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

January 29, 2001

Florida Power and Light Company
ATTN: Mr. T. F. Plunkett
President - Nuclear Division
P. O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: ST. LUCIE NUCLEAR PLANT - NRC INSPECTION REPORT
50-335/00-07, 50-389/00-07

Dear Mr. Plunkett:

On December 30, 2000, the NRC completed an inspection at your St. Lucie Units 1 and 2. The enclosed report documents the inspection findings which were discussed on January 3, 2001 with Mr. R. Kundulkar and other members of your staff.

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

Based on the results of this inspection, the inspectors identified one issue of very low safety significance (Green). The issue was determined to involve a violation of NRC requirements. However, because of its very low safety significance and because it has been entered in your corrective action program, the NRC is treating this issue as a Non-cited Violation in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny this non-cited violation, 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 Resident Inspector at the St. Lucie facility.

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,

/RA/

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 50-335/00-07, 50-389/00-07
w/attached NRC's Revised Reactor Oversight Process

cc w/encl:
Rajiv S. Kundalkar
Plant Vice President
Florida Power & Light Company
Electronic Mail Distribution

R. G. West
Plant General Manager
St. Lucie Nuclear Plant
Electronic Mail Distribution

E. J. Weinkam
Licensing Manager
St. Lucie Nuclear Plant
Electronic Mail Distribution

Don Mothena, Manager
Nuclear Plant Support Services
Florida Power & Light Company
Electronic Mail Distribution

Mark Dryden
Administrative Support & Special Projects
Florida Power & Light Company
Electronic Mail Distribution

J. A. Stall
Vice President - Nuclear Engineering
Florida Power & Light Company
P. O. Box 14000
Juno Beach, FL 33408-0420

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

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

Joe Myers, 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:
W. Gleaves, NRR
RIDSNRRDIPMLIPB
PUBLIC

PUBLIC DOCUMENT (circle one): YES NO

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRP	RII:DRS	RII:DRS	RII:DNMS	RII:DRS
SIGNATURE	SNinh	TRoss	DLanyi	GWarnick	GKuzo	DThompson	SNinh for	SNinh
NAME	SNinh	TRoss	DLanyi	GWarnick	GKuzo	DThompson	WTobin	JWallo
DATE	1/29/2001	1/29/2001	1/29/2001	1/22/00	1/25/2001	1/29/2001	1/29/2001	1/29/00
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

PUBLIC DOCUMENT (circle one): YES NO

OFFICE	RII:DRS						
SIGNATURE	LWert for						
NAME	KVanDoorn						
DATE	1/29/2001	1/ /2001	1/ /2001	1/ /2001	1/ /2001	1/ /2001	1/ /2001
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: C:\00-07REV.wpd

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-335, 50-389
License Nos:	DPR-67, NPF-16
Report No:	50-335/00-07, 50-389/00-07
Licensee:	Florida Power & Light Company (FPL)
Facility:	St. Lucie Nuclear Plant, Units 1 & 2
Location:	6351 South Ocean Drive Jensen Beach, FL 34957
Dates:	October 1 - December 30, 2000
Inspectors:	T. Ross, Senior Resident Inspector D. Lanyi, Resident Inspector G. Warnick, Resident Inspector P. Van Doorn, Senior Reactor Inspector (Section 1R07) G. Kuzo, Senior Radiation Specialist (Sections 2OS2, 2OS3, 2PS2, and 2PS3) D. Thompson, Senior Security Specialist (Section 3PP3) W. Tobin, Senior Security Specialist (Section 3PP2) J. Wallo, Security Specialist (Section 3PP3)
Approved by:	L. Wert, Chief Reactor Projects Branch 3 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000335-00-07, IR 05000389-00-07 on 10/1-12/30/2000, Florida Power & Light Company, St. Lucie Plant, Units 1 & 2. One finding in area of Response to Contingency Events.

This inspection was conducted by resident inspectors, a regional senior radiation specialist, a senior reactor inspector, and several regional security specialists. The inspectors identified one Green finding, which was a non-cited violation. The significance of the finding is indicated by its color (Green) which was determined using IMC 609 "Significance Determination Process" (see attachment, NRC's Revised Reactor Oversight Process).

