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

July 25, 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 05000335/2005003 AND 05000389/2005003 AND EXERCISE OF ENFORCEMENT DISCRETION

Dear Mr. Stall:

On June 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 July 5, 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.

The report closes one issue involving a failure to protect cables from fire damage, which could result in a number of valves spuriously operating in a manner, which could adversely affect safe shutdown capability. Although the issue constitutes a violation of NRC requirements, the NRC is exercising enforcement discretion and reactor oversight process discretion (i.e. not subjecting the violation to the significance determination process (SDP)). The basis for the enforcement discretion is NRC Enforcement Manual Section 8.1.7.1 ©), Fire Induced Circuit Failures. One of the conditions for applying discretion is that the circuit vulnerabilities be corrected within a reasonable time frame. NRC Inspection Manual Chapter 0305, Operating Reactor Assessment Program, Section 06.06.2, Violations in Specified Areas of Interest Qualifying for Enforcement Discretion, states that violations related to certain circuit issues, which are eligible for enforcement discretion shall also be eligible for reactor oversight process discretion. The conditions for applying discretion were met because you did not dispute the violation, entered it into corrective action program and are taking timely corrective action.

In addition, this report documents one inspector identified finding of very low safety significance (Green). This finding was determined to involve a violation of NRC requirements. However, because of the very low safety significance and because it was entered into your corrective action program, the NRC is treating this violation as a non-cited violation (NCV), in accordance with Section VI.A of the NRC's Enforcement Policy. If you contest this NCV, 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/

Charles A. Casto, Director
Division of Reactor Projects

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

Enclosure: Inspection Report 05000335/2005003, 05000389/2005003
w/Attachment - Supplemental Information

cc w/encl: (See page 3)

cc w/encl:
William Jefferson, Jr.
Site Vice President
St. Lucie Nuclear Plant
Florida Power & Light Company
Electronic Mail Distribution

G. L. Johnston
Plant General Manager
St. Lucie Nuclear Plant
Electronic Mail Distribution

Terry L. Patterson
Licensing Manager
St. Lucie Nuclear Plant
Electronic Mail Distribution

David Moore, Vice President
Nuclear Operations Support
Florida Power and Light Company
Electronic Mail Distribution

Rajiv S. Kundalkar
Vice President - Nuclear Engineering
Florida Power & Light Company
Electronic Mail Distribution

M. S. Ross, Managing Attorney
Florida Power & Light Company
Electronic Mail Distribution

Marjan Mashhadi, Senior Attorney
Florida Power & Light Company
Electronic Mail Distribution

William A. Passetti
Bureau of Radiation Control
Department of Health
Electronic Mail Distribution

Craig Fugate, Director
Division of Emergency Preparedness
Department of Community Affairs
Electronic Mail Distribution

J. Kammel
Radiological Emergency
Planning Administrator
Department of Public Safety
Electronic Mail Distribution

Douglas Anderson
County Administrator
St. Lucie County
2300 Virginia Avenue
Ft. Pierce, FL 34982

Distribution w/encl: (See page 4)

Distribution w/encl:
B. Moroney, NRR
L. Slack, RII EICS
RIDSNRRDIPMLIPB
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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.:	05000335/200503, 05000389/200503
Licensee:	Florida Power & Light Company (FPL)
Facility:	St. Lucie Nuclear Plant, Units 1 & 2
Location:	6351 South Ocean Drive Jensen Beach, FL 34957
Dates:	April 01 - June 30, 2005
Inspectors:	T. Hoeg, Senior Resident Inspector S. Sanchez, Resident Inspector O. DeMiranda, Sr. Allegations Coordinator (Section 4OA2) R. Rodriguez, Reactor Inspector (Section 4OA5) M. Scott, Senior Reactor Inspector (1R02, 1R17) C. Julian, Senior Project Manager (1R02, 1R17) R. Cortes, Reactor Inspector (1R02, 1R17) S. Rose, Senior Operations Engineer (1R02, 1R17) R. Fanner, Reactor Inspector (1R02, 1R17)
Approved by:	Joel Munday, Chief Reactor Projects Branch 3 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000335/2005-03, 05000389/2005-03; 04/01/2005 - 06/30/2005; St. Lucie Nuclear Plant, Units 1 & 2; Temporary Plant Modifications.

