UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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July 30, 2001

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

SUBJECT: ST. LUCIE NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT 50-335/01-03, 50-389/01-03

Dear Mr. Stall:

On June 30, 2001, the NRC completed an inspection at your St. Lucie Units 1 and 2. The enclosed report documents the inspection findings which were discussed on July 2, 2001 with Mr. D. Jernigan 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.

No findings of significance were identified by the NRC inspectors.

In accordance with 10 CFR 2.790 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/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,

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Leonard D. Wert, Chief
Reactor Projects Branch 3
Division of Reactor Projects

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

Enclosure: Inspection Report 50-335/01-03, 50-389/01-03

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-335, 50-389
License Nos:	DPR-67, NPF-16
Report No:	50-335/01-03, 50-389/01-03
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 1 - June 30, 2001
Inspectors:	T. Ross, Senior Resident Inspector D. Lanyi, Resident Inspector S. Sanchez, Resident Inspector, Crystal River 3 (Sections 1R04, 1R20, 1R22) G. Kuzo, Senior Radiation Specialist (Sections 2OS1, 2OS2, 2OS3, 2PS1, 2PS2, 2PS3, 4OA1.1) B. Crowley, Reactor Inspector (Section 1R08) J. Wallo, Security Specialist (Sections 3PP1, 3PP2, 4OA1.2) N. Merriweather, Reactor Inspector (Section 1R05.2) L. Moore, Reactor Inspector (Section 1R05.2)
Approved by:	L. Wert, Chief Reactor Projects Branch 3 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000335-01-03, IR 05000389-01-03 on 4/1 - 6/30/01, Florida Power & Light Company, St. Lucie Plant, Units 1 & 2. Integrated Inspection Report.

This inspection was conducted by resident inspectors and several Region II inspectors; three reactor inspectors, a senior radiation specialist, and a security specialist. No findings of significance were identified by NRC inspectors during this inspection. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www.nrc.gov/NRR/OVERSIGHT/index.html.

A. Inspector Identified Findings

No findings of significance were identified.

B. Licensee Identified Violations

Seven violations of very low safety significance identified by the licensee were reviewed by the inspectors. Corrective actions taken and planned by the licensee appeared reasonable. These violations are listed in Section 4OA7 of this report.

Report Details

Summary of Plant Status:

Unit 1 began the report period at 70 percent power to conduct Main Steam Safety Valve testing. The unit was shutdown on April 2 for a planned refueling outage, and returned to service on April 30. Unit 1 operated at full power until June 5, when it automatically tripped due to low reactor coolant flow when the 1A2 Reactor Coolant Pump power supply breaker unexpectedly opened. The unit was restarted on June 7, and operated at essentially full power for the remainder of the report period.

Unit 2 remained at essentially full power for the entire report period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity (Reactor - R), and Emergency Preparedness (EP)

1R04 Equipment Alignment

.1 Partial Alignment Verifications

a. Inspection Scope

The inspectors conducted partial alignment verifications of the safety related systems listed below to evaluate the operability of the redundant trains or backup systems while the other trains were inoperable or out of service. The verifications included reviews of plant lineup procedures, operating procedures, and piping and instrumentation drawings which were compared with observed equipment alignments to identify any discrepancies which could affect Technical Specification (TS) operability of the redundant train or backup system.

- 1A Emergency Diesel Generator (during shutdown cooling operations)
- 1B Component Cooling Water (CCW) System
- 1A Emergency Diesel Generator (during 1B diesel radiator failure)

b. Findings

No findings of significance were identified.

.2 Complete Equipment Walkdown

a. Inspection Scope

The inspectors completed a detailed alignment verification of the Unit 2 Auxiliary Feedwater (AFW) system. This verification included a review of the lineup per procedure OP 2-07000222, Auxiliary Feedwater - Normal Operation. Applicable plant drawings, outstanding modifications, work orders, operator work arounds, Temporary System Alterations (TSA),

Condition Reports (CRs), and Plant Manager Action Items (PMAI) were also reviewed. The inspectors verified the following as required for TS operability:

- All valves were properly aligned
- There was no apparent significant leakage
- Electrical power was available
- Major system components were properly labeled, lubricated, and cooled
- Hangers and supports were correctly installed and functional
- Auxiliary equipment and debris did not interfere with system performance

The inspectors also verified that the licensee identified and documented equipment alignment problems at an appropriate threshold in the corrective action program.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

.1 Fire Protection Review

a. Inspection Scope

The inspectors conducted tours of the fire areas listed below that are important to reactor safety and reviewed Administrative Procedure (AP)-1800022, Fire Protection Plan. The inspectors verified that any transient combustibles in the areas inspected were being controlled in accordance with licensee procedures. They also verified that all hot work or other ignition sources were being properly controlled by the licensee. The inspectors ensured that the material condition, operational status, and operational lineup of fire protection systems, equipment and features were in accordance with the Fire Protection Plan. Also, the inspectors confirmed that any compensatory measures in place were being performed per the licensee's procedures, and the condition of fire barriers met all requirements of the Fire Protection Plan.

- 1B EDG Room
- Unit 1 Cable Spreading Room
- Unit 2 Cable Spreading Room
- Unit 1 Emergency Core Cooling Systems Rooms
- Unit 1 Main, Startup, and Auxiliary Transformers
- Unit 1 Containment

b. Findings

No findings of significance were identified.

.2 (Open) Unresolved Item (URI) 50-335,389/98-201-09: Fire Mitigation System Does Not Meet Plant Licensing Basis Requirements/Commitments or Minimum Industry Codes and Standards for System Design and Testing

This item included four fire protection program issues concerning the design and testing requirements of the (1) fire detection systems, (2) water suppression systems, (3) Halon 1301 fire suppression system, and (4) standpipe and fire hose systems. These issues were previously discussed in NRC Inspection Report (IR) 50-335,389/98-201. Issue (4) was resolved in IR 50-335,389/98-14. This review addresses the closeout of items (1) and (2). Item (3) of this URI, related to the Halon 1301 fire suppression system, remains open pending further NRC review.

Fire Detection System

Item (1) included issues identified by the licensee's review of the fire alarm and detection systems on Units 1 and 2. Several non-conformances were identified between the installed fire detection systems, the National Fire Protection Association (NFPA) code of record, and/or the Updated Final Safety Analysis Report (UFSAR). These nonconforming conditions were documented by the licensee in CRs 98-0259, 98-0260, 98-0303, 98-0304, 98-305, 98-306, 98-0453, and 98-0488. A regional based inspector performed an in-office review of the licensee's CRs, problem evaluations, and associated corrective actions either planned or taken and concluded that these issues were appropriately addressed. The licensee determined that several of the items were acceptable to "use-as-is" with no corrective actions necessary. Other items required either plant changes/modifications (PC/M) or revisions to documents. The inspector's review determined that two of these licensee identified issues were violations of NRC requirements.