A. Inspector Identified Findings

Cornerstone: Physical Protection

- Green. The inspectors identified a non-cited violation of the St. Lucie Security Plan. A security officer posted at perimeter gate 04 was not in a position which allowed him to observe the areas for which he was providing compensatory measures.

  The finding was of very low safety significance because of the non-predictable basis of the single officer failure and there was no evidence that the vulnerability had been exploited, (Section 3PP3.2)

B. Licensee Identified Violations

One violation of very low safety significance which was identified by the licensee was reviewed by the inspectors. Corrective actions taken and planned by the licensee appear reasonable. This violation is listed in section 4OA7 of this report.

Report Details

Summary of Plant Status:

Both units operated 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)

1R01 Adverse Weather Preparations

a. Inspection Scope

During the week of November 21, 2000, the inspectors verified licensee actions in preparation for severe cold weather in accordance with administrative procedure ADM-04.03, Cold Weather Preparations. This verification included physical walkdowns of the licensee's property and discussions with the appropriate licensee supervision. Additionally, the inspectors verified that the licensee was identifying areas in which cold weather could affect mitigating systems or their support systems and documenting these problems in their corrective action program.

b. Findings

No findings of significance were identified.

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 operability of the redundant train or backup system.

- 1B High Pressure Safety Injection System
- 1A Low Pressure Safety Injection System
- 1A Emergency Diesel Generator (Starting Air, Fuel Oil, Lubricating Oil, Cooling, and Electrical systems)

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 Component Cooling Water system. The verification included a review of Operating Procedure OP 2-0310020, Component Cooling Water - Normal Operation, applicable plant drawings, outstanding modifications, work orders, operator work arounds, Temporary System Alterations (TSA), Condition Reports (CRs), and Plant Manager Action Items. The inspectors verified the following:

- All valves were properly aligned
- There was no leakage that could affect operability
- Electrical power was available as required
- 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 was identifying and documenting equipment alignment problems at an appropriate threshold in their corrective action program.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors conducted tours of the areas listed below that are important to reactor safety and referenced in AP-1800022, Fire Protection Plan, to evaluate conditions related to licensee control of transient combustibles and ignition sources; the material condition, operational status, and operational lineup of fire protection systems, equipment and features; and the fire barriers used to prevent fire damage from propagation of potential fires.

- Unit 2 Auxiliary Feedwater Steam Trestle
- Unit 1 Spent Fuel Pool Heat Exchanger Room
- 2B Switchgear Room
- 1A Emergency Core Cooling System Work Areas
- Unit 1 Heating and Ventilation Equipment Rooms
- Unit 2 Emergency Core Cooling System Rooms

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

The inspector reviewed licensee programs, tests, and inspection activities to provide assurance of the integrity and operability of the Component Cooling Water System (CCWS) and the Intake Cooling Water System (ICWS). This included review of documentation (listed at the end of the report), discussions with system engineers, and field observations of the systems. The inspector reviewed documentation to confirm that the licensee had continued to meet commitments for Generic Letter 89-13, Service Water System Problems Affecting Safety Related Equipment. In addition, the inspector reviewed licensee corrective actions for recent problems experienced with the two systems. These included sea grass intrusion, ICWS pump shaft failure, CCWS heat exchanger (HX) tube leakage, CCWS HX debris, and CCWS strainer damage.

For the CCWS, the inspector reviewed documentation to confirm that initial baseline HX testing criteria and tube plugging guidance was consistent with design basis values. The inspector also reviewed documentation to confirm that ongoing frequent HX inspection/maintenance activities, test methodology, system performance monitoring, operational guidance, and system chemical treatments were consistent with accepted industry practices.

