



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

Report Nos.: 50-335/85-14 and 50-389/85-14

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

Docket Nos.: 50-335 and 50-339

License Nos.: DPR-67 and NPF-16

Facility Name: St. Lucie

Inspection Conducted: June 10 - 14, 1985

Inspector: E. H. Girard 6/26/85  
Date Signed  
 E. H. Girard

Approved by: B. R. Crowley *for* 6/26/85  
Date Signed  
 J. J. Blake, Section Chief  
 Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection entailed 35 inspector-hours on site in the areas of licensee action on previous enforcement matters, inservice testing of pumps and valves, Inspection and Enforcement Bulletin 80-08, and inspector followup items.

Results: No violations or deviations were identified.

## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*K. N. Harris, Plant Vice President
- \*D. A. Sager, Plant Manager
- \*D. M. Stewart, Test and Performance Lead Engineer
- \*B. M. Parks, Quality Assurance Supervising Engineer
- \*A. B. Johnson, Assistant Plant Engineer
- \*V. T. Chilson, Senior Nuclear Energy Specialist

#### NRC Resident Inspectors

- \*R. V. Crlenjak, Senior Resident Inspector
- \*H. E. Bibb, Resident Inspector

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on June 14, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings listed below. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

Inspector Followup Item 335, 389/85-14-01, Valve Stroke Times, paragraph 5.c.

### 3. Licensee Action on Previous Enforcement Matters

- a. (Closed) Violation (335, 389/85-04-02): Failure to Enter Pump Test Status in Control Room "Pump and Valve Summary Book"

This violation involved the licensee's failure to enter some pump test status information in their "Pump and Valve Summary" book as required by Administrative Procedure 0010132 and the Code for inservice testing of pumps and valves - ASME Section XI. The licensee's letter of response for this violation, dated March 29, 1985, has been reviewed and determined acceptable by Region II. In their response letter the licensee indicated that the failure to enter all required pump test status information in their summary books was the result of an oversight and that the books had been updated to indicate the current status. The NRC inspector discussed the item with the licensee's Test and Performance Lead Engineer and reviewed the licensee's summary books

(for Unit 1 and 2) and verified that the previously omitted data had been added and that it appeared that the books were being kept fully up-to-date.

- b. (Open) Unresolved Item (335, 389/85-04-03): Testing of Category "C" Relief Valves

This item was opened to identify an NRC inspector's concern that the licensee had not included Unit 1 relief valves, other than pressurizer and main steam relief valves, in their ASME Section XI pump and valve test program. During the current inspection the NRC inspector questioned the licensee's Test and Performance Lead Engineer regarding this matter. The Lead Engineer stated that the subject relief valves had not been included in the test program because they were not required to perform a specific function in shutting down the reactor to the cold shutdown condition or in mitigating the consequences of an accident. The 1980 edition of ASME Section XI only specifies testing of valves required to perform a specific function in shutting down the reactor to cold shutdown or in mitigating the consequences of an accident. The Lead Engineer indicated that these valves would be tested at the next refueling outage. This item will remain open pending further NRC review of the function of such valves to establish whether they should have been tested.

#### 4. Unresolved Items

Unresolved items were not identified during the inspection.

#### 5. Inservice Testing of Pumps and Valves - Units 1 and 2 (92706B)

The inspector examined selected aspects of the licensee's implementation of inservice testing (IST) requirements for pumps and valves to verify compliance with regulatory requirements and licensee commitments. The applicable codes for IST, as identified through 10 CFR 50.55(a)g, are:

Unit 1 - ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition with Addenda through S75 (based on operating license issuance date of March 1, 1976)

Unit 2 - ASME Boiler and Pressure Vessel Code, Section XI, 1980 Edition with Addenda through W80 (based on operating license issuance date of June 10, 1983)

The details of the NRC inspector's examination are described below:

##### a. IST Program and Relief Requests

The licensee has submitted their documented IST programs for Units 1 and 2 to the NRC for evaluation. The program submittals contained, as integral parts, the licensee's requests for relief from certain code requirements. The relief requests were submitted for evaluation and

approval by the NRC in accordance with 10 CFR 50.55a(g)(5) and (6). The inspector examined the status of the programs and relief requests through a review of the related documentation and discussions with involved personnel - principally the licensee's Senior Nuclear Energy Specialist. The inspector determined that the status of the licensee submittals and NRC evaluations was as follows:

- Unit 1 - NRC evaluation of the program and relief requests has been completed as documented in a letter (and attached safety evaluation report) dated April 2, 1985, from J. R. Miller (NRC) to J. W. Williams (Florida Power and Light Company)
- Unit 2 - The program and relief requests for this unit were submitted in a letter dated October 6, 1983, from R. E. Uhrig (Florida Power and Light Company) to D. G. Eisenhut (NRC). The evaluation is being conducted currently by NRC Region II. Based on their experience with the Unit 1 program and relief requests, the licensee intends to submit revisions for Unit 2 within two months.

b. Responsibilities

Through discussions with cognizant personnel (principally the Test and Performance Lead Engineer) and review of Administrative Operating Procedure 0010132, "ASME Code Testing of Pumps and Valves," the inspector verified assignment of responsibilities for IST related functions as listed below:

- (1) Preparation, review and approval of IST procedures and changes are primarily the responsibility of the Operations Department except that the Maintenance Department has responsibility for the relief valves.
- (2) Scheduling of IST - Operations Department through their Administrative Operating Procedures:  
  
Note: The Technical Staff has responsibility for identifying frequency of testing.
- (3) Performance of tests and evaluation of test results - primarily the responsibility of the Operations Department except that the Maintenance Department is responsible for relief valve tests and the Technical Staff evaluates pump test baseline data and data indicating pump operation within the "required action range."
- (4) Performance of Maintenance and Calibrations - Maintenance Department



## c. Summary Status List

The inspector examined the licensee's Unit 1 and Unit 2 Pump and Valve Summary books to verify that they maintain summary test status information as required by the ASME Code. In his examination the inspector specifically verified entries for the following pumps and valves on both units:

Pumps (verified all data entries)

1B and 2B Charging Pumps  
 1A and 2A High Pressure Safety Injection Pumps  
 1C and 2C Intake Cooling Water Pumps

Valves (verified entries for tests stated) -

Containment Spray System Valves LCV-07-11A and  
 -11B (Category A valves, stroke timing verified)  
 Component Cooling Water System Valves HCV-14-8A  
 and - 8B (Category B valves, stroke timing verified)

In reviewing the stroke time entries in the books, the inspector noted that for valves LCV-07-11A and-11B the licensee's Unit 2 summary book indicated that the maximum stroke times allowable were 10 seconds each. Unit 2 Technical Specifications Table 3.6.2 specifies a maximum stroke time of 5 seconds for these valves. Data entries indicated the valves were actually stroking in about 2 seconds. In follow-up of the NRC inspector's finding on this matter, the Test and Performance Lead Engineer found that one of two checklists contained in procedure 2-0010125 and utilized in testing the valves contained the correct maximum stroke time (5 seconds) while the other gave the incorrect 10 second value. The Unit 1 Technical Specification had specified a 10 second maximum for the identical valves and it appeared that this was the source of the incorrect maximum times specified for Unit 2. The Test and Performance Lead Engineer informed the inspector that the incorrect times in the summary book and checklist would be promptly corrected. In further review of specified stroke times for valves, the inspector found that the licensee had specified allowable maximum stroke times of 120 seconds for valves HCV-14-8A and -8B, while in recent testing these valves actually stroked in under 6 seconds. The 120 second maximum was apparently related to the time required for the system to function rather than to the capability of the valves. The inspector stated that the 120 second time appeared inappropriate in that it would not be meaningful in determining the operational readiness of the valves. The purpose of the ASME code tests as stated in ASME Section XI (80W80), Subsection IWV-1100, is to verify the operational readiness of the valves. The Test and Performance Lead Engineer stated that there were already plans to re-examine the specified stroke times to determine if they were proper. The inspector informed the

licensee that their maximum specified stroke times and their planned corrections thereto would be examined further in subsequent NRC inspections and that the matter would be identified as Inspector Followup Item 335, 389/85-14-01, Valve Stroke Times.

d. Development and Approval of Test Procedure

The inspector reviewed licensee procedures to verify that procedures had been developed and approved for all code required testing on selected pumps and for quarterly stroke time tests on selected valves. The selected pumps and valves and the procedures verified are as follows:

Pumps

Low Pressure and High Pressure Safety Injection Pumps

Tested in accordance with Administrative Operating Procedures 1 (Unit 1) - and 2 (Unit 2) - 0010125, Check Sheet 4; and Operating Procedures 1 - and 2-0410050

