

FLORIDA POWER & LIGHT COMPANY

*Central File*  
50-335

September 29, 1976  
L-76-344

Norman C. Moseley, Director  
Office of Inspection & Enforcement - Region II  
U. S. Nuclear Regulatory Commission  
230 Peachtree Street, N. W., Suite 818  
Atlanta, Georgia 30303

Dear Mr. Moseley:

Re: IE: II: MSK  
50-335/76-10

Florida Power & Light Company has reviewed the subject inspection report and has determined that it contains no proprietary information.

Very truly yours,

Robert E. Uhrig  
Vice President

REU/MAS/NLR/hlc

cc: Jack R. Newman, Esq.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
230 PEACHTREE STREET, N. W. SUITE 818  
ATLANTA, GEORGIA 30303

SEP 13 1976

In Reply Refer To:

IE:II:MSK

50-335/76-10

Florida Power and Light Company  
ATTN: Dr. R. E. Uhrig, Vice President  
of Nuclear and General Engineering  
P. O. Box 013100  
9250 West Flagler Street  
Miami, Florida 33101

Gentlemen:

This refers to the inspection conducted by Mr. M. S. Kidd and others of this office on June 29; July 27-28; August 2-5, 7, and 10-13; 1976, of activities authorized by NRC Operating License No. DPR-67 for the St. Lucie Unit 1 facility, and to the discussion of our findings held with Mr. K. N. Harris and other members of your staff at the conclusion of the inspection.

Areas examined during the inspection and our findings are discussed in the enclosed inspection report. Within these areas, the inspection consisted of selective examination of procedures and representative records, interviews with personnel, and observations by the inspector.

Within the scope of this inspection, no items of noncompliance were disclosed.

We have also examined actions you have taken with regard to previously identified enforcement matters and unresolved items. The status of these items is identified in Sections II and IV of the summary of the enclosed report.

An infraction identified through your internal audit program is shown in the details of the enclosed inspection report. The appropriate report was made and corrective action initiated or completed and no additional information is needed for this item at this time.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you believe to be proprietary, it is necessary that you submit a written application

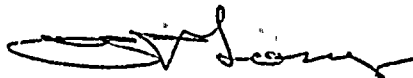
Florida Power and Light  
Company

-2-

to this office requesting that such information be withheld from public disclosure. If no proprietary information is identified, a written statement to that effect should be submitted. If an application is submitted, it must fully identify the bases for which information is claimed to be proprietary. The application should be prepared so that information sought to be withheld is incorporated in a separate paper and referenced in the application since the application will be placed in the Public Document Room. Your application, or written statement, should be submitted to us within 20 days. If we are not contacted as specified, the enclosed report and this letter may then be placed in the Public Document Room.

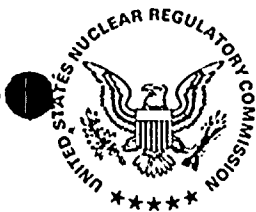
Should you have any questions concerning this letter, we will be glad to discuss them with you.

Very truly yours,



F. J. Long, Chief  
Reactor Operations and Nuclear  
Support Branch

Enclosure:  
IE Inspection Report No.  
50-335/76-10



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
230 PEACHTREE STREET, N. W. SUITE 818  
ATLANTA, GEORGIA 30303

IE Inspection Report No. 50-335/76-10

Licensee: Florida Power and Light Company  
P. O. Box 013100  
Miami, Florida 33101

Facility Name: St. Lucie 1  
Docket No.: 50-335  
License No.: DPR-67  
Category: B2

Location: Hutchinson Island, Florida

Type of License: CE, PWR, 2560 Mwt

Type of Inspection: Routine, Announced

Dates of Inspection: June 29; July 27-28; August 2-5, 7 and 10-13, 1976

Dates of Previous Inspection: June 14-18, 1976

Principal Inspector: M. S. Kidd, Reactor Inspector  
Reactor Projects Section No. 2  
Reactor Operations and Nuclear Support Branch  
(August 10-13, 1976)

Accompanying Inspectors: R. C. Parker, Reactor Inspector  
Reactor Projects Section No. 2  
Reactor Operations and Nuclear Support Branch  
(August 10-13, 1976)

D. J. Burke, Reactor Inspector  
Nuclear Support Section  
Reactor Operations and Nuclear Support Branch  
(July 27-28 and August 2-5, 1976)

G. L. Troup, Radiation Specialist  
Radiation Support Section  
Fuel Facility and Materials Support Branch  
(August 7, 1976)

