewed AP-0005753, Severe Weather Preparations, with regard to potential external flooding issues.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

On August 15 through 17, 2005, the inspectors observed hydrolazing tube cleaning activities of the 2A and 2B CCW heat exchangers in accordance with MMP-14.01, CCW Heat Exchanger Cleaning And Repair. The inspectors also witnessed eddy current testing (ECT) of the 2A CCW heat exchanger and reviewed applicable ECT procedures, equipment calibration records, ECT analyst qualification certifications, and CCW Heat Exchanger Component Specific Technique Sheets. Furthermore, the inspectors also interviewed the responsible system engineer, reviewed FPL Specification M-081, Tube Plugging Criteria, and examined applicable work order packages to verify the total number of plugged tubes were within analyzed limits for the 2A CCW heat exchanger. In addition, the inspectors' review of the records and documentation indicated that the frequency of inspection was sufficient to detect degradation to ensure TS operability prior to loss of heat removal capabilities below design basis values.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

.1 Quarterly Review

a. Inspection Scope

On August 3, 2005, an inspector observed and assessed licensed operator actions during two simulator evaluations. During these simulator evaluations, the inspector witnessed the operating crew respond to a total loss of forced circulation event and a steam generator tube rupture event. The inspector specifically evaluated the following attributes related to the operating crews' performance:

- Clarity and formality of communication
- Ability to take timely action to safely control the unit
- Prioritization, interpretation, and verification of alarms
- Correct use and implementation of Emergency Operating Procedure (EOP) 1 and Standard Post Trip Actions

- Timely and appropriate Emergency Action Level (EAL) declarations per Emergency Plan Implementing Procedure (EPIP) - 01, Classification of Emergencies
- Control board operation and manipulation, including high-risk operator actions
- Oversight and direction provided by operations supervision, including ability to identify and implement appropriate TS actions, regulatory reporting requirements, and emergency plan actions and notifications
- Effectiveness of the post-evaluation critique

b. Findings

No findings of significance were identified.

.2 Biennial Review

a. Inspection Scope

The inspectors reviewed the facility operating history and associated documents in preparation for this inspection. During the periods of July 11-15 (in office) and July 18 - 21 (on site), 2005, the inspectors reviewed documentation, interviewed licensee personnel, and observed the administration of simulator operating tests and Job Performance Measures (JPMs) associated with the licensee's operator requalification program. Each of the activities performed by the inspectors was done to assess the effectiveness of the licensee in implementing requalification requirements identified in 10 CFR 55, "Operators' Licenses." The evaluations were also performed to determine if the licensee effectively implemented operator requalification guidelines as established by their Systems Approach to Training (SAT) based on the Institute of Nuclear Power Operations (INPO) approved program. The inspectors also reviewed and evaluated the licensee's simulation facility for adequacy for use in operator licensing examinations. The inspectors observed two operator crews during the performance of the operating tests. Documentation reviewed included written examinations, JPMs, simulator scenarios, licensee procedures, on-shift records, simulator modification request records and performance test records, the feedback process, licensed operator qualification records, remediation plans, watchstanding, and medical records. The records were inspected against the criteria listed in Inspection Procedure 71111.11. Documents reviewed during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the reliability and deficiencies associated with the two systems listed below, including associated condition reports. The inspectors verified the

licensee's maintenance effectiveness efforts met the requirements of 10 CFR 50.65 and Administrative Procedure ADM-17.08, Implementation of 10 CFR 50.65, The Maintenance Rule. The inspectors focused on the licensee's system functional failure determination, a(1) and a(2) classification determination, corrective actions, and the appropriateness of established performance goals and monitoring criteria. The inspectors also attended applicable expert panel meetings, and interviewed responsible engineers. The inspectors reviewed associated system health reports, system walkdown reports, and the licensee's goal setting and monitoring requirements.