Operating License DPR-67 (Unit 1), Condition 2.C(3) and NPF-16 (Unit 2), Condition 2.C(20), specify that the licensee implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR for the facility and as approved by NRC Safety Evaluation Reports (SER). Unit 1 UFSAR Table 9.5A-2 identified NFPA 72A-1972 as the code of record for original installation of the fire detection system. NFPA 72A-1972 requires that smoke detectors shall be located and adjusted to operate reliably in case of smoke at any part of the area protected. The NRC SER for Unit 2 dated October 1981 specifies that all fire detection systems used to actuate fire suppression systems will be Class A systems. Section 3.5.2.b of the Unit 2 UFSAR, Appendix 9.5A requires that fire protection systems shall be designed to ensure that any detector failure, single break, ground fault or wire to wire short will not prevent the transmission of an alarm, resulting in false operation, or cause a false indication of fire. Contrary to NFPA 72A-1972, a smoke detector (7B-4) was installed such that it could not detect smoke in the Unit 1 area it was protecting (Fire Zone 57) because it was surrounded by a Thermo-lag enclosure. The Unit 2 fire detection system had Class B style monitoring installed where Class A was required. With a Class B style electrical monitoring system, a single break or ground fault will result in a "trouble" condition for the initiating device circuits.

The inspector determined that these issues had a credible impact on safety because they could result in the delayed detection of a fire affecting safety related equipment. These violations, which are discussed in Section 4OA7 of this IR, were determined to be of very low safety significance because redundant safe shutdown functions were separated by appropriate fire rated barriers. These licensee identified issues were documented in CR(s) 98-0259 and 98-260. Item (1) of this URI is closed.

Water Suppression Systems

In Item (2), the licensee identified that the testing and installed design for the Unit 1 and Unit 2 water suppression sprinkler systems were not consistent with the licensee's commitment to NFPA 13 or NFPA 15. The applicable NFPA requirements stated that the system deluge valve should be tested in a wet, pressurized condition. The licensee's testing involved a dry inspection of the deluge valve internals. The installed design deficiencies included inadequate coverage of equipment in the Auxiliary and Emergency Diesel Generator spaces. This issue was previously documented in Section F7.4.3, Fixed/Automatic Fire Suppression, of NRC IR 50-335,389/98-201.

The inspector conducted an in-office review of the licensee's CRs which addressed these water suppression system deficiencies. The corrective actions in the CRs included test procedure changes, engineering evaluations, and PC/Ms to resolve the testing and installation design deficiencies.

Operating License DPR-67 (Unit 1), Condition 2.C(3) and NPF-16 (Unit 2), Condition 2.C(20), specify that the licensee implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR for the facility and as approved by NRC Safety Evaluation Reports. Section 4.3.1.5 Automatic Water Suppression Systems of the UFSAR, Amendment 33, dated August 17, 1979, indicated that all station automatic water suppression systems conformed to NFPA 13 or 15. The failure of the licensee to maintain the Code requirements of the station water suppression systems for Units 1 and 2 is identified as a violation. The inspector determined that the issue had a credible impact on safety because the inadequate water suppression coverage did not assure adequate fire protection of safety related equipment in the Emergency Diesel Generator and Auxiliary buildings. This licensee identified violation, which is discussed in Section 4OA7 of this IR, was determined to be of very low safety significance because the safe shutdown functions of the plant were not affected due to separation by appropriate fire rated barriers. Therefore, safety related systems were not directly impacted by the water suppression system design deficiencies. Additionally, subsequent completion of the appropriate system testing verified that the water suppression systems were functional. These licensee identified issues were documented in condition reports CRs 98-307, 98-0405, and 98-0429. Item (2) of this URI is closed.

1R08 Inservice Inspection Activities

a. Inspection Scope

The inspectors observed in-process Inservice Inspection (ISI) work activities and reviewed selected ISI records. The observations and records were compared to the TS and the

applicable Code (American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, 1989 Edition, with no Addenda). This was the second outage of the first period of the third interval.

Portions of the following Unit 1 ISI examinations were observed:

Ultrasonic (UT) -	Welds	RC-123-FW-2000, RC-123-1-503-LS-A, RC-123-1-503-LS-B, 1-SGA-FW-1RS, and 1-SGA-W169
Magnetic Particle (MT) -	Welds	RC-123-FW-2000, RC-123-1-503-LS-A, RC-123-1-503-LS-B, BF-51-FW-3A, and 1-SGA-W169
Liquid Penetrant (PT) -	Welds	BF-51-FW-2000, 1-SGA-W256, and 1-SGA-W284
Eddy Current (ET) -	Data Acquisition for 14 Steam Generator Tubes	

In the process of observing these ISI activities, the inspectors also observed Flow Accelerated Corrosion (FAC) activities for components I-18-BF51-E-24-77 and 14HD40-P-7-15.

Qualification and certification records for examiners, equipment and consumables for the above ISI and FAC examination activities were reviewed. In addition, a sample of ISI issues in the licensee's corrective action program were reviewed. Specifically, Condition Reports 01-0733, 00-1596, 00-0701, and 00-1595, including associated corrective action documentation were reviewed. Also, ISI Non-Destructive Examination (UT/PT) records were reviewed for welds SI-213-1-SW-2, SI-210-FW-5, SI-216-SW-4 and SI-216-SW-5.

The inspectors also reviewed ASME Section XI repair and replacement packages for the following: (1) Work Order (WO) 30008418 01 - Replace Unit 1 Diesel Air Start Valve VSH-59094, (2) WO 30021234 01 - Replace Channel Head Bolting on Unit 2 Component Cooling Water Heat Exchanger 2B, (3) WO 30017423 01 - Replace Disc in Unit 2 Chemical and Volume Control System Valve V-2169, (4) WO 31007814 01 - Replace Channel Head Bolting in Unit 1 CCW Heat Exchanger 1A, (5) WO 28019578 01 - Replace Unit 2 Safety Injection Valve V-3259, and (6) PC/M 99-117 (WOs 29015413 01 and 29015414 01) - Replace a Portion of Unit 2 Train A and Train B Emergency Core Cooling System 24 Inch Diameter Piping.