For the ICWS, the inspector verified that periodic internal inspections, system performance monitoring, operational guidance, and system chemical treatments were consistent with accepted industry practices.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

a. Inspection Scope

During the week of October 23, 2000, inspectors observed and assessed simulator training for actions taken during a station blackout. Additionally, the inspectors reviewed the actions taken to remediate a previous crew simulator failure. The inspectors assessed the following items:

- 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 technical specification actions such as reporting 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 selected a sample of identified equipment performance problems from the systems listed below, and assessed the effectiveness of licensee efforts in accordance with 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 at the appropriate level, entered into the corrective action program and being dispositioned appropriately.

- Shield Building Ventilation Damper HVS-6B failure
- Unit 1 Chemical and Volume Control System history
- Unit 2 Leading Edge Flow Meter failures
- Unit 1 Hot Leg Injection Valve HCV-3646 VOTES failure
- 1B Instrument Air Compressor failures
- Unit 2 High Pressure Safety Injection System Maintenance Preventable Functional Failure review

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.

- Unit 1 Instrument Air Compressor Work
- 1A/2A Startup Transformer On-Line Maintenance
- 2A Auxiliary Feedwater Pump Discharge Valve Work
- 1A Emergency Core Cooling System Maintenance
- 1B Emergency Core Cooling System Maintenance

- Shield Building Ventilation Damper HVS-6B Surveillance failure
- Unit 1 Full Length Core Elemental Assembly Test
- Unit 1 Containment Recirculation Sump Isolation Valve Testing

b. Findings

No findings of significance identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the interim disposition and operability evaluation of the following CRs to ensure that operability was properly justified and the system, structure, or component (SSC) remained available, such that no unrecognized increase in risk occurred. Reviews of the Updated Final Safety Analysis Report (UFSAR) and applicable supporting documents and procedures were performed to assess the adequacy of the interim CR disposition.

- CR 00-1940 Unit 1 HVE-9B Degraded Filter Cells
- CR 00-1856 Unit 2 Temporary filters on 2HVE-6A and 6B
- CR 00-2015 2C Auxiliary Feedwater Pump Steam Admission Piping
- CR 00-2016 Unit 1 HVE-9A Failure to Provide Adequate Negative Pressure in the Control Room
- CR 00-1981 Unit 1 High Pressure Safety Injection Valve Environmental Qualification Issues

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope

The inspectors reviewed the operator work arounds (OWA) listed below, to evaluate their risk significance from an individual perspective and cumulative effect with other OWAs. The impact of these OWAs upon the operators' abilities to use affected abnormal and emergency operating procedures was also evaluated. Responsible operators were interviewed to assess their knowledge and familiarity with applicable compensatory instructions.

- Unit 2 Power Operated Relief Valve seat leakage
- 2B 15 Main Feedwater 15 percent bypass valve controller failure

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors reviewed post maintenance test (PMT) procedures and witnessed testing activities for selected risk significant mitigating systems to determine the following: (1) Effect of testing on the plant had been 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 had current calibrations, range and accuracy consistent with the application; (5) Tests were performed as written with applicable prerequisites satisfied; (6) Jumpers were installed or leads lifted 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:

- Unit 1 Startup Transformer Preventive Maintenance
- Unit 1 HVE-9A Charcoal Filter Replacement
- 1A Emergency Core Cooling System On-line Maintenance
- 1B Emergency Core Cooling System On-line Maintenance
- Shield Building Ventilation fan HVS-6B Maintenance
- Unit 1 Nuclear Instrument Channel D Temporary Modification
- Unit 1 Rod Control Card Replacement

b. Findings

No findings of significance identified.

R22 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), and instrumentation and control procedures (ICP). Applicable test data was reviewed to verify whether they met Technical Specifications (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.

- OP-2200050B 1B Emergency Diesel Generator Operating Test
- ICP 2-0700051 Unit 2 Auxiliary Feedwater Actuation System Monthly Functional Test
- OP 2-0700050 2A Auxiliary Feedwater Pump Inservice Test
- OP 2-0400053 Unit 2 Engineered Safeguards Relay Test
- ICP 2-1400050 Unit 2 Reactor Protection System Monthly Functional Test

- ICP 2-1220052 Unit 2 Linear Power Range Safety and Control Channel Monthly Calibration
- 1-OP-3200051 Unit 1 At Power Determination of Moderator Temperature Coefficient
- 1-OSP-66.01 Control Element Assembly Quarterly Exercise