- Unit 1 High Pressure Safety Injection System
- Unit 2 125 Volt Direct Current System

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

The inspectors reviewed the risk assessments for the following six Systems, Structures, or Components (SSC) or a combination thereof that were non-functional due to planned and/or emergent work. The inspectors also walked down and/or reviewed the scope of work to evaluate the effectiveness of licensee scheduling, configuration control, and management of online risk in accordance with 10 CFR 50.65(a)(4) and applicable program procedure ADM-17.16, Implementation of the Configuration Risk Management Program. The inspectors interviewed responsible Senior Reactor Operators on-shift, verified actual system configurations, and specifically evaluated results from the online risk monitor (OLRM) for the combinations of OOS risk significant SSCs listed below:

- 2A AFW Pump Maintenance
- 1C AFW Pump, 1B ICW Pump, and Auxiliary Building Supply Fans HVS 4B and 6B Maintenance
- 1B ICW Pump, 1B AFW Pump, and 1B Charging Pump Maintenance
- 1A Containment Spray (CS) Pump, and 1B ICW Pump Maintenance
- Unit 1 Risk with Low Grid Voltage Condition while Unit 2 in Mode 3
- 2A and 2B Boric Acid Makeup Pumps, 2C AFW Pump, and 2A CS Pump Maintenance

b. Findings

No findings of significance were identified.

1R14 Nonroutine Events

a. Inspection Scope

On August 11, 2005, Unit 2 was manually tripped due to decreasing steam generator water levels caused by the loss of the 2A main feedwater pump (MFP). The 2A MFP tripped as a result of the 2A condensate pump tripping when a non-vital 4160 volt (V) bus was accidently de-energized. The loss of the non-vital bus also caused the loss of a vital 4160 V bus, which in turn caused the 2A EDG to automatically start and load. The inspectors responded to the control room and observed actions taken by the Unit 2 operators on-shift as they performed emergency operating procedures, standard post trip actions, and reviewed the sequence of events recorder print outs. The inspectors also observed the Unit 2 reactor startup and approach to criticality, as well as portions of the power ascension. The licensee documented the manual trip in their corrective action program as condition report 2005-22187.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following six CR interim dispositions and operability determinations to ensure that technical specification operability was properly supported and the affected SSC remained available to perform its safety function with no increase in risk. The inspectors reviewed the applicable UFSAR, and associated supporting documents and procedures, and interviewed plant personnel to assess the adequacy of the interim CR disposition.

- CR 2005-2777, 2C AFW Pump Overspeed
- CR 2005-21716, 2A/2B ICW System
- CR 2005-22030, Unit 2 HVS-1D Containment Air Cooler
- CR 2005-22862, Unit 2 ICW Pump Room Cooling Fans
- CR 2005-23076, Part 21 for Vendor Relay Seismic Design
- CR 2005-24475, Failure of Unit 2 RPS Channel C Linear Bistable

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

.1 Operator Workaround

a. Inspection Scope

The inspectors reviewed the operator workaround associated with the 2A LPSI header venting following the 2A LPSI pump surveillance testing. The inspectors verified the OWA did not affect either the functional capability of the related system in responding to an initiating event or the operator's ability to implement abnormal or emergency operating procedures.

b. Findings

No findings of significance were identified.

.2 Cumulative Effects of Operator Work Arounds

a. Inspection Scope

The inspectors performed a semi-annual evaluation of the potential cumulative affects of all outstanding Unit 1 and 2 OWAs. The inspectors discussed these potential effects with control room supervision and operators. The inspectors also reviewed the minutes of the previous quarterly OWA team meeting, which met to systematically examine individual and cumulative OWA status and repair priority, and assess overall risk. The inspector discussed implementation and effectiveness of the OWA program with the with operations department manager.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors witnessed and reviewed work order (WO) post-maintenance test (PMT) activities of the six risk significant systems, structures, and components (SSCs) listed below. The following aspects were inspected: (1) Effect of testing on the plant recognized and addressed by control room and/or engineering personnel; (2) Testing consistent with maintenance performed; (3) Acceptance criteria demonstrated operational readiness consistent with design and licensing basis documents such as TS, UFSAR, and others; (4) Range, accuracy and calibration of test equipment; (5) Step by step compliance with test procedures, and applicable prerequisites satisfied; (6) Control

of installed jumpers or lifted leads; (7) Removal of test equipment; and, (8) Restoration of SSCs to operable status. The inspectors also reviewed problems associated with PMTs that were identified and entered into the corrective action program as condition reports.