The report covered a three month period of inspection by resident inspectors and several other inspectors from Region II. One Green non-cited violation (NCV) was identified. 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: Containment Barriers

- Green. The inspectors identified a non-cited violation of Technical Specification 6.8.1.a for failing to maintain configuration control of the unit 2 control room emergency ventilation system (CREVS) fan room structure in accordance with administrative procedure ADM-17.18, Temporary System Alteration, Revision 6.

  The finding is greater than minor because it is associated with the plant modification design control attribute of the reactor safety barrier integrity cornerstone and affected the cornerstone objective of ensuring the reliability and capability of the control room emergency ventilation system. The finding was 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 only represented a degradation of the radiological barrier function provided for the control room. Until the issue could be permanently resolved, the licensee initiated a clearance order to control the system alterations. (Section 1R23)

B. Licensee-Identified Violations

None.

Enclosure

Report Details

Summary of Plant Status

Units 1 and 2 began the report period at 100% power and operated continuously at full power throughout the report period except for short periods of time while conducting planned turbine valve testing.

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

1R01 Adverse Weather Protection

a. Inspection Scope

During the week of June 13 and 20, the inspectors reviewed and verified the status of licensee actions taken in accordance with their procedural requirements prior to the onset of hurricane season. The inspectors reviewed lessons learned and corrective actions taken from the 2004 season documented in condition reports 2004-7844 and 2004-9179. The inspectors reviewed Administrative procedure ADM-04.01, Hurricane Season Preparation, Revision 12 and performed site walkdowns to verify the licensee had made the required preparations. The inspectors performed reviews of plant exterior areas vulnerable to high winds and hurricane conditions including the following areas:

- Unit 1 and 2 Turbine Buildings
- Unit 1 and 2 Reactor Auxiliary Buildings

b. Findings

No findings of significance were identified.

1R02 Evaluations of Changes, Tests or Experiments

a. Inspection Scope

The inspectors reviewed selected samples of evaluations to confirm that the licensee had appropriately considered the conditions under which changes to the facility, Updated Final Safety Analysis Report (UFSAR), or procedures, may be made, and tests conducted, without prior NRC approval. The inspectors reviewed evaluations for seven changes and additional information, such as calculations, supporting analyses, the UFSAR, and drawings to confirm that the licensee had appropriately concluded that the changes could be accomplished without obtaining a license amendment. The seven evaluations reviewed are listed in the List of Documents Reviewed.

The inspectors also reviewed samples of changes for which the licensee had determined that evaluations were not required, to confirm that the licensee's conclusions to "screen out" these changes were correct and consistent with 10CFR50.59. The twenty-two "screened out" changes reviewed are listed in the List of Documents Reviewed.

The inspectors also reviewed corrective action report forms (condition reports) (CR) to confirm that problems were identified at an appropriate threshold, were entered into the corrective action process, and appropriate corrective actions had been initiated.

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.

- Unit 1 Component Cooling Water (CCW) System Train B
- Unit 2 CCW System Train A
- Unit 2 Emergency Core Cooling System (ECCS) Room Ventilation Train B
- Unit 1 Containment Spray System Train A

b. Findings

No findings of significance were identified.

1R05 Fire Protection

Routine Inspections

a. Inspection Scope

The inspectors conducted tours of eight areas throughout the plant listed below to verify they conformed with Administrative Procedure AP-1800022, Revision 38C, Fire Protection Plan. The inspectors specifically examined any transient combustibles in the areas and any 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 any compensatory

measures being performed in accordance with the licensee's procedures and Fire Protection Plan.

- Central Alarm Station Room
- Unit 1 CCW System Area
- Unit 2 Turbine Building
- Unit 2 Switchgear Room
- Unit 2 Control Room Emergency Ventilation System (CREVS) Room
- Unit 1 ECCS Pump Room
- Unit 2 CCW System Room
- Unit 2 ECCS Pump Room

b. Findings

1R11 Licensed Operator Requalification Program

Quarterly Review

a. Inspection Scope

On June 22, 2005, an inspector observed and assessed licensed operator actions during a simulator evaluation. During this simulator evaluation, the inspector witnessed the operating crew perform a reactor power ascension sequence, which included transition from manual to automatic steam generator water level control, loading the main turbine generator, and increasing reactor power level. The inspector specifically evaluated the following attributes related to the operating crews' performance:

- Clarity and formality of communication
- Prioritization, interpretation, and verification of alarms
- Correct use and implementation of Normal Operating Procedures
- 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
- Effectiveness of the post-evaluation critique

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 2 Control Element Drive System
- Unit 1 Containment Spray 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:

- Unit 1 CCW Heat Exchanger Cleaning Train A
- Unit 2 Intake Cooling Water Pump C, Unit 2 CCW Pump C, and Station Blackout Cross-Tie Breaker Maintenance
- Unit 2 ECCS Pump Venting
- Unit 2 Charging Pump C, Unit 2 CCW Pump C, and Unit 2 Atmospheric Dump Valve Maintenance
- Unit 2 Battery Charger Train A Maintenance
- Unit 2 ECCS Room Ventilation Train A, Unit 2 Battery Charger Train B, and Unit 2 Atmospheric Dump Valve Maintenance

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 2005-10422, Unit 1 Auxiliary Feedwater (AFW) System Piping Corrosion
- CR 2005-11232, Unit 1 1A2 Reactor Coolant Pump (RCP) Seal Cooler Flow
- CR 2005-11854, Unit 2 Intake Cooling Water Pump Room Overhead Scaffold
- CR 2005-13856, Unit 2 CREVS Room Configuration Control
- CR 2005-12812, Unit 1 CCW System Pipe Clamp
- CR 2005-17843, Unit 2 Degraded Engineered Safety Feature Actuation System Relay Socket Connection

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

The inspectors reviewed unit 2 operator workaround OWA 2-155 associated with a manual action requirement to isolate warm up steam from steam generator B to the 2C auxiliary feedwater pump turbine in the event of a faulted steam generator. Warm up steam solenoid valve SE-08-1 leaks by its seat when in the closed position. In the event of a faulted steam generator, the operator must manually close stop valve VO8883 to isolate warm up steam flow to the turbine. 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.

1R17 Permanent Plant Modifications

a. Inspection Scope

The inspectors evaluated design change packages for nine modifications, in the Initiating Events, Mitigating Systems, and Barrier Integrity cornerstone areas, to

evaluate the modifications for adverse effects on system availability, reliability, and functional capability. The modifications and the associated attributes reviewed are as follows:

Maintenance Support Package (MSP) 03087, [GL96-06] RHR Water Hammer Modifications (mitigating system)

- Materials/Replacement Components (compatibility, certification)
- Seismic Requirements
- System Design Analyses
- Updating of Licensee Documents (emergency procedure, drawings, analyses)

Plant Change Modification (PCM) 03063, 2A HPSI Pump Suction Vent Valve Addition (mitigating system)

- Materials/Replacement Components (material compatibility)
- Seismic Requirements
- Pressure Boundary
- Structural Requirements
- Functional Analysis
- Post-Installation Testing

PCM 04007, SIAS Trip of Pressurizer Heaters (mitigating system)

- Energy Needs
- Materials/Replacement Components (compatibility, environmental, seismic)
- Replacement Functional Properties
- Control Signals
- Operations
- Updating of Licensee Documents (procedures)
- Post-Installation Testing

PCM 02042, Unit 2 DDPS Obsolescence DDPS/SOER Replacement (mitigating system)

- Materials/Replacement Components (material compatibility)
- Plant Document Updating (design and licensing documents)
- Energy Needs
- 10 CFR 50.59 Evaluation

MSP 03059, AFW Pump 2C Turbine Coupling End Bearing Modification (mitigating system)

- Seismic
- Structural
- Materials/Replacement Components (material compatibility)
- Plant Document Updating (design and licensing documents)
- Post-Installation Testing

Installation Records

MSP 03096, Repair/Rework of Unit 1 HVAC Units HVA 3A, 3B, and 3C Maintenance Access Doors to Remove Excessive In-Leakage Into Unit 1 Control Room Envelope (mitigating system)

Materials/Replacement Components (compatibility, certification)
Seismic Requirements
System Design Analyses
System Testing Results
Updating of Licensee Documents (drawings)

PCM 02026, Temporary Reverse Osmosis System for Silica Removal (barrier integrity)

Functional Analysis
Testing Results
Updating of Licensee Documents (procedures)