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed TSA# 1-00-005 that was installed to supply temporary power from a lighting panel to a fire protection inverter panel, and TSA # 1-00-007 that was installed to restore the 'D' channel nuclear instrument indication from a corresponding safety related channel. The inspectors evaluated these temporary modifications and associated 10 CFR 50.59 screenings against the system design basis documentation, and verified that the modifications did not adversely affect system operability or availability. Additionally, the inspectors verified that the installations were 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 November 7, 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 classification, notification, and protective action recommendation development activities were in accordance with emergency plan implementing procedures. Additionally, the inspectors evaluated the adequacy of the post drill critiques conducted in the simulator. The inspectors verified that a performance deficiency involving late classification was identified and appropriately recognized as a performance indicator hit.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

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

2OS2 "As Low As Reasonably Achievable" Program Planning and Controls

a. Inspection Scope

Licensee "As Low As Reasonably Achievable" (ALARA) Calendar Year (CY) 2000 collective exposure trends, and worker performance were reviewed and discussed. In addition, ALARA work plans and estimated dose expenditures for ongoing incore detectors cutting and storage activities were reviewed and discussed. Licensee program activities for monitoring declared pregnant females for CY 2000, was reviewed and discussed. Program guidance and implementation were reviewed against the facility's CY 2000 ALARA goals, UFSAR, TS, and 10 CFR Part 20 requirements.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring and Protection Equipment

a. Inspection Scope

Availability and operability of the "fast-scan" and chair whole-body counting equipment were reviewed and evaluated. Current calibration and response check data were reviewed and discussed. The review included the following Health Physics Procedures (HPPs):

- HPP-010, Multichannel Analyzers,
- HPP-031, Operation of the Whole Body Counting System,

b. Findings

No findings of significance were identified.

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

.1 Laboratory Quality Control Activities

a. Inspection Scope

Quality control and calibration data for in-service counting room instrumentation associated with effluent monitoring and release activities was reviewed and discussed. Licensee QC data were reviewed for liquid scintillation and germanium detector equipment. Licensee activities were compared against TS and Offsite Dose Calculation Manual (ODCM) details.

b. Findings

No findings of significance were identified.

.2 Identification and Resolution of Problems

a. Inspection Scope

The inspector verified that equipment problems associated with gaseous and liquid effluent treatment and monitoring systems were being identified at the appropriate level, entered into the corrective action program and dispositioned appropriately. The inspector reviewed the licensee's evaluation and actions for CRs 00-1777 and 00-2039 which addressed a leaking waste gas tank valve. The inspectors walked-down and discussed the "A" WGT system operation with the responsible system engineer. System maintenance records for the involved equipment were reviewed and discussed with responsible maintenance personnel. In addition, the inspectors evaluated the Unit 2 Main Plant Vent radiation detection equipment operability from June through October 31, 2000, and reviewed offsite dose estimates for the period. The following documents and procedures associated with this issue were reviewed:

- Work Order 30013687-01, Drain Valve for Waste Gas Compressor 2B Accumulator, Valve Leaks conducted October 13, 2000.
- Drawing No. 2998-G-078
- Unit 2 Plant Saint Lucie Process Monitor Trend Data, June 1 through October 2000
- Administrative Procedure 78-01, Post Maintenance Testing.

The licensee's actions were reviewed against TS, 10 CFR Part 20 requirements, Appendix I to 10 CFR Part 50 design criteria, and ODCM details.

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportation

.1 Radioactive Waste Processing

a. Inspection Scope

Radiation protection program activities for characterization, temporary storage, and preparation of radioactive waste for subsequent transport to licensed processing or burial facilities were reviewed. Sample representativeness for radioactive waste streams was verified. The inspectors reviewed and discussed radiochemical sample analysis results used to determine scaling factors and calculations to account for difficult-to-measure radionuclides for selected 1999-2000 waste streams including Spent Resin Tank Resins, Spent Fuel Pool resins, Chemical Volume Control System Primary Resin, Condensate Resins, Steam Generator Blow Down Resin, and Dry Active Waste. During the week of December 4, 2000, the inspectors toured solid radioactive waste processing and on-site storage facilities, observed material conditions, and conducted

dose rate surveys for selected radioactive waste containers and temporary storage areas.