- WO 33006723 Unit 1 HVE-13A Fan Motor Overhaul
- WO 35005602 Remove Corrosion on 2C AFW Pump Trip Leakage
- WO 34017643 2A CCW Heat Exchanger Clean, Inspect and Eddy Current Testing
- WO 35022715 1A Charging Pump Discharge Valve Repair
- WO 35023112 Troubleshoot and Repair Louvre on Unit 1 ECCS Pump Room Exhaust Fan HVE-9B
- WO 35003134 1B Start Up Transformer Maintenance

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities

a. Inspection Scope

Following the Unit 2 reactor trip on August 11, 2005, the inspectors observed shutdown activities and monitored unit status to verify compliance with applicable Mode 3 TS and operating procedures. The inspectors also attended status and planning meetings in the Outage Control Center, and reviewed plant restart schedules. The inspectors observed licensee processes for controlling work activities in accordance with their administrative procedures. The inspectors also reviewed applicable CRs prior to restart regarding the post-trip review and resolution of post-trip equipment problems. On August 12, the inspectors observed start up of Unit 2 and subsequent power ascension in accordance with applicable technical specifications and general operating procedures.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors witnessed portions of the following six surveillance tests and monitored test personnel conduct and equipment performance, to verify that testing was being accomplished in accordance with applicable operating procedures. The test data was reviewed to verify it met TS, UFSAR, and/or licensee procedure requirements. The inspectors also verified that the testing effectively demonstrated the systems were operationally ready, capable of performing their intended safety functions, and that identified problems were entered into the corrective action program for resolution. The tests included two inservice tests (ISTs) as follows:

- Unit 1 OP-3200051 At Power Determination of Moderator Temperature Coefficient and Power Coefficient
- Unit 2 OP-2200050B, 2B Emergency Diesel Generator Monthly Test
- Unit 1 I-OSP-24.01, Reactor Auxiliary Building Fluid Systems Periodic Test (IST)
- Unit 2 OP-0420050, Containment Spray and Iodine Removal (IST)
- Unit 2 SR-59-3B, Periodic Relief Valve Test
- Unit 1 OSP-25.04, Fuel Handling Building Ventilation Filter Testing

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors continued to periodically screen active TSAs for risk significant systems. The inspectors examined the two TSAs listed below, which included a review of the technical evaluation and its associated 10CFR50.59 screening. In addition, the inspectors reviewed the temporary metal plates in the north and south CREVS fan room floor drains installed to help improve the required control room positive differential pressure to verify they were implemented in accordance with TSA process. The temporary alteration was compared against the system design basis documentation to ensure that (1) the modification did not adversely affect operability or availability of other systems; (2) the installation was consistent with applicable modification documents; and (3) did not affect TS or require prior NRC approval. The inspectors also observed accessible equipment related to the temporary modification to verify configuration control was maintained.

- TSA 1-05-005, Reroute Cabling/Detector for Unit 1 Linear Power Range RPS Channel C
- TSA 1-05-006, Removal of Control Element Assembly (CEA) #63 Reed Switch Position Indication Input to CEA Position Display System (CEAPDS)

b. Findings

Introduction. The inspectors identified a non-cited violation (NCV) of TS 6.8.1.a and Regulatory Guide 1.33, for the licensee failing to implement administrative procedure ADM-17.18, Temporary System Alteration, Revision 6, when the control rod position circuit for control element assembly (CEA) 63 was altered to simulate the control rod position was at the upper electrical limit (UEL).