PCM 02019, Intake Structure Refurbishment (Intake Cooling Water Pump 2A) (mitigating systems)

Seismic Considerations
Materials/Replacement Components (compatibility)
Structural Requirements
Cathode Protection Electrical Continuity Test

PCM-04012, Turbine Driven AFW Pump Governor Replacement (1C) (mitigating system, initiating event)

Seismic Requirements
Post Modification Testing
Updating of Licensee Documents (drawings, procedures, and licensing documents)
Functional Properties of Component

For selected modification packages, the inspectors observed the as-built configuration. Documents reviewed included procedures, engineering calculations, modification design and implementation packages, work orders, site drawings, corrective action documents, applicable sections of the UFSAR, supporting analyses, Technical Specifications, and design basis information.

The inspectors also reviewed selected corrective action documents associated with modifications to confirm that problems were identified at an appropriate threshold, were entered into the corrective action process, and appropriate corrective actions had been initiated.

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 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 34017878, Unit 1 Component Cooling Water Heat Exchanger Cleaning
- WO 35006476, Unit 2 Control Element Assembly A MG Set Motor
- WO 34013496, Unit 2 B Emergency Diesel Generator Lube Oil Filter Replacement
- WO 35012306, Unit 2 Backup Pressurizer Heater Temporary System Alteration
- WO 35012544, Unit 1 HVS-1B Containment Fan Cooler Relay Replacement
- WO 35016337, Unit 2 Train A Engineered Safety Features Relay Replacement

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 one inservice test (IST), and one RCS leak detection TS surveillance test as follows:

- OP 1-220050A, 1A Emergency Diesel Generator Periodic Test
- OP 2-0700050, 2C Auxiliary Feedwater Periodic Test
- OP 2-220050B, 2B Emergency Diesel Generator Periodic Test
- 1-INP-26.14, Containment Atmosphere Process Monitor Functional Test
- OP 0-3200051, Unit 2 Moderator Temperature Coefficient Periodic Test
- OP 1-0010125A, Degraded Grid Voltage Functional Test

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors continued to periodically screen active temporary system alterations (TSA) 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 04-005, Unit 2 2B1/2B2 Emergency Diesel Generator Fuel Oil Pumps
- TSA 05-004, Unit 2 480 Volt Pressurizer Heaters

b. Findings

Introduction. A Green non-cited violation (NCV) was identified for failing to implement administrative procedure ADM-17.18, Temporary System Alteration, Revision 6, as prescribed by TS 6.8.1.a and Regulatory Guide 1.33.

Description. On October 19, 2001, the licensee experienced difficulty maintaining a positive differential pressure (dP) of greater than or equal to 0.125 inches of water when performing surveillance test procedure 2-OSP-25.01, Control Room Pressure Periodic Test and documented the issue in CR 2001-2528. An evaluation by the licensee concluded that the floor drains in the fan room were interconnected with other rooms in the reactor auxiliary building, which affected the ventilation system's ability to maintain the required positive differential pressure. Subsequently, on October 26, 2001, the licensee installed temporary metal plates in the north and south CREVS fan room floor drains under work order number 31019445 to help improve the required control room

positive differential pressure. After the plates were installed the surveillance was re-performed successfully.

On May 10, 2005, while conducting a fire protection walkdown, the inspectors identified the two floor drains in the unit 2 CREVS fan room, which were covered with sheet metal and sealed with caulking below the floor grating. The inspectors questioned the licensee regarding the analysis that was performed to approve the installation as well as the adequacy of the material used. The inspectors determined that the licensee had been relying on the plates to ensure operability of the CREVS system and that the 2001 modification had not been installed in accordance with a controlled process. In addition, the inspectors questioned the current operability of the CREVS and on May 10, 2005, the licensee initiated CR 2005-13856 to conduct an evaluation. The licensee concluded that the plates were acceptable to leave in place, and in fact, a permanent modification would be implemented to ensure system design was maintained. In the interim, the licensee elected to control system design by installing a clearance to ensure the plates were not inadvertently removed. The inspectors concluded that installing the plates not in accordance with the temporary system alteration process was a violation of regulatory requirements and had existed for approximately 3 years.

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 plant modification design control attribute of the reactor safety barrier integrity cornerstone and affected the cornerstone objective of ensuring the reliability and capability of the control room emergency ventilation system. The finding was 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 only represented a degradation of the radiological barrier function provided for the control room.