B. A. Byrne, Reactor Inspector  
Nuclear Support Section  
Reactor Operations and Nuclear Support Branch  
(August 10-13, 1976)

R. W. Wright, Reactor Inspector  
Engineering Support Section No. 1  
Reactor Construction and Engineering Support Branch  
(June 29, 1976)

Other Accompanying Personnel: None

Principal Inspector: M. S. Kidd  
M. S. Kidd, Reactor Inspector  
Reactor Projects Section No. 2  
Reactor Operations and Nuclear Support Branch

9-10-76  
Date

Reviewed by: R. C. Lewis  
R. C. Lewis, Chief  
Reactor Projects Section No. 2  
Reactor Operations and Nuclear Support Branch

9/10/76  
Date

## SUMMARY OF FINDINGS

I. Enforcement Items

None

II. Licensee Action on Previously Identified Enforcement MattersDeficiencyFailure to Document Surveillance Activities

Quality control surveillances of startup testing activities are being documented as required. This matter is closed. (Details I, paragraph 3)

III. New Unresolved Items

None

IV. Status of Previously Reported Unresolved Items76-4/1 Qualification of Balance of Plant Class IE Equipment

Additional information concerning environmental qualifications of engineered safety features logic cabinets was submitted to IE:II in June of 1976. This information contained evidence of qualification of the cabinets. This item is considered resolved. (Details I, paragraph 4)

76-8/1 Setpoint Drift

Appropriate changes in steam generator and containment pressure setpoints had been made to operating procedure 1400052. This item is considered closed.

V. Unusual OccurrencesBurnable Poison Rod Failures

During inspection of selected fuel assemblies conducted as a result of power distribution anomalies reported in RO 335-76-35, dated July 23, 1976, licensee personnel found deterioration of cladding on some burnable poison rods. (Details III, paragraph 2)

## VI. Other Significant Findings

### A. Plant Status

Conditions of items E.1 - E.3 of Enclosure 1 to the St. Lucie 1 operating license were verified to be completed by June 30, 1976. (Details I, paragraph 4 and Details VI)

Installation and testing of fuel handling building charcoal filters were verified to be complete prior to the transfer of spent fuel to the fuel handling building as required by item H of Enclosure 1 to the operating license. (Details IV)

### B. Diaphragm Operated Relief Valves (IEB 76-06)

FP&L's response to Inspection and Enforcement Bulletin 76-06, dated August 5, 1976, states that no diaphragm operated relief valves are used in high temperature fluid systems at St. Lucie 1.

## VII. Management Interview

Management interviews were held at the conclusion of various segments of the inspection effort as follows:

- A. Findings relative to installation of the emergency intake canal erosion protection devices and the ultimate heat sink barrier dam were discussed on June 29, 1976 with N. T. Weems, Assistant QA Manager - Construction. (Details VI)
- B. Findings regarding the review of installation and testing of spent fuel building ventilation filters were discussed on August 7, 1976, with J. H. Barrow, acting Plant Manager. (Details IV)
- C. Other findings of the inspection including the previously identified deficiency in Section II and the previously identified unresolved items in Section IV were discussed with K. N. Harris, Plant Manager, on August 13, 1976. (Details I, II, and V)

## DETAILS I

Prepared by: M. S. Kidd

M. S. Kidd, Reactor Inspector  
Reactor Projects Section No. 2  
Reactor Operations and Nuclear  
Support Branch

8-30-76

Date

Dates of Inspection: August 10-13, 1976

Reviewed by: R. C. Lewis

R. C. Lewis, Chief  
Reactor Projects Section No. 2  
Reactor Operations and Nuclear  
Support Branch

9/10/76

Date

1. Persons ContactedFlorida Power and Light Company (FP&L)

K. N. Harris - Plant Manager  
J. H. Barrow - Operations Superintendent  
C. A. Wells - Operations Supervisor  
N. G. Roos - QC Engineer  
R. K. Ryall - Reactor Supervisor  
P. B. Dillon - Technical Staff Supervisor  
R. E. McQue - Technical Staff Engineer

2 Review of Startup Testing

Completed test OP 3200051, "At Power Determination of Moderator Temperature Coefficient and Power Defect," run at 50% power, was reviewed to verify that it had been reviewed and approved in accordance with section 5.7 of QI 5-PR/PSL - 1, "Preparation, Revision, Review/Approval of Procedures." The completed procedure had been reviewed by the cognizant department head, but did not contain evidence of Facility Review Group (FRG) approval. The format for periodic test procedures such as 3200051 does not provide a space for indicating FRG review as do preoperational and startup test procedures. The procedure was discussed by the FRG on June 17, 1976, to review procedure changes (discussed further below), but these minutes did not indicate specific review of test results. Licensee personnel stated that it was reviewed for that purpose and that the minutes would be amended or that it would be reviewed again. The inspector stated that this would be pursued further during a subsequent inspection.