Intake Cooling Water Pumps

Tested in accordance with Administrative Operating Procedures 1 and 2-0010125, Check Sheet 3

Valves

Containment Spray System Valves LCV-07-11A and 11B

Quarterly stroke time tests in accordance with Administrative Operating Procedures 1- and 2-0010125, Check Sheet 9, Data Sheet 7

Component Cooling Water System Valves HCV-14-8A and -8B

Quarterly stroke time tests in accordance with Administrative Operating Procedures 1- and 2-0010125, Check Sheet 9, Data Sheet 8

e. Adequacy of Pump Test Procedures

The inspector reviewed test procedures for the following pumps:

Intake Cooling Water Pumps 1A (Unit 1) and 2A (Unit 2) - tested per procedures 1- and 2-0010125, Check Sheet 3 and Data Sheet 19.

Low Pressure Safety Injection pumps 1A and 2A - tested per procedures 1- and 2- 0410050.

The inspector reviewed the above test procedures for general technical and administrative adequacy, human factors and for the specific test criteria necessary to assure that code, Technical Specification, and other regulatory requirements were met. No clear violations of requirements were identified. However, the inspector did identify the following items which the licensee should evaluate for possible improvements in their procedures:

- (1) None of the procedures state or reference the means by which test frequency is increased when test values are in the "alert" range.
- (2) The instructions in the Data Sheet for the 1- and 2-0010125 procedures permit testing at zero flow. However, they indicate this in a note near the end of the instructions, many steps after the instructions have already required a flow adjustment to 14,000 gallons per minute.
- (3) All of the procedures require that several measurements of bearing temperature be made and compared to verify temperature stabilization, but the data sheets provide no space for entry or comparison of the temperatures.

Within the areas examined no violations or deviations were identified.

6. Inspection and Enforcement Bulletins (IEBs) - Units 1 and 2 (92703B)

(Open) IEB 80-08: Examination of Containment Liner Penetration Welds

IEB 80-08 was issued on April 7, 1980, and requested licensees to determine whether their facilities contained the flued head design for penetration connections, or other designs with containment boundary butt welds between the penetration sleeve and process piping as illustrated in Figure NE 1120-1, winter 1975 addenda to the 1974 edition and later editions of the ASME Boiler and Pressure Vessel Code. If the licensee's facility contained this design, they were requested to determine whether the welds were made with a backing ring and whether the welds were examined volumetrically by radiography. The Bulletin indicates that weld joints with a backing ring that have not been radiographed are of particular interest, as they are potentially defective.

The licensee provided the following letters of response to the IEB:

<u>Date</u>	<u>Applicable to Unit</u>	<u>Identifying Number</u>
7/8/80	1	L-80-215
9/29/80	2	L-80-323
12/01/80	2	L-80-394

In July 1984 Report NUREG/CR-3053, "Closeout of IE Bulletin 80-08: Examination of Containment Liner Penetration Welds" was issued. This report recommended additional actions, based on a review of licensee responses to IEB 80-08, for certain facilities - including St. Lucie Unit 1. The licensee's response had indicated one instance in which a partial backing ring had been used in St. Lucie Unit 1 without the performance of radiography. This partial backing ring weld was addressed as a concern in the NUREG. The inspector discussed this matter with the licensee's Senior Nuclear Energy Specialist who stated that he wished to review this matter and that he believed a written response from the licensee to the NRC might be appropriate. He also indicated that he was not certain whether radiographs for related penetration welds were available at the plant. The NRC

inspector requested that the licensee assure that related records be collected and made available for review in a future NRC inspection. This IEB will remain open pending the licensee's review of the NUREG/CR-3053 recommendation, the licensee's development of a related response and an NRC review of the response and associated records.

7. Inspector Followup Item (IEI) 92701B

(Open) IFI (335, 389/85-04-01): Control of IST Program Documents

This item was opened to identify an NRC inspector's concern that the licensee's IST programs for Units 1 and 2 were not clearly being handled as controlled documents. It was not clear whether the documents in use were fully up to date. During the current inspection, the NRC inspector questioned the responsible licensee individual, the Senior Nuclear Energy Specialist, about this matter. The inspector was informed that the licensee was in the process making the programs controlled documents and that the process would be completed about coincident with revision of the Unit 2 program. This item will remain open pending verification of that action.