Enforcement. TS 6.8.1.a requires 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 design alterations made to a system. Contrary to the above, ADM-17.18, Temporary System Alteration, Revision 6, was not implemented when on October 26, 2001, the licensee altered the CREVS system design without conducting the required assessments necessary to ensure the operability, reliability and capability of the CREVS. 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 2005-13856), this violation is being treated as an NCV, consistent with Section VI.A of the NRC Enforcement Policy: NCV 05000389/2005-03-01, Failure to Implement Temporary System Alteration Procedure.

Cornerstone: Emergency Preparedness (EP)

1EP6 Drill Evaluation

a. Inspection Scope

On May 24, 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. Annual Sample Review - Employee Concerns and Corrective Action Program Effectiveness In Dealing With Safety Conscious Work Environment Issues

a. Inspection Scope

During the week of May 23, 2005, the inspectors searched the licensee's corrective action program (CAP) database for the past two years and reviewed 14 anonymous condition reports (CRs), CRs related to harassment and intimidation (H&I) or discrimination, and other CRs that potentially represented safety conscious work environment (SCWE) issues. The inspectors also interviewed the CAP supervisor, performance improvement department manager, maintenance manager, corporate speakout program manager, and 12 craft personnel in the mechanical, electrical, and

instrumentation and control departments regarding the effectiveness of their CAP and employee concerns program (i.e., Speakout) for dealing with H&I, discrimination, and SCWE issues.

In addition, the inspectors reviewed 31 speak out program files for completeness, adequacy of the investigation conducted, file documentation, responsiveness to the individual, and responses to recommended corrective actions by station management. The inspectors verified that the licensee responded to their CAP and speakout program concerns in a way and on a schedule that was appropriate to the concern's level of safety significance. The inspectors evaluated applicable condition reports against requirements of the licensee's corrective action program as defined in their Administrative Procedure NAP 204, Condition Reporting.

b. Findings and Observations

No safety significant findings were identified. In general, the SCWE at the St. Lucie plant appeared to be healthy where employees felt free to raise issues to their management without fear of retaliation. The licensee's speakout program organization was effective in investigating and facilitating the resolution of employee concerns and appropriately addressed individuals concerns. The licensee was timely in response to employee concerns with the appropriate prioritization placed on the safety significance of the issue.

The inspectors identified that some responses to corrective actions contained in several speakout program files lacked specificity and sufficient detail to ensure all appropriate actions had been completed as required. Although not a program required by 10 CFR 50 Appendix B, the inspector noted that the overall quality of the speakout files was not as high as other CRs and quality assurance audit reports contained in their 10 CFR 50, Part B, corrective action program. Station management agreed that the documentation provided to speakout following completion of assigned corrective actions was not always adequate to verify the corrective actions were actually complete. The inspectors determined that in all cases the corrective actions completed were adequate and exceeded the corrective actions documented in the speakout program files. Some managers indicated that they were unsure of the expectation regarding documentation of completed corrective actions associated with speakout issues.

3. Semi Annual Trend Review

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspectors performed a review of the licensee's corrective action program and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review included daily screening of individual condition reports, licensee trending efforts, and licensee human performance self-assessments. The inspectors' review nominally considered the six month period of January 2005 through June 2005, although some examples expanded beyond those dates when the scope of the trend warranted. This review also specifically examined

equipment issues identified in selected System Health Reports, and adverse and negative trends identified by the Cross Functional Trend Coordinator Team Reports. Furthermore, the inspectors verified whether adverse or negative trends and issues identified in the licensee's reports were entered into the CAP.

b. Findings and Observations

No violations of NRC requirements were identified. However, during routine tours of the Unit 1 and Unit 2 facilities including reactor auxiliary buildings, control rooms, AFW pump room areas, and ICW pump areas, the inspectors identified an increasing trend in plant configuration control deficiencies.

The inspectors identified a number of pipe cap and test connection fittings installed in the field that were not shown on piping and instrumentation drawings (CR 2005-7069); temporary ladders and scaffolding in various locations that were not being procedurally controlled to ensure proper installation and removal (CR 2005-11854); unit 2 pressurizer heater control circuit wiring that was modified and not properly controlled (CR 2005-14616); modified floor drains in the unit 2 CREVS room (CR 2005-13856), and paint coatings on AFW piping with localized corrosion causing piping surface blistering requiring inspection and repair (CR 2005-10422). The inspectors discussed this trend with site engineering management and following additional inspector questions, the licensee identified several new configuration control deficiencies not previously identified and entered these findings into their CAP as CR 2005-17060.