In addition to the above observations and reviews for the current Unit 1 outage, radiographic film for the following ASME pipe welds were reviewed:

WO 28019578 01 - Welds SI-515-2000 and SI-113-2000

PC/M 99-117 (WOs 29015413 01 and 29015414 01) - Welds CS-2-FW 2066, CS-2-FW 2071, C3-3-FW 2030, and CS-3-FW 2032

WO 29001814 02 - Welds 3-CH-938-2053 and 3-CH-938-2062

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

a. Inspection Scope

During the weeks of June 10 and June 17, inspectors observed and assessed simulator training for actions taken during main steam line break and loss of off-site power scenarios. The inspectors assessed the following aspects:

- 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 procedures, specifically use of Annunciator Response Procedures and Emergency Operating Procedures
- Control board operation and manipulation, including high-risk operator actions
- Oversight and direction provided by the shift supervisor, including ability to identify and implement appropriate TS actions, reporting requirements, and emergency plan actions and notifications
- Effectiveness of the post training critique

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed the equipment performance problems listed below, and assessed the effectiveness of licensee efforts in accordance with Administrative Procedure ADM-17.08, Implementation of 10 CFR 50.65, The Maintenance Rule. Reviews focused on maintenance rule scoping in accordance with 10 CFR 50.65 and characterization of failed systems or components. Additionally, the risk significance classifications, the (a)(2) classifications, and the appropriateness of performance criteria for systems or components classified as (a)(2),

or goals and corrective actions for those classified as (a)(1) were also reviewed. The inspectors also verified that equipment problems were being identified, entered into the corrective action program, and being positioned appropriately.

- CRs 01-308 and 406 — 2A Charging pump failures
- CR 01-0643 — Unit 1 CCW heat exchanger tube leaks
- CRs 01-0822 and1372 — 1B Emergency Diesel Generator (EDG) radiator failures
- CR 01-1441 — 1A2 Reactor Coolant pump trip
- CR 01-0714 and 741 — Unit 1 Shutdown Cooling (SDC) System suction relief lifting
- CR 01-1543 — 1A Intake Cooling Water (ICW) pump maintenance

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed and witnessed the following emergent and planned maintenance tasks to evaluate the effectiveness of licensee scheduling and management of online risk, and control over actual work. The inspectors also verified that appropriate contingencies were taken to reduce risk and minimize unavailability, and that emergent work activities were properly planned per ADM-10.03, Work Week Management. The inspectors also confirmed that problems with maintenance, risk assessments and emergent work were identified and appropriately addressed as part of the corrective action program.

- Deenergization of 1B2 load center
- 1B hot leg instrument nozzle repair
- 1B EDG out-of-service due to radiator failure
- 1A ICW Pump work with the 1B EDG out-of-service
- 1A CCW System critical maintenance outage

b. Findings

No findings of significance identified.

1R14 Personnel Performance During Non-routine Plant Evolutions

a. Inspection Scope

The inspectors witnessed and/or reviewed Operations personnel performance in coping with several nonroutine and unplanned plant evolutions. The inspectors witnessed the Unit 1 reactor and turbine shutdown to support a scheduled refueling outage. The inspectors also observed operator actions associated with the Unit 1 automatic reactor

trip, trip recovery, and subsequent restart. Lastly, the inspectors reviewed an event in which a personnel error involving the Unit 1 Steam Bypass Control System caused an unexpected heatup of the Reactor Coolant System (RCS) and an unintentional lifting of the Main Steam Safety Valves. The inspectors examined operator logs, strip charts, and computer data, interviewed responsible operators and their supervision, and evaluated operator actions against applicable plant procedures and TS. For each of these evolutions or event responses, the inspectors verified that Operations personnel performed in accordance with applicable procedures, training, and management expectations.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the interim disposition and operability evaluation of the following CRs to ensure that TS operability was properly justified and the system, structure, or component (SSC) remained available to perform its safety function with no unrecognized increase in risk. Reviews of the UFSAR, applicable supporting documents and procedures, and interviews of plant personnel, were performed to assess the adequacy of the interim CR disposition.

• CR 01-1134	Unit 1B EDG slow start
• CRs 01-1200 and 1208	Unit 1 Reactor Protection System (RPS) Nuclear Instrumentation Linear Power Range Channels anomalous indications
• CR 01-1338	Unit 1 RPS Channel B Thermal Margin/ Low Pressure spurious trips
• CRs 01-0822 and 1372	1B EDG radiator degradation
CR 01-1597	1B1 Safety Injection tank recirculation valve ground
• CRs 01-1081 and 99-1936	Unqualified and deteriorated Unit 1 Containment coatings

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors reviewed post maintenance test (PMT) procedures, including those included in PC/M packages and Pre-Operational Test Procedures (PTP), and witnessed

testing activities for selected risk significant mitigating systems to determine the following: (1) Effect of testing on the plant was adequately addressed by control room and/or engineering personnel; (2) Testing was adequate for the maintenance performed; (3) Acceptance criteria were clear and adequately demonstrated operational readiness consistent with design and licensing basis documents; (4) Test instrumentation was calibrated and the range and accuracy was consistent with the application; (5) Tests were performed as written with applicable prerequisites satisfied; (6) Jumpers were installed or lifted leads were properly controlled; (7) Test equipment was removed following testing; and, (8) Equipment was returned to the status required to perform its safety function. The inspectors also verified that selected problems associated with PMTs were identified and appropriately resolved as part of the corrective action program. Post maintenance testing for the following were witnessed and reviewed:

- PC/M 00-077 Unit 1B EDG governor modification
- 1-PTP-1 Unit 1 Main Feedwater isolation valve replacement
- Various WO's 1A SDC System suction relief valve (V3483) seat leak and lift test
- WO 31007354 1A Motor Generator voltage regulator
- Various WO's Unit 1B EDG Periodic Maintenance PMT
- WO 31013663 Unit 2 Pressurizer Level Controller LC-110Yl Replacement

b. Findings

No findings of significance identified.

1R20 Refueling and Outage Activities

a. Inspection Scope

The inspectors observed refueling and outage activities for compliance with TS, UFSAR, applicable plant procedures, regulatory guidance, industry experience, and management expectations. Overall outage risk control processes for the Unit 1 refueling outage were specifically reviewed by the inspectors. Selected operational evolutions and fuel movement activities were discussed with responsible reactor operators, reactor engineers, and other control room personnel. Fuel movement communication and controls were verified during control room observations. Selected equipment clearances associated with safety related equipment were reviewed with Operations. The inspectors also performed an inspection of containment prior to closeout to verify readiness for reactor operations. The following activities were inspected, reviewed, or observed:

- Outage planning and associated risk assessment activities
- Reactor shutdown
- Reactor cooldown and initiation on shutdown cooling
- Reduced reactor cooling system inventory and mid-loop operations
- Shutdown risk evaluations
- Reactor cavity seal ring installation and testing
- Refueling operations

- Equipment clearance orders 1-01-01-118, 1-01-03-115, and 1-01-02-041
- Containment closeout
- Reactor startup
- Startup physics testing
- Power escalation

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors reviewed and witnessed the conduct of surveillance testing in accordance with operating procedures (OP), operations surveillance procedures (OSP), Instrumentation Maintenance Procedures (IMP), and instrumentation and control procedures (ICP). Applicable test data was reviewed to verify whether they met TS, UFSAR, and licensee procedure requirements. Also, the inspectors verified that the testing effectively demonstrated that 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.