Description. On March 3, 2005, the reed switch position indication for Unit 1 CEA 63 was declared out of service due to unreliable position indication caused by a failure within the reed switch circuitry. The licensee began verifying the subject CEA at its upper electrical limit every 8 hours per technical specifications. The licensee generated a work order 35006288 to install a dummy load circuit to simulate the control rod position as being at the upper electrical limit (UEL) position of 134 inches with CEAPDS

and eliminate the associated nuisance alarms. On April 15, 2005, the reed switch was determined to be beyond repair and would remain OOS until the next planned shutdown. On August 15, 2005, during a review of the CEA 63 position indication work order, a licensed reactor operator determined that the previously installed dummy load also affected the subject CEA block circuit and required a more frequent rod position verification of every 4 hours vice 8 hours to meet technical specifications. The licensee generated CR 2005-22480.

The inspectors questioned the licensee regarding the analysis that was performed to approve the installation of the dummy load and determined that they had not used their TSA procedure to implement the modification. The licensee failed to recognize that since the motion block function of rod control was also affected they were required to maintain configuration control of their rod control system by use of their TSA process and not just a work order. The TSA process required a much more rigorous analysis and 10 CFR 50.59 review prior to installation. This condition was written in CR 2005-23267. The inspectors concluded that installing the dummy load not in accordance with the temporary system alteration process was a violation of regulatory requirements that had existed for approximately five months.

Analysis. The inspectors determined that the licensee's failure to follow their temporary system alteration procedure to be a performance deficiency. The finding was greater than minor because it is associated with the configuration control attribute of the mitigating systems cornerstone and affected the cornerstone objective of ensuring the reliability and capability of the rod control system. The finding was determined to be of very low safety significance in accordance with NRC Inspection Manual Chapter 0609, Appendix A, Attachment 1, the SDP Phase 1 screening worksheet because it did not represent an actual loss of the rod control system safety function and only affected one CEA in the entire rod control system.

Enforcement. TS 6.8.1.a requires that written procedures shall be established, implemented, and maintained covering the activities specified in Regulatory Guide (RG) 1.33, Revision 2, February 1978. RG 1.33, Appendix A, Item 1.c, identifies administrative procedures to be implemented for equipment control. Administrative procedure ADM-17.18, Temporary System Alteration, Revision 6, implements this requirement for temporary modifications made to a system. Contrary to the above, on August 15, 2005, the inspectors identified that ADM-17.18, Temporary System Alteration, Revision 6, was not implemented when the licensee altered CEA 63 block circuitry without conducting the required assessments necessary to ensure the operability, reliability and capability of the rod control system since March 3, 2005. Because the failure to implement the subject procedure is of very low safety significance and has been entered in the licensee's corrective action program (CR 2005-23267), this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000389/2005004-002, Failure to Implement Temporary System Alteration Procedure. The licensee initiated CR 2005-23267 to assess the condition and implement necessary corrective actions.

Cornerstone: Emergency Preparedness (EP)

1EP6 Drill Evaluation

a. Inspection Scope

On September 30, 2005, the inspectors observed a quarterly emergency preparedness drill of the licensee's emergency response organization for personnel in the simulator, Technical Support Center (TSC), and the Emergency Operations Facility (EOF). During this drill the inspectors assessed licensee performance to determine if proper emergency classification, notification, and protective action recommendations were made in accordance with emergency preparedness procedures. The inspectors evaluated the adequacy of the post drill critiques conducted in the EOF.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

.1 Routine Review of Condition Reports (CRs)

a. Inspection Scope

The inspectors performed a daily screening of all condition reports entered into the licensee's corrective action program. The inspectors followed NRC Inspection Procedure 71152, "Identification and Resolution of Problems", to help identify repetitive equipment failures or specific human performance issues for follow-up.

b. Findings and Observations

There were no specific findings identified from this overall review of the CRs issued each day.