4OA3 Event Followup

.1 (Closed) LER 05000335/2004-004-00, Dual Unit Loss of Offsite Power During Hurricane Jeanne

On September 25, 2004, a dual-unit loss of offsite power (LOOP) occurred at the St. Lucie site as a result of Hurricane Jeanne. The event was addressed in the licensee's CAP as CR 2004-9001. This LER was reviewed and determined to be accurate and consistent with NRC observations following the LOOP. The event was also mentioned in Inspection Report (IR) 2004-05. No significant findings were identified and the event did not constitute a violation of NRC requirements. This LER is closed.

.2 (Closed) LER 05000389/2004-005-00, Manual Reactor Trip Due to Steam Generator Low Level

On December 27, 2004, Unit 2 was in Mode 1 at 10 percent power when shortly after latching the turbine the 2A main feedwater pump automatically tripped on high level in the A-steam generator. With no feed pump in service, the B-steam generator narrow range water level decreased to the low level reactor protection system pre-trip setpoint and the operators manually tripped the reactor. The event was addressed in the licensee's CAP as CR 2004-17851. This LER was reviewed and determined to be accurate and consistent with NRC observations following the trip. This event and its cause were previously documented and dispositioned in IR 2004-06. This LER is closed.

4OA5 Other Activities

.1 (Closed) NRC Temporary Instruction (TI) 2515/163, Operational Readiness of Offsite Power

The inspectors collected data pursuant to TI 2515/163, "Operational Readiness of Offsite Power." The inspectors reviewed the licensee's procedures related to General Design Criteria 17, "Electric Power Systems;" 10 CFR 50.63, "Loss of All Alternating Current Power;" 10 CFR 50.65(a)(4), "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants;" and the Technical Specifications for the offsite power system. The data was provided to the Office of Nuclear Reactor Regulation for further review. Documents reviewed for this TI are listed in the attachment.

.2 (Closed) EEI 05000335, 389/1998014-07. Failure to Implement and Maintain in Effect Provisions of the NRC Approved Fire Protection Program as Described in the Final Safety Analysis Report (FSAR) and 10 Code of Federal Regulations (CFR) Part 50, Appendix R, Sections III.G.1.a and III.L.7.

Introduction. An in-office inspection was performed to review and close this open item. Upon further inspector review, it was determined that a violation of 10 CFR 50, Appendix R, III.G.2 and III.G.3 was identified for failure to protect cables from fire damage which could result in a number of valves spuriously operating in a manner which could adversely affect safe shutdown capability. The mode of failure involved bypassing of limit switches and/or torque switches such that the valve could be damaged to the point where it could not be repositioned either manually or from the alternate shutdown panel. The NRC applied enforcement and reactor oversight process discretion to the violation.

Description. An apparent violation was identified in NRC Inspection Report 50-335, 389/98-14. Specifically, the licensee did not have any documented evaluation addressing the potential for fire-induced short circuits on motor operated valve control cables to spuriously operate the valve while simultaneously bypassing the torque switches. This could result in valve damage which would preclude repositioning the valve to the safe shutdown position. Following the enforcement conference held to obtain facts on this apparent violation, the enforcement panel decided to maintain the issue as unresolved pending results of evaluations the licensee committed to perform. Later, the issue of complex circuit failures became a generic agency issue, and the licensee delayed their analysis until the generic issue was resolved. Condition Report (CR) 00-0349 was written in March 2000 to track this issue while awaiting results of Nuclear Energy Institute (NEI)/Electric Power Research Institute (EPRI) circuit failure testing. Based upon the tests results and NEI 00-01, the licensee completed their analysis of valves important to safe shutdown. The analysis identified fifteen valves on Unit 1 and eleven valves on Unit 2 which were susceptible to the problem. The licensee prepared Plant Change/Modification 02154M to reconfigure the control circuit for susceptible valves to preclude one fire-induced short circuit from causing the valve to spuriously operate and simultaneously bypassing the torque switch. Work Orders have been scheduled for completion by September 2005. Currently, the affected Motor Operated Valves (MOV) are susceptible to this fire-induced malfunction, however, the

licensee has implemented a roving fire watch in order to reduce the likelihood of a fire causing this failure.