• 1-MSP-08.07	Unit 1 Main Steam Safety Valve Test
• OP 1-0400050	B Train Safeguards Test
• OP 2-0400053	Engineered Safeguards Relay Test
• 1-OSP-03.01A/B	Unit 1 High Pressure Safety Injection System Full Flow Test
• 1-OSP-68.02	Unit 1 Containment Radiation Monitor Isolation Valve Local Leak Rate Test
• OP 1-0700050	Unit 1 AFW Cold Shutdown Full Flow Test
• 1-IMP-64.05C/D	RPS Nuclear Instrumentation Channel C and D Calibration
• ICP 1400071	Unit 1 Motor Generator Anticipated Transient Without Scram Functional Test

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed TSA 1-01-005, Temporary Power to Unit 1 Shutdown Cooling Instruments installed during the period. The inspectors evaluated the temporary modification and associated 10 CFR 50.59 screening against the system design basis documentation, and verified that the modification did not adversely affect system operability or availability. Additionally, the inspectors verified that the installation was

consistent with applicable modification documents and was conducted with adequate configuration control.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation

a. Inspection Scope

On June 20, the inspectors observed an emergency preparedness drill conducted by the site emergency response organization. Inspectors observed licensee activities in the main control room (simulator) to assess whether emergency classification and notifications were in accordance with emergency plan implementing procedures. Additionally, the inspectors evaluated the adequacy of the post drill critiques conducted in the simulator.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety (OS) and Public Radiation Safety (PS)

2OS1 Access Controls to Radiologically Significant Areas

a. Inspection Scope

Radiological controls for Unit 1 (U1) Refueling Outage (RFO) 17 tasks involving high dose rates and elevated cumulative dose expenditures were discussed and evaluated. Controls implemented for selected initial shutdown and chemistry task evolutions were evaluated. The inspectors evaluated established exclusion areas based on essential U1 RFO 17 shutdown evolutions, reactor coolant system activity concentrations, and current dose rates within U1 Reactor Containment Building (RCB) and Reactor Auxiliary Building (RAB) areas. Selected task briefings for the initial U1 RFO shutdown tasks were observed and health physics and chemistry technician performance was evaluated. The inspectors directly observed and verified administrative and physical controls established for selected U1 RAB high radiation and locked high radiation areas. For 1A shutdown cooling suction relief valve V3483 maintenance activities conducted April 4, 2001, the inspectors reviewed direct radiation and contamination survey results and evaluated established radiation and contamination controls.

Licensee guidance and activities were evaluated against 10 CFR Part 20 and the facility TS requirements, UFSAR details, and established procedural guidance. Valve maintenance activities were reviewed against details specified in Radiation Work Permit

(RWP) 01-543, U1 RAB 5 foot elevation Pipe Tunnel, A & B Low Pressure Safety Injection (LPSI) Rooms, Repair, Repack, Remove, Replace Miscellaneous Valves.

b. Findings

No findings of significance were identified.

2OS2 "As Low As Reasonably Achievable" (ALARA) Program Planning and Controls

.1 ALARA Review

a. Inspection Scope

Licensee ALARA activities for initial shutdown and preparation for selected U1 RFO 17 tasks were evaluated. General ALARA program initiatives, including shut-down chemistry and initial reactor coolant system clean-up activities were assessed. Off-site and onsite dose consequences associated with a March 30, 2001, U1 reactor building purge release conducted in preparation for the initial outage activities were reviewed and evaluated. In addition specific training provided to workers assigned to conduct work on the following RWPs was observed and evaluated.

- RWP 01-543, RAB 5 foot Elevation Pipe Tunnel, A & B Low Pressure Seal Injection Rooms; Repair, Re-pack, Remove, Replace Miscellaneous Valves
- RWP 01-1310, U1, RCB 62 foot and 18 foot Elevations, Steam Generator Secondary Manways & Handholds; Install and Remove Sludge Lance Equipment. Perform Sludge Lance Operations/Inspections/Secondary Side Bundle Flush
- RWP 01-1324, U1, RCB, 18 foot Elevation; Install/Remove and Operate Genesis Equipment, Perform Eddy Current Testing and Tube Plugging Operations
- RWP 01-1428, U1, RCB 18 foot Elevation, A and B Steam Generator Platforms; Remove, Install Steam Generator Primary Manway Covers, Diaphrams, and Pump Water from the Channelheads
- RWP 01-1429, U1, RCB 18 foot Elevation, A & B Steam Generator Channel heads; Install and Remove Steam Generator Primary Nozzle Dams

Training regarding specific RWP task details was evaluated against the UFSAR, TS, and requirements detailed in 10 CFR Parts 19 and 20. Initial shut-down chemistry activities and primary coolant activity concentration results were evaluated against Chemistry Operating Procedure 05.03, Refueling Shutdown/Startup Guidelines.

b. Findings

No findings of significance were identified.

2 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed licensee evaluations and actions for the following CRs associated and ALARA program activities:

- CR 00-0176, Potential for unanticipated, unplanned personnel exposure due to airborne radioactivity from portable high efficiency particulate airborne (HEPA) filters and vacuum cleaner operations
- CR 01-0135, Problems identified with 1B Chemical and Volume Control System Filter replacement resulting in additional exposure
- CR 01-0136, Problems with U1 Fuel Pool Purification Filter Cask and Cart Access to Overhead Crane
- CR 01-0231, 1B Chemical and Volume Control System B filter housing misalignment and misplacement of backup filters
- CR 01-0618, Premature loading of vacuum HEPA filters resulting from pre-filter retainer failures
- CR 01-0638, Poor radiation control practices associated with U1 V2319 maintenance activities resulting in unanticipated release of contaminated resin
- CR 00-0706, Unanticipated low radionuclide concentrations for March 30, 2001 U1 containment atmosphere sample collected using radiation monitor channels RE-26-31/32

Licensee actions were reviewed against TS, UFSAR, and 10 CFR Part 20 requirements.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation

a. Inspection Scope

Operability and availability of Area Radiation Monitor (ARM) equipment, and “whole-body counting” and portable radiation instruments were evaluated.