The solid radioactive waste processing equipment and storage areas were verified against UFSAR and Process Control Program (PCP) details. Measured dose rates were verified against current label, posting or survey record data. Program guidance and implementation were evaluated against 10 CFR Parts 20 and 61, and TS.

b. Findings

No findings of significance were identified.

.2 Transportation Activities

a. Inspection Scope

Radiation protection program activities associated with packaging, and transportation of radioactive material/waste were reviewed. Quality control records, and shipping paper and supporting documentation were reviewed and evaluated for accuracy and completeness. Records of the following radioactive waste or radioactive material shipments were reviewed and discussed.

- 00-005, Radioactive Material, not otherwise specified (n.o.s.), 7, UN2982, RQ, Fissile Excepted, De-watered Bead Resins, 02/16/00
- 00-018, Radioactive Material, LSA, n.o.s., 7, UN2912, RQ, Fissile Excepted, De-watered PWR Process Filters, 03/21/00
- 00-019, Radioactive Material, LSA, n.o.s., 7, UN2912, RQ, Fissile Excepted, Compactable and Non-Compactable High-Level Trash, 03/24/00
- 00-072, Radioactive Material, LSA, n.o.s., 7, UN2912, Fissile Excepted, De-watered Bead Resins, 09/21/00
- 00-079, Radioactive Material, LSA, n.o.s., 7, UN2912, Dry Active Waste, 10/10/00

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

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring Program

a. Inspection Scope

Radiation protection program guidance and implementation to prevent the inadvertent release of licensed materials into the public domain were reviewed and evaluated. Availability and operability of personnel contamination monitors, portal monitors, and small article monitors were reviewed and evaluated. Current calibration and response check data were verified. The inspectors directly observed daily response checks of

personnel contamination monitors at the Unit 1 Radiologically Controlled Area (RCA) exit point. In addition, alarm settings for selected personnel contamination and small article monitors at the Unit 1 RCA exit were verified using a calibrated source.

The following HPPs were reviewed and discussed with licensee representatives:

- HPP-002, Calibration and Operation of the MGP and the Bicron-NE Small Article Monitor,
- 0-HPP-35, Operation and Calibration of the TSA Systems Model SPM-906 Portal Monitor,
- HPP-114, Calibration and Operational Check of the Nuclear Enterprises Personnel Contamination Monitors,

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

3PP2 Access Authorization

a. Inspection Scope

Fitness For Duty and Access Authorization Programs were inspected at the St. Lucie Site and at the Corporate Offices. The inspector also reviewed corporate oversight of these programs. This included audits and corrective actions for CRs 98-0011, 98-1827, and 99-0273. Parts 26 and 73.56 of the Code of Federal Regulations require the Fitness For Duty and Access Authorization Programs to be implemented for those employees granted unescorted access to the licensee's facility. Site implementation was also inspected. Semi-annual statistics, procedures, background investigations, psychological tests and access records were reviewed. Interviews of randomly chosen individuals were conducted. The inspector reviewed the background investigations and psychological evaluations given to the Medical Review Officers, technicians and collectors of the Fitness-For-Duty staff who give access to the site. Revocation of access records were also inspected to verify timely voiding of access upon unfavorable termination. Random selection of individuals for testing was inspected through analysis of the licensee's Nuclear Employee Plant Access System, Chains of Custody, Permanent Record Book and security computer access records. Nuclear Division Policy NP400, Nuclear Fitness For Duty and St. Lucie Plant Administrative Procedure, ADM-15.01, Fitness For Duty Program were reviewed and discussed with plant employees. Several "broken seal" issues which caused the licensee to retest the donor were reviewed. Related correspondence among lawyers, Medical Review Officers, site and Corporate administrators was also reviewed

b. Findings

No findings of significance were identified.