Analysis. The inspectors determined that the licensee's identification of 26 valves which could be damaged by fire-induced short-circuit through the mechanism of bypassing the torque switch constitutes a performance deficiency because it violated requirements in the area of fire protection and could have been prevented by the licensee. Additionally, the finding was associated with the "protection against external factors" attribute and affected the objective of the Mitigating Systems cornerstone to ensure the availability, reliability, and capability of systems that respond to initiating events. Therefore, the finding is greater than minor. The finding degraded the defense-in-depth for fire protection and is a circuit analysis problem involving spurious operations. Pursuant to NRC Inspection Manual Chapter 0305, Operating Reactor Assessment Program, Section 06.06.2, Violations in Specified Areas of Interest Qualifying for Enforcement Discretion, the NRC did not evaluate the significance of this finding through use of the Significance Determination Process and will not be entering it into the Reactor Oversight Program (ROP) Action Matrix. The finding was placed in the corrective action program as CR 98-0225, CR 00-0349 and CR 04-16518 and planned corrective actions are scheduled to be completed in a timely manner.

Enforcement. 10 CFR 50, Appendix R, III.G.2 states, in part, that where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment, one of three means of ensuring that one of the redundant trains is free of fire damage shall be provided. Appendix R, III.G.3, allows for alternative shutdown capability independent of cables in the area under consideration in cases where the requirements of III.G.2 cannot be met.

Contrary to these requirements, cables for 26 valves were not protected such that one train of systems necessary to achieve and maintain hot shutdown conditions was not free of fire damage nor independent from the area under consideration. The plant has been in this condition since at least November 1998 when it was identified by the inspection team as documented in NRC Inspection Report 50-335, 389/98-14. Pursuant to NRC Enforcement Manual Section 8.1.7.1 ©), Fire Induced Circuit Failures, the NRC is exercising enforcement discretion for this noncompliance. The conditions for applying enforcement discretion in this case have been met. The licensee does not dispute these requirements were violated. The licensee took prompt compensatory action by posting fire watches once system analysis confirmed a non-compliance existed and entered the issue into the corrective action program. The planned corrective action contained in the approved plant modification and the schedule for implementation will result in corrective action being taken in a reasonable time frame.

4OA6 Meetings

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. Bill Jefferson and other members of licensee management on July 5, 2005. The licensee acknowledged the findings presented. No proprietary information was identified.

.2 Annual Assessment Meeting Summary

On May 16, 2005, the NRC's Chief of Reactor Projects Branch 3, Region II Public Affairs Officer, and Resident staff assigned to the St. Lucie Nuclear Plant met with Florida Power and Light (FP&L) to discuss the NRC's Reactor Oversight Process (ROP) and the St. Lucie annual assessment of safety performance for the period of January 1, 2004 - December 31, 2004. The major topics addressed were: the NRC's assessment program, the results of the St. Lucie assessment, and future NRC inspection activities. Attendees included FP&L management, St. Lucie site management, and one member of the public who showed up after the meeting had adjourned and spoke with the NRC staff.

This meeting was open to the public. The NRC's presentation material used for the discussion is available from the NRC's document system (ADAMS) as accession number ML051370225. ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

ATTACHMENT: SUPPLEMENTAL INFORMATION

Supplemental Information

KEY POINTS OF CONTACT

Licensee Personnel

P. Sullivan, Work Control Manager
M. Bruecks, Security Manager
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
R. Hughes, Site Engineering Manager
E. Katzman, Performance Improvement Department Manager
G. Johnston, Plant General Manager
W. Jefferson, Site Vice President
J. Martin, Operations Support Supervisor
R. McDaniel, Fire Protection Supervisor
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

05000389/2005003-001	NCV	Failure to maintain plant configuration control in accordance with administrative procedure ADM-17.18, Temporary System Alteration (Section 1R23)