The inspectors observed ARM equipment installation and material condition; verified local, remote, and control room indicator readouts; and confirmed selected system warning and alarm set-points. Calibration data were reviewed and discussed for the following ARM equipment:

- Unit 2 (U2) Control Room, ARM 26-01,
- Unit 1 (U1) Containment Isolation System (CIS), ARM 26-05
- U1 Fuel Pool Area, ARM, 26-07
- U1 Waste Gas Compressor Area, ARM, 26-13

- U2 Containment Post Accident Monitor, ARM, 26-38
- U1 Containment High Radiation Monitor, 26-58

Current calibration and response check data for the “fast-scan” and chair whole-body counting equipment were reviewed and discussed. Operability and calibrations were verified for portable ion chambers and teletectors used for direct radiation measurements associated with spent resin transfer and de-watering activities conducted June 12-14, 2001, in accordance with Radiation Work Permit 01-162.

The ARM calibration and set-point data were evaluated against applicable sections of the UFSAR, TS, NUREG 0737 Action Item II.F.1, the Offsite Dose Calculation Manual (ODCM), and applicable Design Base Document and Drawing details.

b. Findings

No findings of significance were identified.

2PS1 Radioactive Gaseous and Liquid Effluent Monitoring Systems

.1 Out-of Service Monitor Process Monitors

a. Inspection Scope

Licensee activities associated with identified airborne and liquid effluent process monitor operational problems were reviewed and evaluated. Reviewed records included the calendar year (CY) 2000 Annual Radioactive Effluent Release Report details, Equipment Out-Of-Service (OOS) Logs, applicable plant work orders, liquid and gaseous effluent release permits, and chemistry shift turn-over logs. Licensee actions regarding the following process monitors and dates entered in equipment OOS logs were reviewed and discussed with cognizant licensee representatives:

- U1 Radiation Monitor System (RMS) 26-35, Condenser Steam Air Ejector, from April 9-28, 2001.
- U1 RMS 26-66, Liquid Effluent Monitor, from June 8-14, 2000.
- U2 RMS 26-11, Condenser Steam Air Ejector, from January 17-25, 2000.
- U2 RMS 26-90, Wide Range Gas Monitor, August 6 - September 7, 2000.

The effluent release and sampling equipment OOS status and resultant compensatory sampling tasks, as applicable, were evaluated against 10 CFR Part 20 requirements, Appendix I to 10 CFR Part 50 design criteria; TS; UFSAR; Regulatory Guide (RG) 1.21, Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials In Liquid and Gaseous Effluents from Light-Water Cooled Nuclear Power Plant, June 1974; and RG 4.15, Quality Assurance for Radiological Monitoring Programs (Normal Operation) - Effluent Streams and the Environment, December 1977. Compensatory sampling for OOS effluent processing and monitoring equipment was verified against Chemistry Operating Procedure-06.10, Alternate Sampling Methods for Effluent and Process Radiation Monitors.

b. Findings

No findings of significance were identified.

.2 Identification and Resolution of Problems

a. Scope

Selected CRs associated with Effluent Monitoring, Offsite Dose Calculation Manual, Process Control Program, and Environmental Monitoring activities were reviewed and evaluated. The inspectors evaluated the licensee's prioritization, documentation, and resolution of problems for the following identified issues:

- 00-1320, Substitution of Plant Vent Gas Monitor for U2 Wide Range Gas Monitor Low Range Channel
- 01-0224, Math Error on U2 Mini-purge Release Permit
- 01-0343, Alert Alarm on Unit 1 Low Range Gas Plant Vent Monitor
- 01-0841, Incorrect Alarm Set-points for U1 Containment Isolation Alarm 26-6-1
- 01-1207, Untimely Detection/Correction of Meteorological Tower Performance Problems

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportation

.1 Radioactive Waste Processing

a. Inspection Scope

During the week of June 11, 2001, licensee program activities for characterization and preparation for transport of spent resin and subsequent burial at a licensed facility were evaluated. The inspectors directly observed de-watering activities and reviewed and discussed radiochemical analytical results used for characterization and preparation of the resultant radioactive waste for transport and subsequent burial. Radiochemical sample analysis results used to determine scaling factors and calculations to account for difficult-to-measure radionuclides for the processed waste stream were examined. The inspectors evaluated staff proficiency in conducting dewatering activities, observed process equipment and area material conditions, and verified dose rate surveys for selected radioactive resin transfer lines and containers.

The solid radioactive waste processing equipment operations, radiation controls, and material condition of the processing and storage areas were evaluated against 10 CFR Part 20 requirements, UFSAR and Process Control Program (PCP) details. The observed label, posting, and survey record data were evaluated against independently measured

dose rates and radiological conditions. Program guidance and implementation were evaluated against 10 CFR Parts 20 and 61, TS, PCP, and the following procedures:

- Health Physics Procedure (HPP)-49, De-watering Radioactive Bead Resin.
- HPP-49A, Transfer of Radioactive Bead Resin.

b. Findings

No findings of significance were identified.

.2 Transportation Activities

a. Inspection Scope

The inspectors reviewed radiation protection (RP) program activities associated with packaging, and transportation of June 14, 2001 radioactive waste shipment Number (No.) 01-41, Radioactive Material, LSA, n.o.s., 7, UN2912, De-watered Bead Resins and Charcoal, 06/14/01. Completion of direct radiation and contamination surveys for the out-going shipment were observed. Quality control data, shipping paper records, and supporting documentation were reviewed and evaluated for accuracy and completeness.

Transportation activities were reviewed against 10 CFR Parts 20 and 71, and 49 CFR Parts 170 -189 requirements and procedural details.

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring and Radioactive Material Control Program

a. Inspection Scope

During the week of June 11, 2001, Radiological Environmental Monitoring Program (REMP) Quality Control (QC) activities for selected sample types listed in the 2000 Annual Radiological Environmental Monitoring Report were discussed and evaluated. Evaluated QC activities included review of reported inter-laboratory comparison result for trends; confirmation of selected sample matrices Lower Limit of Detection (LLD) capabilities for gamma spectroscopy analyses; preservation requirements for surface water samples; and verification of pump flow calibrations and airflow determinations for selected airborne sampling systems.