3PP3 Response to Contingency Events

.1 Intrusion and Detection

a. Inspection Scope

The protected area intrusion detection system and assessment system required by the Physical Security Plan (PSP) were evaluated to determine if vulnerabilities could be identified. Identified potential vulnerabilities were tested to determine if they were exploitable.

b. Findings

No findings of significance were identified.

.2 Assessment Aids

a. Inspection Scope

The inspectors conducted an evaluation of the licensee's assessment capability. The quality of the assessment aids was evaluated against the PSP to determine if the alarm station operators could clearly recognize a threat in the intrusion detection zones. The team assessed whether the licensee's camera assessment system was capable of automated call-up of fixed closed circuit television cameras to assess alarms emanating from the protected area perimeter. The capability to assess alarms by a video capture system was evaluated.

b. Findings

Green. A Non-Cited Violation was identified by the inspectors. While conducting tests of the assessment systems, the inspectors noted that an officer posted at perimeter gate (PG) 04 was not in a position which allowed him to observe the areas for which he was providing compensatory measures.

On December 12, 2000, the inspector identified that the security officer posted as compensatory measures for a deactivated alarm system was not positioned to view the zone of detection such that he could provide the equivalent function of the malfunctioning component.

If left uncorrected, this issue could become a more significant safety concern. However, this issue was determined to have very little safety significance, given the non-predictable basis of the single officer failure and there was no evidence that the vulnerability had been exploited.

License Amendment No. 165 (Unit 1) and 109 (Unit 2), Paragraph 2d, dated October 4, 2000, states that St. Lucie Nuclear Power Plant shall fully implement and maintain in effect all provisions of the Commissioned-approved nuclear security and contingency, and guard training and qualification plan. Paragraph 1.2 of the Safeguards Contingency Plan Implementing Procedure No. 0006027, Appendix E states that the

licensee will provide compensatory security measures for the system component which is lost or malfunctioning. This normally will be accomplished through the use of security officers performing the same or equal functions provided by the component." Security Force Instruction (SFI) #1, Access Control Delivery Gate, Paragraph 2.2.2, states that "One (1) Security Officer will be assigned to the post at PG 04. This armed security officer shall deny access through PG 04 and keep the north-south fence perpendicular to Protected Zone(PZ) 06 and PG 04 and adjacent fence under observation while at PG 04." On December 12, 2000, the officer posted as compensatory measures for a deactivated alarm system was not positioned to view the zone of detection to provide the equivalent function of the malfunctioning component. This violation is being treated as a Non-Cited Violation (NCV), consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 50-335,389/00-07-01, Failure of a Security Officer posted as Compensatory Measure for a Deactivated Alarm System to Maintain a Position to View the Zone of Detection). This issue was placed in the licensee's corrective action program as CR 00-2054.

.3 Weapons Demonstration

a. Inspection Scope

Using the Tactical Response Plan as part of the basis, the inspection team evaluated the firearms proficiency by observing a range demonstration by three individuals selected by the inspection team. The inspectors observed the weapons demonstration to determine whether each of the three selected individuals were capable of effectively engaging the targets using appropriate weapons from each type plant defensive position used as part of the defensive strategy. The inspectors observed the individuals firing from elevated positions, from behind barricades and barrels, and at fixed, moving and pop-up targets.

b. Findings

No findings of significance were identified.

.4 Table-Top Exercises

The inspection team conducted five table-top exercises which focused on evaluating the response strategy to protect against an armed attack as defined in the Tactical Response Plan. The inspectors conducted table-top exercises to determine whether the licensee's armed response force defensive strategy demonstrated the ability to quickly focus responders on the adversaries' location, interdict the adversaries, provide defense-in-depth, and protect target sets against attack from the locations used during the table-top drills.

Findings

No findings of significance were identified.