Closed

05000335/2004-004-00	LER	Dual Unit Loss of Offsite Power During Hurricane Jeanne (Section 4OA3.1)
05000389/2004-005-00	LER	Manual Reactor Trip Due to Steam Generator Low Level (Section 4OA3.2)
05000335, 389/1998014-07	EEI	Failure to Implement and Maintain in Effect Provisions of the NRC Approved Fire Protection Program as Described in the FSAR and 10 CFR Part 50, Appendix R, Sections III.G.1.a and III.L.7. (Section 4OA5)
2515/163	TI	Operational Readiness of Offsite Power(Section 4OA5)

LIST OF DOCUMENTS REVIEWED

Section 1R02: Evaluation of Changes, Tests, or Experiments

Full Evaluations

PCM 99170 02, Spent Fuel Cell Blocking Device Removal
PSL-ENG-SENS-97-006, Performance of Full Core Refueling Offloads
PSL-ENG-02-069, Operations with Increased Steam Generator Tube Plugging
PSL-ENG-SEFJ-02-007, Unit 1 Accident Dose Consequences
PCM 02042 Unit 2 DDPS Obsolesence DDPS/SOER Replacement
PCM 03068 Unit 1 DDPS, SOER, & PDN Modifications
PSL-ENG-SENS-02-044, Control of Painting and Chemical Releases Potentially Affecting Ventilation Systems

Screened Out Items

PCM 04004, Alternate Cooling Method for Spent Fuel Pool Heat Exchanger
PCM 03099, As Required Plant Change Agastat DSC Relay Replacement
MSP 03087, [GL96-06] Water Hammer Modification
PCM 02097, Remove CCW Heat Exchanger Tube Side Relief Valves
PCM 03063, 2A HPSI Pump Suction Vent Valve Addition
PCM 04007, SIAS Trip of Pressurizer Heaters
PCM 02119, Unit 2 [GL96-06] HPSI/CCW Pump Motor EDG Load Block Swap
MSP 02116, Unit 2 Feedwater Recirculation FCV-09-1A2/B2 Actuator/Valve Control Logic Change
MSP 01166, Unit 1 16 Cylinder Diesel Generator Engine 1A1 Electronic Governor
PCM 04006, Unit 1 Time Delay SIAS Signal from MV-09-1 & MV-09-2
PCM 04026, Unit 1 4.16 KV SWGR Circuit Breakers / Phase 1
PCM 05002, Unit 2 Feedwater Controller Replacement Rev. 1, 01-17-05
PCM 02026M, Temporary Reverse Osmosis System for Silica Removal
PCM 03006, Removal of Threshold Seals on EDG Building Doors
MSP 03059, AFW Pump 2C Turbine Coupling End Bearing Modification
MSP 03096, Repair/Rework of Unit 1 HVAC Maintenance Access Doors
PCM 03010, MFIV Local Manual Close Valves Bypass 3-way Valve
PCM 03065, Personnel Airlock Outer Door Operator Coupling Modification
PCM 02173, RCS Hot Leg Nozzle Replacement
PCM 02166, EDG Soakback Pump Piping Reroute
PCM 02019, Intake Structure Refurbishment (Intake Cooling Water Pump 2A)
PCM-04012, Turbine Driven AFW Pump Governor Replacement (1C)

Self-Assessment Documents

Quality Report 04-0082, Assessment of 10 CFR 50.59 Applicability/Screening Reviews
Condition Report (CR) 04-1258, SFP Alternate Heat Exchanger
Quality Assurance Audit Report QSL-ENG-03-06

Section 1R17: Permanent Plant Modifications

Self-Assessment Documents

CR 2005-9825, Support SI-30-294
CR 03-2705, Pre-Operational Test Procedures

Section 4OA5, Other

Offnormal procedure ONOP-53.01, Main Generator
Weekly surveillance procedures OSP-100.01, 02, 03
ADM-17.6, Implementation of the Configuration Risk Management Program
1/2-EOP-01, Standard Post Trip review
1/2-EOP-10, Station Blackout
1/2-EOP-15, Functional Recovery
1/2-EOP-99, Appendices/Figures/Tables/Data Sheets

Condition Reports:

98-0225, Potential for a primary system high/low pressure interface condition as a result of fire-induced cable faults.
00-0349, Susceptibility of MOVs to fire-induced hot shorts.
04-16518, SITRIS tracking of the GL 91-18 condition documented in CR 00-0349.

Minor Engineering Package:

PC/M 02154M, MOV hot short circuit modification.