.2 Cross References to PI&R Findings Documented Elsewhere

Section 1R04 describes a finding related to the cross-cutting area of problem identification and resolution, specifically problem identification, because control room operators did not enter the degraded condition into the corrective action program.

4OA3 Event Follow-up

.1 (Closed) LER 05000389/2004-003-00, Hot Shutdown Panel Display Instrumentation Failures - Operation Prohibited by Technical Specification

On December 16, 2004, St. Lucie Unit 2 was in Mode 1 at 100 percent power when the licensee discovered that they had been operating since January 2004 with inoperable hot shutdown panel instruments which were used for indicating charging flow and pressure (FI-2212) and shutdown cooling temperature (TI-3351Y). The instruments were not indicating in the upper 10 percent range of their scale. With the upper 10 percent of the instrument display segments not illuminating and no back up digital display available, these instruments did not satisfy the limiting condition of operation (LCO) requirements specified in technical specifications Table 3.3-9 and as such were inoperable and did not satisfy technical specification 3.3.3.5. The licensee concluded the apparent cause of this event to be; 1) the acceptance of longstanding equipment issues coupled with less than adequate detail in the planned maintenance process, and 2) a desensitization by operators to these type of issues and subsequent failure to recognize that this condition constituted a loss of technical specification instrumentation. Corrective action included replacing the failed instruments with a new model. The finding is more than minor because it had a credible impact on safety, in that important reactor plant indications may not have been available to the operator at the hot shutdown panel when needed to control the reactor plant. The finding affects the Mitigating Systems Cornerstone objective of ensuring the reliability and capability of the hot shutdown panel display instrumentation system. In accordance with SDP Appendix A, Phase 1, it was considered to have very low safety significance (Green) because the finding did not represent an actual loss of any safety system function. This licensee identified-finding involved a violation of TS 3.3.3.5, Remote Shutdown System Instrumentation. The enforcement aspects of the violation are discussed in Section 4OA7. This LER is closed.

.2 (Close) SL IV VIO 05000389/2005002-001, Failure to Comply with Requirements Established for the Conduct of Maintenance

The inspectors reviewed the licensee's response to the Notice of Violation dated March 2, 2005. The violation was cited for failure to comply with requirements established for the conduct of maintenance. Specifically, on May 26, 2003, an instrumentation and control (I&C) technician performed megger testing on the control element drive mechanism control (CEDMC) system without obtaining the required clearance and authorization from the supervisor. The inspectors determined that the licensee had entered the issue into the corrective action program as CR 2005-3728 and had subsequently addressed the violation. Corrective actions included counseling the individual involved in the incident and conducting an all hands briefing to re-emphasize the importance of obtaining work orders prior to performing work. In addition, FPL senior management issued a memorandum to all Nuclear Division personnel to inform all personnel that any employee who deliberately violates a plant procedure would be subject to severe disciplinary action, up to an including termination of employment. Based on these corrective actions, this violation is closed.

4OA5 Other

(Discussion)Temporary Instruction (TI) 2515/163: Operational Readiness of Offsite Power

This TI was completed in inspection report 05000335, 389/2005003. However, after NRC headquarters review of the information provided, additional information related to the TI was requested. The inspectors collected this information from licensee discussions, site procedures and other licensee documentation. Appropriate documentation of the inspection results was provided to the headquarters staff for further analysis.

4OA6 Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. Bill Jefferson and other members of licensee management on October 4, 2005. The licensee acknowledged the findings presented. No proprietary information was identified.

4OA7 Licensee- Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as an NCV.