.5 Identification and Resolution of Problems

a. Inspection Scope

The inspectors randomly selected and screened licensee records for the period of July 1999 through September 2000, relating to security loggable events, maintenance work requests and problem evaluation reports to determine if the licensee was identifying problems related to these areas, and entering them into the corrective action program.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

.1 Mitigating Systems Cornerstone

a. Inspection Scope

The inspectors verified the accuracy of the performance indicator for Safety System Unavailability: Heat Removal, in this case Auxiliary Feedwater, which was reported to the NRC. The inspectors reviewed data applicable to four quarters of operation beginning with the third quarter of 1999 and ending the second quarter of 2000. The inspectors reviewed Operations logs, applicable CRs, and Maintenance Rule history to ensure the data reported was complete and accurate.

b. Findings

No findings of significance identified.

.2 Occupational Radiation Safety Performance Indicator Verification

a. Inspection Scope

The inspectors verified the Occupational Exposure Control Effectiveness performance indicator for the Occupational Radiation Safety Cornerstone through December 4, 2000. The inspectors reviewed data reported to the NRC, and sampled and evaluated applicable CRs and selected Health Physics Program records. The reviewed records included exposure investigation reports, internal exposure evaluations, and Health Physics Supervisor Logs.

b. Findings

No findings of significance were identified.

.3 Public Radiation Safety Performance Indicator Verification

a. Inspection Scope

The inspectors verified the Radiological Control Effluent Release Occurrences performance indicator for the Public Radiation Safety Cornerstone through September 31, 2000. The inspectors reviewed data reported to the NRC and evaluated applicable CRs and selected Effluent Program records associated with liquid and gaseous effluent releases, process radiation monitor operation, and abnormal release results.

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up

(Closed) Licensee Event Report (LER) 50-335, 389/00-003: Technical Specification Control Room Minimum Staffing Level Not Met. On October 24, 2000, the licensee determined that the Nuclear Watch Engineers (NWE) were not fulfilling the proficiency watch requirements of 10CFR55.53(e) for maintaining an active senior reactor operator (SRO) license. Since the NWEs occasionally relieved the Assistant Nuclear Plant Supervisor (ANPS) of his command and control function, this constituted a failure to meet TS 6.2.2.a requirements for minimum shift crew composition. This condition has existed for at least several years. The inspectors reviewed CR 00-1812, applicable licensee procedures and documents, and the LER. The inspectors also interviewed shift crew personnel and responsible Operations and Training supervision and management. The inspectors also verified the immediate corrective actions were adequate to restore regulatory compliance.

The licensee's root cause analysis concluded that the deficiency was caused by an inadequate understanding of 10CFR55.53(e) as it applied to SROs in a TS 6.2.2.a position. Although this issue could have become a more significant concern if left uncorrected, it was determined to be of very low safety significance because the periods of time the NWE relieved an ANPS were short and infrequent (typically once or twice a week for 1-3 hours on backshift); the NWEs had fulfilled all SRO requalification training requirements; and the ANPS was still onsite and available to resume command and control functions. The enforcement aspects of this issue are addressed in Section 4OA7 of this report.

4OA5 Other

Institute of Nuclear Power Operations (INPO) Plant Evaluation Report

The inspectors reviewed the "INPO Final Report - St. Lucie (1999)" regarding the most recent INPO plant evaluation. The inspectors did not note any safety issues in the INPO report that needed further NRC followup.

4OA6 Meetings

Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on January 3, 2001. 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 finding of very low significance was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600 for being dispositioned as a NCV.

NCV Tracking Number	Requirement Licensee Failed To Meet
NCV 50-335, 389/00-07-02	Requirements of TS 6.2.2.a for minimum operating shift compliment were not maintained when the NWE relieved the ANPS. The NWEs had not fulfilled proficiency watch requirements of 10CFR55.53 for SRO licenses (Section 4OA3)

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
J. Gianfrancesco, Maintenance Manager
W. Guldemond, Operations Manager
R. Kundalkar, Site Vice President
W. Lindsey, Training Manager
A. Scales, Operations Supervisor
E. Weinkam, Licensing Manager
R. West, Plant General Manager
C. Wood, Work Control Manager

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

NRC

G. Dicus, Commisioner
T. Hiltz, Technical Assistant for the Commissioner
L. Reyes, Region II Administrator
L. Wert, Chief of Region II Reactor Projects Branch 3