On June 12, 2001, the inspectors toured and evaluated sampling locations, required sample types, and collection frequencies for REMP implementation. Monitoring equipment material condition, or sampling processes implemented at selected ODCM REMP sampling locations were discussed. Surface water sampling activities were observed and discussed. Thermoluminescent dosimeter placements were verified for approximately 10 offsite locations. Change-out of airborne sampling station particulate and charcoal filters were

observed, and flow rate determinations assessed for airborne sampling equipment located at sampling stations H-14, H-30, and H-34. In addition, airborne sampling equipment positions and vegetation sampling locations were evaluated against the current land use census and meteorological data.

The REMP activities were reviewed against RG 4.1, Programs for Monitoring Radioactivity in the Environs of Nuclear Power Plants, Rev 1, April 1975, and Regulatory Guide (RG) 1.21, Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials In Liquid and Gaseous Effluents from Light-Water Cooled Nuclear Power Plant, June 1974. Program implementation and sample monitoring activities were verified against TS, ODCM, and the CY 2000 Annual Environmental Monitoring Report details.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Cornerstone: Physical Protection

3PP1 Access Authorization (Behavior Observation Program)

a. Inspection Scope

The inspector evaluated licensee procedures, Fitness For Duty (FFD) reports, and licensee audits. Additionally, the inspector interviewed five representatives of licensee management and five escort personnel concerning their understanding of the behavior observation portion of the personnel screening and FFD program. In interviewing these personnel, the inspector evaluated the effectiveness of their training and abilities to recognize aberrant behavioral traits, physiological indications of narcotic and alcohol use, and work call-out reporting procedures. Licensee compliance was evaluated against requirements in the St. Lucie Nuclear Plant Physical Security Plan and associated procedures, and 10 CFR Part 26, Fitness For Duty Programs.

b. Findings

No findings of significance were identified.

3PP2 Access Control

a. Inspection Scope

The inspector observed access control activities on April 24, and 25, 2001, and search/access control equipment testing was observed on April 25, 2001. In observing the access control activities, the inspector assessed whether officers could detect contraband prior to it being introduced into the protected area. The protective barriers for the Final

Access Control facility were inspected to ensure compliance with protection standards in the Physical Security Plan. Additionally, the inspector assessed whether the officers were conducting access control equipment testing in accordance with regulatory requirements through observation, review of procedures and log entries. Preventative and post maintenance procedures were evaluated and observed as performed. Lock, combination, and key control procedures were evaluated, as well as, aspects of the site access authorization program. Licensee compliance was evaluated against requirements in the St. Lucie Nuclear Plant Physical Security Plan and associated procedures, 10 CFR Part 73.55, Requirements for Physical Protection of Licensed Activities in Nuclear Power Reactors Against Radiological Sabotage, and Part 73.56, Personnel Access Authorization Requirements for Nuclear Power Plants.

b. Findings

No findings of significance were identified

4. OTHER ACTIVITIES

4OA1 Performance Indicator Review

.1 Barrier Cornerstone

a. Inspection Scope

The inspectors verified the accuracy of the performance indicators for RCS activity and RCS leakage which were reported to the NRC. The inspectors reviewed data applicable to four quarters of operation beginning with the second quarter of 2000 and ending the first quarter of 2001. The inspectors reviewed Operations logs, Chemistry Reports, and Condition Reports to ensure the data reported was complete and accurate.

b. Findings

No findings of significance were identified.

.2 Physical Protection Cornerstone

a. Inspection Scope

The inspector evaluated Florida Power and Light, and St. Lucie Nuclear Plant programs for gathering and submitting data for the Fitness-for-Duty, Personnel Screening, and Protected Area Security Equipment Performance Indicators. The evaluation included St. Lucie's tracking and trending reports and security event reports for the performance indicator data submitted from the first quarter to the fourth quarter of 2000. Licensee performance was evaluated against the guidance in NEI 99-02, Regulatory Assessment Performance Indicator Guideline.

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up

.1 Declaration of Unusual Events Due to RCS Leakage in Excess of 10 Gallons per Minute

a. Inspection Scope

The licensee declared an Unusual Event on April 2 and again on April 4 when the suction relief of the 1A SDC System lifted unexpectedly during licensee attempts to place the SDC system into service. The inspectors responded to the control room and verified that plant conditions were stable and applicable operating procedures were being properly implemented. Inspectors also interviewed responsible Operations and Engineering personnel; attended Event Review Team meetings; and reviewed applicable CR dispositions.

b. Findings

Since initial unit operations, the licensee has experienced problems with the inadvertent lifting of SDC suction relief valves during the initial system alignment for cooldown. As recently as April 2, 2001 (CR 01-0714), licensee corrective action efforts to prevent lifting the 1A SDC suction relief valve were unsuccessful. A repeat event occurred on April 4 (CR 01-0741). The licensee has determined that past corrective actions were ineffective in preventing inadvertent relief valve liftings which adversely impact the orderly transition to SDC operations. The ineffective corrective actions to resolve a significant condition adverse to quality constituted a violation of Criterion XVI, Corrective Actions, of 10CFR50, Appendix B. These events were subsequently determined to be of very low safety significance due to the limited quantity of RCS coolant discharged through the relief valve, and the conclusion that the 1A SDC suction relief would have reseated (without operator action) once RCS pressure decreased below the blowdown margin setpoint. After the relief valve reseated, operators would have been able to proceed with unit cooldown. Enforcement aspects of this issue are addressed in Section 4OA7 of this report.

.2 Unit 1 Reactor Trip

a. Inspection Scope

On June 4, Unit 1 tripped from full power when the 1A2 Reactor Coolant Pump (RCP) breaker opened unexpectedly. An inspector responded to the control room and confirmed that the unit was stable in Mode 3, and that all safety-related mitigating systems had operated properly. Operator and plant response was verified to be as expected by reviewing plant parameters, strip charts, and the Sequence of Events Recorder; and discussing the event with plant operators and the licensee's Event Review Team. The only equipment problems of any significance involved nonsafety-related secondary systems which did not adversely affect the operators ability to safely shutdown the unit.

The inspector also discussed the risk significance with the onsite risk analyst and Region II personnel, and verified that appropriate notifications were made in accordance with 10 CFR 50.72.

b. Findings

No findings of significance were identified.

.3 (Closed) Licensee Event Report (LER) 50-335/2001-02: Technical Specification Minimum Shutdown Cooling Loop Operation Requirement Violation

On April 3, 2001, while Unit 1 was in Mode 4, both trains of SDC were inadvertently tagged out while the 1A1 and 1A2 RCPs were already tagged out. This violated TS 3.4.1.3 which required at least two of four cooling loops (e.g. reactor coolant loops or SDC loops) to be operable in this mode. This condition lasted slightly more than two hours before the operators recognized the TS noncompliance and took actions to return the 1A1 RCP to service. The inspectors verified the immediate actions to restore compliance. The event was entered into the corrective action program as CR 01-0728. Appropriate corrective actions were implemented.