- TS 3.3.3.5 requires that remote shutdown system instrumentation for shutdown cooling temperature and charging flow/pressure have at least 2 channels operable in Modes 1, 2, and 3. Contrary to this, from January 2004 until December 2004, 2 channels for each of the subject instrumentation were not operable and the reactor plant was not placed in hot shutdown within 30 days. This was identified in the licensee's corrective action program as CR 2005-16232. This finding is of very low safety significance because it does not represent an actual loss of any system safety function.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

C. Buehrig, Maintenance Rule Coordinator
D. Calabrese, Emergency Planning Supervisor
C. Costanzo, Operations Manager
R. De La Espriella, Site Quality Manager
L. Edwards, Training Manager
K. Frehafer, Licensing Engineer
J. Hagan, Acting Security Manager
R. Hughes, Site Engineering Manager
W. Jefferson, Site Vice President
G. Johnston, Plant General Manager
E. Katzman, Performance Improvement Department Manager
R. McDaniel, Fire Protection Supervisor
L. Neely, Work Control Manager
W. Nurberg, Chemistry Manager
W. Parks, Operations Supervisor
T. Patterson, Licensing Manager
J. Porter, Operations Support Engineering Manager
G. Swider, Systems Engineering Manager
J. Tucker, Maintenance Manager
S. Wisla, Health Physics Manager

NRC personnel

B. Moroney, NRR Project Manager

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Open/Closed

05000389/2005004-001	NCV	Failure to adequately identify and report conditions potentially adverse to plant safety involving the 1C ICW pump discharge isolation valve (Section 1R04)
05000335/2005004-002	NCV	Failure to maintain plant configuration control in accordance with administrative procedure ADM-17.18, Temporary System Alteration (Section 1R23)

Closed

05000389/2004-003-00	LER	Hot Shutdown Panel Display Instrumentation Failures - Operation Prohibited by Technical Specification (Section 4OA3)
05000389/2005002-001	VIO	Failure to Comply with Requirements Established for the Conduct of Maintenance (Section 4OA3)

Discussion

2515/163	TI	Operational Readiness of Offsite Power (Section 4OA5)

List of documents reviewed

1R11: Licensed Operator Requalification

2003-2004 LOR Program Grades
2003-2004 LOR Program Grades
2004 Biennal Written Exams
Scenario 0815001, Rev 18, Complicated SGTR
Scenario 0815005, Rev 20, SBLOCA with Trip Complications
Scenario 0815006, Rev 16, Recoverable Total Loss of FW
Scenario 0815020, Rev 14, SGTR With Delayed ESDE Inside Containment
Scenario 0815021, Rev 09, ESDE Outside Containment with SBLOCA
Scenario 0815034, Rev 04, SBLOCA With Partial LOOP. Loss of HPSI
Badge Access Transaction Reports for Reactivation of Licenses (8)
Licensed Operator Medical Records (20)
Feedback Summaries
Human Performance Errors
Remedial Training Records (7)
Written Exams Reviewed (RO/SRO 2004 LOCT Annual Exam 0820046A,B,C,D,E Shift) (5)
PSL-ENG-SEFJ-04-009, St. Lucie Unit 2 Cycle 15 Operation Data for the Core Physics Data Book, Rev. 0
Simulator Deviation Report No. 2005054 (Simulator Work Order No. D2005061), Core Delta Pressure Instruments are reading about 3 psid too high on the simulator
Simulator Steady State Performance Testing, 2005 Steady State Test
Listing of “In Work” Simulator Work Orders
List of “On Hold” Simulator Work Orders
List of “Completed” Simulator Work Orders
Unit 2 Cycle 15 Core Update Notebook
ANSI/ANS-3.5-1998, American Standard for Nuclear Power Plant Simulators for Use in Operating Training and Examination, April 15, 1998
Regulatory Guide 1.149, Nuclear Power Plant Simulation Facilities for Use in Operator Training and License Examinations
ANSI/ANS-3.4-1983, American National Standard Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants, April 29, 1983
SEI-07, Simulator Operability Testing and Evaluation Guideline, Sept. 16, 2002
Scenario-Based Test Documentation for 0815034 (TG-023, App. A)

Scenario-Based Test Documentation for 0815006 (TG-023, App. A)
Scenario-Based Test Documentation for 0815020 (TG-023, App. A)
2005 Transient Test - Reactor Trip from Full Power
2005 Transient Test - Loss of All Feedwater