



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30323

Report Nos.: 50-335/87-01 and 50-389/87-01

Licensee: Florida Power and Light Company  
9250 West Flagler Street  
Miami, FL 33102

Docket Nos.: 50-335 and 50-389

License Nos.: DPR-67 and NPF-16

Facility Name: St. Lucie 1 and 2

Inspection Conducted: January 13 - February 7, 1987

Inspectors:	<u>H. O. Crlenjak</u>	<u>2/26/87</u>
	R. V. Crlenjak, Senior Resident Inspector	Date Signed
	<u>H. O. Bibb</u>	<u>2/26/87</u>
	H. E. Bibb, Resident Inspector	Date Signed
Approved by:	<u>Bruce A. Wilson</u>	<u>2/26/87</u>
	B. Wilson, Section Chief	Date Signed
	Division of Reactor Projects	

SUMMARY

Scope: This inspection involved on site activities in the areas of Technical Specification compliance, operator performance, overall plant operations, quality assurance practices, station and corporate management practices, corrective and preventive maintenance activities, site security procedures, radiation control activities, surveillance activities, and refueling activities.

Results: Of the areas inspected no violations or deviations were identified. One unresolved item was identified, paragraph 7.

8703240341 870228  
PDR ADOCK 05000335  
G PDR

## REPORT DETAILS

### 1. Licensee Employees Contacted

- \*K. Harris, St. Lucie Vice President
- \*D. A. Sager, Plant Manager
- \*J. H. Barrow, Operations Superintendent
- T. A. Dillard, Maintenance Superintendent
- \*J. B. Harper, QA Superintendent
- \*L. W. Pearce, Operations Supervisor
- \*R. J. Frechette, Chemistry Supervisor
- \*C. F. Leppla, I&C Supervisor
- P. L. Fincher, Training Supervisor
- C. A. Pell, Technical Staff Supervisor
- E. J. Wunderlich, Reactor Engineering Supervisor
- H. F. Buchanan, Health Physics Supervisor
- G. Longhouser, Security Supervisor
- J. Barrow, Fire Prevention Coordinator
- \*J. Scarola, Assistant Plant Superintendent - Electrical
- C. Wilson, Assistant Plant Superintendent - Mechanical
- \*N. G. Roos, Quality Control Supervisor

Other licensee employees contacted included technicians, operators, mechanics, security force members, and office personnel.

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on February 11, 1987, with those persons indicated in paragraph 1 above.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

### 3. Plant Tours (Units 1 and 2)

The inspectors conducted plant tours periodically during the inspection interval to verify that monitoring equipment was recording as required, equipment was properly tagged, operations personnel were aware of plant conditions, and plant housekeeping efforts were adequate. The inspectors also determined that appropriate radiation controls were properly established, critical clean areas were being controlled in accordance with procedures, excess equipment or material was stored properly and combustible materials and debris were disposed of expeditiously. During tours, the inspectors looked for the existence of unusual fluid leaks, piping vibrations, pipe hanger and seismic restraint settings, various valve and breaker positions, equipment caution and danger tags, component positions,

adequacy of fire fighting equipment, and instrument calibration dates. Some tours were conducted on backshifts.

The inspectors routinely conducted partial walkdowns of Emergency Core Cooling Systems (ECCS). Valve, breaker/switch lineups and equipment conditions were randomly verified both locally and in the control room. During the inspection period the inspectors conducted a complete walkdown in the accessible areas of the Unit 1 emergency diesel generators and component cooling water to verify that the lineups were in accordance with licensee requirements for operability and equipment material conditions were satisfactory. Additionally, flowpath verifications were performed on the following systems: Unit 1 and 2 chemical and volume control and high pressure and low pressure safety injection.

#### 4. Plant Operations Review (Units 1 and 2)

The inspectors, periodically during the inspection interval, reviewed shift logs, and operations records, including data sheets, instrument traces, and records of equipment malfunctions. This review included control room logs and auxiliary logs, operating orders, standing orders, jumper logs and equipment tagout records. The inspectors routinely observed alertness and demeanor during plant tours. During routine operations, operator performance and response actions were observed and evaluated. The inspectors conducted random off-hours inspections during the reporting interval to assure that operations and security remained at an acceptable level. Shift turnovers were observed to verify that they were conducted in accordance with approved licensee procedures. The inspectors performed an in-depth review of the following safety-related tagouts (clearances):

##### Unit-1

1-1-104 1C charging pump - replace packing  
 1-1-125 D containment cooler breaker - maintenance  
 1-2-007 1C auxiliary feedwater pump - overspeed trip maintenance

##### Unit-2

2-1-065 A boric acid pump relief valve - leak repair  
 2-2-004 2A hydrogen recombiner - calibrate wattmeter  
 2-2-005 2A low pressure safety injection pump - PM

#### 5. Technical Specification Compliance (Units 1 and 2)

During this reporting interval, the inspectors verified compliance with limiting conditions for operations (LCO's) and results of selected surveillance tests. These verifications were accomplished by direct observation of monitoring instrumentation, valve positions, switch positions, and review of completed logs and records. The licensee's compliance with LCO statements were reviewed on selected occurrences as they happened.