This event was determined to be of very low safety significance because the 1B SDC loop was only administratively inoperable and could have been easily returned to service. The 1B reactor coolant loop remained in operation the entire time. Enforcement aspects of this issue are addressed in Section 4OA7 of this report. This LER is closed.

.4 (Closed) LER 50-389/2001-01: Reactor Scram Due to Control Element Assembly Drops

This LER documented a Unit 2 reactor trip due to long-term thermal degradation of the 2B control element assembly motor generator voltage regulator. The LER was accurate and consistent with NRC observations following the reactor trip (see IR 50-335, 389/00-08). The event was addressed in the corrective action program as CR 01-1443. The trip was uncomplicated and was determined to be of very low safety significance. This LER is closed.

.5 (Closed) LER 50-335/2001-05: Faulty CSAS Re-Sequencing Circuit Led to Operation Prohibited by Technical Specifications

This LER documented the licensee's finding that the 1A EDG load re-sequencing circuit was inoperable during the previous fuel cycle due to a sticking Containment Spray Actuation System (CSAS) actuation relay. This condition could have caused the 1A EDG to become overloaded during certain design basis accidents (i.e. large loss of coolant accident, main steam or feed line break within containment, coincident with loss of offsite power). However, the susceptibility of an 1A EDG failure was limited to a specific five second period for containment spray actuation during EDG load sequencing. The event was addressed in the corrective action program as CR 01-1198.
The sticking relay was replaced, and the re-sequencing circuit was retested, during the recent Unit 1 refueling outage which restored operability of the 1A EDG. The inspectors

also verified that the licensee's long-term corrective actions included fault analysis of the sticking relay and appropriately considered potential generic implications.

The NRC performed a phase 2 Significance Determination Process evaluation and determined that this event was of very low safety significance due to the limited window of susceptibility and the very low probability of initiating events and conditions necessary to overload EDG. With exceptions of short duration surveillance testing, the 1B EDG remained operable during the previous fuel cycle. Enforcement aspects of this event are addressed in section 4OA7 of this report. This LER is closed.

.6 (Closed) LER 50-335/2001-004: Mode 2 entered Without Both Hydrogen Recombiners Operable

On April 28, 2001, Mode 2 was entered on Unit 1 with the 1B Hydrogen Recombiner tagged out of service. This event was placed into the corrective action program as CR 01-1195. The apparent causes of the event were personnel errors and process deficiencies. The inspectors verified that the licensee took immediate actions to correct the condition and restore compliance. The event was determined to be of very low significance because the redundant 1A hydrogen recombiner was operable the entire time. Additionally, hydrogen recombiners are not needed until many hours after a design basis accident, and since the 1B recombiner was only out of service administratively (i.e., breaker tagged open) it could have been promptly restored by the operators. Enforcement aspects of this event are addressed in section 4OA7 of this report. This LER is closed.

4OA6 Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. D. Jernigan and other members of licensee management at the conclusion of the inspection on July 2, 2001. Interim exits by regional inspectors were held on April 5, 13, and 26, and June 14. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

4OA7 Licensee Identified Violations. The following findings of very low significance were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as NCVs.

If the licensee denies these non-cited violations, a response with the basis for denial should be provided, within 30 days of the date of this inspection report, 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 Resident Inspector at the St. Lucie facility.

NCV Tracking Number	Requirement Licensee Failed To Meet
NCV 50-335/01-03-01	Operating License DPR-67 (Unit 1), Condition 2.C(3), specifies that the licensee implement all provisions of the approved fire protection program as described in the UFSAR and as approved by NRC safety evaluation reports (SERs). UFSAR Table 9.5A-2 identified NFPA 72A-1972 as the code of record for original installation of the fire detection system. NFPA 72A-1972, requires that smoke detectors shall be located and adjusted to operate reliably in case of smoke at any part of the area protected. Contrary to the above, smoke detector 7B-4 could not detect smoke in the cable spreading room (Fire Zone 57) because it was surrounded by a Thermo-lag enclosure. This condition was identified on March 26, 1998. This issue is in the licensee's corrective action program as CR 98-0259. (Green)
NCV 50-389/01-03-02	Operating License NPF-16 (Unit 2), Condition 2.C(20), specify that the licensee implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR and as approved by NRC SERs. NRC SER for Unit 2 dated October 1981 specifies that all fire detection systems used to actuate fire suppression systems will be Class A systems. Section 3.5.2.b of the Unit 2 UFSAR, Appendix 9.5A requires that fire protection systems shall be designed to ensure that any detector failure, single break, ground fault or wire to wire short will not prevent the transmission of an alarm, resulting in false operation, or cause a false indication of fire. The Unit 2 fire detection system had Class B style monitoring installed where Class A was required. With a Class B style electrical monitoring system, a single break or ground fault will result in a "trouble" condition for the initiating device circuits. This problem has existed since the original system installation and was discovered on February 14, 1998, and documented in the licensee's corrective action program as CR 98-0260. (Green)
NCV 50-335,389/01-03-03	Operating License DPR-67 (Unit 1), Condition 2.C(3) and NPF-16 (Unit 2), Condition 2.C(20), specify that the licensee implement and maintain in effect all provisions of the approved fire protection program as described in the UFSAR and as approved by NRC SERs. Section 4.3.1.5 Automatic Water Suppression Systems of the UFSAR, Amendment 33, dated August 17, 1979, indicated that all station automatic water suppression systems conformed to NFPA 13 or 15. The testing and installed design for the

	water suppression sprinkler system was not consistent with NFPA 13 or NFPA 15. This condition has existed since the original system installation and was identified on February 20,1998, and documented in the licensee's corrective action program as CR(s) 98-0307, 98-0405, 98-0429. (Green)
NCV 50-335/01-03-04	10CFR50 Appendix B, Criterion XVI requires that conditions adverse to quality be identified and corrected in a timely manner. The licensee determined that prior corrective actions did not prevent repetitive inadvertent lifting of the 1A SDC system suction relief valve while attempting to place the system into service. On April 2, and April 4, 2001, the licensee declared Unusual Events due to excessive RCS leakage when the 1A SDC suction relief valve lifted. These events were described in CRs 01-0714 and 01-741. (Green)
NCV 50-335/01-03-05	Technical Specification 3.4.1.3 requires at least two of four reactor and/or shutdown cooling loops to be operable in Mode 4. On April 3, 2001, three of the four Unit 1 cooling loops were out of service while in Mode 4. Actions were not initiated within one hour to restore a loop. This event was addressed in the licensee's corrective action program as CR 01-0728. (Green)
NCV 50-335/01-03-06	Technical Specification 3.8.1.1 requires that both EDGs remain operable in Modes 1 through 4. On April 22, 2001, the licensee identified a sticking CSAS relay that could have caused the 1A diesel to become overloaded during certain design basis accidents for the period of October 1999 through April 2001. The event was captured in the licensee's corrective action program as CR 01-1198. (Green)
NCV 50-335/01-03-07	Technical Specification 3.6.4.2 requires that two hydrogen recombiners be operable in Modes 1 and 2. On April 28, 2001, the licensee inadvertently entered Mode 2 with the 1B Hydrogen Recombiner tagged out of service. This condition existed for about one day. This event was placed into the licensee's corrective action program as CR 01-1195. (Green)