ITEMS OPENED AND CLOSED

Opened and Closed

NCV 50-335, 389/00-07-01	Failure of a Security Officer posted as Compensatory Measure for a Deactivated Alarm System to Maintain a Position to View the Zone of Detection. (Section 3PP3.2)
NCV 50-335, 389/00-07-02	TS 6.2.2.a Minimum Shift Compliment Not Maintained When NWE Relieved ANPS (Section 4OA3 and 4OA7)

Closed

LER 50-335, 389/00-003	Technical Specification Control Room Minimum Staffing Level Not Met (Section 4OA3)

Documents Reviewed for Section 1R07:

Procedures

OP 1-0640020, Revision 49, “Intake Cooling Water System Operation”
OP 2-0640020, Revision 45, “Intake Cooling Water System Operation”
Off-Normal OP 1-0640030, Revision 22, “Intake Cooling Water System”
Off-Normal OP 2-0640030, Revision 22, “Intake Cooling Water System”
MMP-14.01, Revision 15, “Component Cooling Water Heat Exchanger Cleaning and Repair”
Chemistry OP-02.05, Revision 2, “Maintaining Component Cooling Water Chemistry”
Chemistry OP-05.04, Revision 13, “Chemistry Department Surveillances and Parameters”

Condition Reports

99-0463, 1A ICWS Pump Shaft Failure
99-0636, 1B ICWS Pump Shaft Corrosion
00-0444, Loss of CCWS Inventory
00-0589, Coating Debris in 1B CCWS HX
00-0703, Pluggable Tubes for CCWS HX 2A
00-0744, CCWS HX 2A Damaged Strainer
00-1421, Unit 2 Intake Traveling Screen Motor Trips
00-1422, Sea Grass Intrusion
00-1431, Sea Grass Intrusion-Operations

Unit 1 Work Orders

30007972-01, CCWS HX 1A Clean and Hydrolase
30005558-01, CCWS HX 1A Clean and Hydrolase
29010218-01, CCWS HX 1A Clean and Hydrolase
28021935-01, CCWS HX 1A Clean and Hydrolase
30007227-01, CCWS HX 1B Clean and Hydrolase
29610163-01, CCWS HX 1B Clean and Hydrolase
29018870-01, CCWS HX 1B Clean and Hydrolase
30007955-01, Pull tube from 1B CCWS HX for Failure Analysis

Unit 2 Work Orders

30015399-01, Pick and Clean CCWS HX 2A
30000411-01, Pick and Clean CCWS HX 2A
29014209-01, Pick and Clean CCWS HX 2A
29010343-01, Clean and Eddy Current CCWS HX 2A
29014220-01, Clean CCWS HX 2B
29012096-01, Clean and Eddy Current CCWS HX 2B

Other Documents

Updated Final Safety Analysis Report Units 1 and 2 Sections 9.2.1 and 9.2.2
Unit 1 and Unit 2 Intake Cooling Water SSC Performance Indicators dated 10/8/00
Unit 1 and Unit 2 Component Cooling Water SSC Performance Indicators dated 9/22/00
Unit 1 CCWS Leakage (GPD) Curve for 2/17/00-8/31/00
Florida Power and Light Letter L-90-28 dated January 25, 1990, Service Water System Problems Affecting Safety Related Equipment-Generic Letter 89-13
Engineering Evaluation PSL-ENG-SEMS-00-0109, Revision 0, Single Train ICWS Inspection
Engineering Evaluation SPEG-91-043-90, Containment Analysis dated 4/29/93 (Partial)
Safety Evaluation PSL-ENG-SEMS-00-022, Revision 1, ICWS Performance Curves
Unit 1 ICWS Inspection Report dated September 16-October 20, 1999
Unit 2 ICWS Inspection Report dated April-May, 2000
Preventive Maintenance File 28A and 31B, Revision 60, CCWS HX 1A and 1B Clean and Inspect
Preventive Maintenance File 04807 and 04808, Revision 65, CCWS HX 2A and 2B Clean and Inspect
CCWS Tests, Calculations and Projection Results dated 10/02/90 and 02/04/91

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and

increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

Attachment