## 6. Maintenance Observation

Station maintenance activities of selected safety-related systems and components were observed/reviewed to ascertain that they were conducted in accordance with requirements. The following items were considered during this review; LCOs were met, activities were accomplished using approved procedures, functional tests and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; and radiological controls were implemented as required. Work requests were reviewed to determine status of outstanding jobs and to assure that priority was assigned to safety-related equipment. The inspector's observed portions of the following maintenance activities/plant work orders (PWO).

### Unit 1 PWO's

7223 excore detector - check out  
7451 engineered safeguards auto-test instrumentation - semiannual alignment check

### Unit 2 PWO's

6876 receipt inspection - pressure switch  
7801 safety assessment system - PM  
7807 auxiliary feedwater actuation system - PM

## 7. Review of Nonroutine Events Reported by the Licensee (Units 1 and 2)

Non-routine plant events were reviewed for potential generic impact, to detect trends, and to determine whether corrective actions appeared appropriate. Events which were reported immediately were also reviewed as they occurred to determine that technical specifications were being met and that the public health and safety were of upmost consideration.

Both units operated at or near full power throughout the reporting period. On February 7, 1987, while in the process of shutting down for the cycle 8 refueling outage, Unit 1 tripped on low steam generator (S/G) level at 5 percent power. The licensee was in the process of collecting data for Combustion Engineering (CE) to support a scheduled outage modification to the feed water control system. An automatic low power feed water control system is being installed to enhance feed control at low power levels (less than 15%). Data had been successfully taken at 15 and 10 percent levels, however, at 5 percent power difficulties were encountered, a stable S/G level could not be maintained and at 00:38 a.m. the unit tripped on low level, 1B S/G. All systems functioned as designed. Auxiliary feedwater had been previously started and functioned as required after the plant trip. The scheduled outage was commenced at that time.

On January 23, 1987, the licensee reported that during an engineering review, 10 non-seismic masonry block walls were identified in the vicinity

of safety related equipment on unit 1. Unit 2 is not affected. The licensee issued a justification for continued operation, which was reviewed by NRC, Region II. Additionally, a plant change/modification package was issued to upgrade the affected walls. By January 26, 9 of the 10 walls had been modified with the one remaining wall to be modified during the unit 1 outage (commenced February 7). Until a Regional technical specialist, Engineering Branch, completes a review of the existence of non-seismic walls adjacent to safety related equipment and the subsequent modifications, this item is unresolved (UNR, 50-335/87-01-01).

#### 8. Physical Protection (Units 1 and 2)

The inspectors verified by observation and interviews during the reporting interval that measures taken to assure the physical protection of the facility met current requirements. Areas inspected included the organization of the security force, the establishment and maintenance of gates, doors and isolation zones in the proper conditions, that access control and badging was proper, and procedures were followed.

#### 9. Surveillance Observations

During the inspection period, the inspectors verified plant operations in compliance with selected technical specifications (TS) requirements. Typical of these were confirmation of compliance with the TS for reactor coolant chemistry, refueling water tank, containment pressure, control room ventilation and AC and DC electrical sources. The inspectors verified that testing was performed in accordance with adequate procedures, test instrumentation was calibrated, limiting conditions for operations were met, removal and restoration of the affected components were accomplished, test results met requirements and were reviewed by personnel other than the individual directing the test, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel. The inspectors observed portions of the following surveillance(s):

OP 1-0110051	Control Element Assembly Periodic Exercise
OP 1-0110057	Periodic Surveillance of Departure from Nucleate Boiling Margin (DNB)
OP 1-0120026	Reactivity - Deviation From Design

#### 10. Refueling Activities

The inspector reviewed the following refueling related procedures to ensure that the licensee had implemented controls for the conduct of refueling operations and for establishing and maintaining control of plant conditions in accordance with the Technical Specifications:

##### Operations

1-0030127 Reactor Plant Cooldown - Hot Standby to Cold Shutdown

1-0030128 Reactor Shutdown  
1-0110022 Coupling and Uncoupling of Control Element Assembly (CEA)  
Extension Shafts  
1-0120021 Draining The Reactor Coolant System  
1-1600022 Unit 1 Refueling Operation  
1-1600023 Refueling Sequencing Guidelines  
1-1610020 Receipt and Handling of New Fuel  
1-1630021 New Fuel Elevator Operation  
1-1630023 Fuel Transfer System Operation  
1-1630024 Refueling Machine Operation  
1-1630028 New Fuel Handling Crane Operation

Administration

0005746 Outage Management  
0010438 Control of Heavy Load Lifts

Maintenance

1-M-0015 Reactor Vessel Maintenance - Sequence of Operations