PARTIAL LIST OF PERSONS CONTACTED

Licensee

G. Bird, Protection Services Manager
D. Calabrese, EP Supervisor
R. De La Espriella, Site Quality Manager
B. Dunn, Site Engineering Manager
W. Guldemond, Operations Manager
D. Jernigan, Site Vice President
W. Lindsey, Training Manager
R. Rose, Work Control Manager
A. Scales, Operations Supervisor
E. Weinkam, Licensing Manager
R. West, Plant General Manager
C. Wood, Maintenance Manager

Other licensee employees contacted included office, operations, engineering, maintenance, chemistry/radiation, and corporate personnel.

NRC

L. Wert, Reactor Projects Branch Chief
Brendan Moroney, Project Manager

ITEMS OPENED AND CLOSED

Opened and Closed

NCV 50-335/01-03-01	Failure to Implement Provisions of the NRC Approved Fire Protection Program for Fire Detection Systems. (Section 4OA7)
NCV 50-389/01-03-02	Failure to Implement Provisions of the NRC Approved Fire Protection Program for Fire Detection Systems. (Section 4OA7)
NCV 50-335,389/01-03-03	Failure to Implement Provisions of the NRC Approved Fire Protection Program for Water Suppression Systems. (Section 4OA7)
NCV 50-335/01-03-04	Failure to Correct the Cause of Inadvertent Lifting of the 1A SDC Suction Relief Valve. (Section 4OA7)
NCV 50-335-01-03-05	Violation of Technical Specification 3.4.1.3 Requirements to Maintain Two Cooling Loops in Operation During Mode 4. (Section 4OA7)

NCV 50-335-01-03-06	Faulty CSAS Re-Sequencing Circuit Led to Operations Prohibited by Technical Specification 3.8.1.1. (Section 4OA7)
NCV 50-335-01-03-07	Mode 2 Entered Without Both Hydrogen Recombiners Operable as Required by Technical Specification 3.6.4.2. (Section 4OA7)

Closed

LER 50-389/2001-001	Reactor Scram Due to CEA Drops (Section 4OA3.4)
LER 50-335/2001-002	Technical Specification Minimum Shutdown Cooling Loop Operation Requirement Violation (Section 4OA3.3)
LER 50-335/2001-004	Mode 2 Entered Without Both Hydrogen Recombiners Operable. (Section 4OA3.6)
LER 50-335/2001-005	Faulty CSAS Re-Sequencing Circuit Led to Operation Prohibited by Technical Specifications (Section 4OA3.5)

Discussed

URI 50-335, 389/98-201-09	Fire Mitigation System Does not Meet Plant Licensing Basis Requirements/Commitments or Minimum Industry Codes and Standards for System Design and Testing (Section 1R05.2)

LIST OF DOCUMENTS REVIEWED

Section 1R05.2, Fire Detection System

Unit 2 WO 9800801401, Replace Ceiling Tiles Per CR 98-0488
Unit 1 WO 9800694601, Replace Ceiling Tiles Per CR 98-0488
PC/M 98025, Unit 1 Fire Protection Alarm Enhancement
PC/M 98026, Unit 2 Fire Protection Alarm Enhancement
PC/M 99029, (pages 1 and 22 of 22), Unit 1 Cable Spread Room to B Switchgear Room Thermo-lag Wall Replacement
PMAI 98-03-138, Thermo-lag Upgrade Project to Relocate SD 7B-4
Drawings ENG-99011-120 &121, Unit 1 Fire Protection Reactor Auxiliary Building Elev. 43.00' Conduit, Fire Detection and Emergency Lighting
PSL-FPER-00-004, Disposition of Unit 2 Fire Detection System Nonconformances
PSL-FPER-00-003, Disposition of Unit 1 Fire Detection System Nonconformances
PMAI 99-12-072, NFPA Code Compliance Modifications of Fire Protection Detection Systems
Units 1 and 2, Appendix 9.5A of the UFSAR, Fire Protection Program Report

Section 1R05.2, Water Suppression Systems

PSL-FPER-99-103, Disposition of Unit 2 NFPA 15 Nonconformances
PSL-FPER-99-012, Disposition of Unit 1 NFPA 15 Nonconformances
PSL-FPER-99-011, Disposition of Unit 2 NFPA 13 Nonconformances
PSL-FPER-99-010, Disposition of Unit 1 NFPA 13 Nonconformances
PC/M 00111, Unit 2 NFPA Code Compliance Suppression System Modifications
PC/M 00110, Unit 1 NFPA Code Compliance Suppression System Modifications
2-EMP-15.01, 6 Month Operability Test of the Diesel Generator Fire Protection System
2-EMP-15.02, 6 Month Operability Test of the Fire Protection Sprinkler System for the Unit 2 Reactor Auxiliary Building

Section 1R08, Inservice Inspection Activities

St. Lucie Nuclear Power Plant Unit 1 Third Inservice Inspection Interval Program Plan ISI-PSL-1-Program, Revision 3
St. Lucie Nuclear Power Plant Unit 1 Third Inservice Inspection Interval ISI Plan ISI-PSL-1-PLAN, Revision 1
Unit 1 Inservice Inspection Program (Current Outage Plan), Revision 0
Administrative Procedure 0005760, Revision 11, St Lucie Plant Implementation Guidelines for the ASME Section XI Repair and Replacement Program
NDE 2.1, Revision 7, Magnetic Particle Examination
NDE 3.3, Revision 8, Liquid Penetrant Examination Solvent Removable Visible Dye Technique
NDE 5.1, Revision 10, Ultrasonic Examination of Pressure Vessel Welds
NDE 5.2, Revision 10, Ultrasonic Examination of Ferritic Piping Welds

Licensee Condition Reports:

CR# 01-0662
CR# 00-1662
CR# 00-1401
CR# 01-1163
CR# 01-1161
CR# 00-2083
CR# 00-1358
CR# 00-1903