The FRG minutes of June 15, 1976, documented review of three changes to OP 3200051. These changes had been made as temporary ones per Technical Specification (TS) 6.8.3, but they had not been brought to the attention of the FRG for review within seven days as required by TS 6.8.3.c. The changes were actually made and documented in 3200051 on June 4, 6, and 7, 1976. A letter by the plant manager was issued to all department heads June 19, 1976, asking them to review procedure change methods with their personnel. It was confirmed that this instruction had been reviewed by members of the department involved. The inspector had no further questions in this area.

### 3. Failure to Document Surveillance Activities

This deficiency, discussed in IE Report No. 50-335/76-8, involved the failure to document startup testing surveillance activities. The licensee's response on this matter, dated July 14, 1976, defined certain corrective actions which were verified to be complete. The Quality Control (QC) surveillance schedule was extended to include surveillance tests on a five day per week basis on June 1, 1976. These activities are being documented on QC 3900 forms, seventeen of which were generated from June 2 through July 16, 1976. A letter was issued by the QC Supervisor to his personnel on June 1, 1976, discussing the requirements for documentation. Licensee personnel were informed that this matter was considered closed.

The licensee letter of July 14, 1976, also stated that QI 18-PR/PSL 1, "Quality Control Audits," had been cancelled. This was verified to have been completed by review of minutes of an FRG meeting held June 10, 1976. This action was taken in response to questions by the inspector during a previous inspection.

### 4. Qualification of Balance of Plant Class IE Equipment

Inspection Report 50-335/76-4, Details III, documented the results of an audit at St. Lucie 1 to verify the qualification of certain balance of plant Class IE electrical equipment. The report identified unresolved item 76-4/1 which was related to (1) inadequate documentation of qualification data for an engineered safety features logic cabinet, and (2) unavailability of WCAP 7829 which detailed qualification of a containment fan cooler motor.

The licensee submitted in June 1976, a letter of certification and Engineering Report No. 1012 as proof of qualification of the logic cabinet. The report contained procedures and data relative to temperature and humidity tests for this type module. The report was reviewed by IE:II and found to contain evidence of qualification. This portion of unresolved item 76-4/1 is closed.

On March 12, 1976, IE:II was informed during a telephone conversation with NRR that NRR would review WCAP 7829 for acceptability. NRR and licensee personnel were informed in June 1976, that the unresolved item was considered closed and that condition E.3 of Enclosure 1 to the Operating License (DPR-67) for St. Lucie 1 had been satisfied for those areas within the purview of IE:II.

#### 5. Surveillance Testing

Surveillance procedures were reviewed for two tests/surveillances for each frequency of shiftly, daily, weekly, monthly, and quarterly. The completed procedures, covering a two month period, or two quarters for quarterly ones, were reviewed to ascertain whether (1) surveillance frequencies had been met, (2) acceptance criteria, if applicable, had been met, (3) records were complete and retrievable, and (4) reviews had been performed as required. Records reviewed, with references to technical specifications implemented, included:

- a. OP 0110055 (or 0110056), "Surveillance Requirement, Shutdown Margin, Reactor Coolant Average Temperature  $>200^{\circ}\text{F}$ " (or  $<200^{\circ}\text{F}$ ); TS 4.1.1.1.b and 4.1.3.6
- b. OP 0010125, "Schedule of Periodic Tests, Checks and Calibrations" - Check Sheet No. 1; TS 4.4.1
- c. OP 1200051, "Nuclear/ $\Delta\text{T}$  Power Heat Balance Calibration;" TS Table 4.3-1, item 2
- d. Op 1400051, "Meteorological Data System Daily Channel Check," item 8.3; TS Table 4.3.5, item 1
- e. OP 1400054, "Reactor Protection System - Loss of Turbine - Hydraulic Fluid Pressure Low;" TS Table 4.3-1, item 10
- f. OP 0010125, Data Sheet No. 1 - "RCS Inventory Balance;" TS 4.4.6.2c
- g. OP 0410050, "HPSI/LPSI Periodic Test;" TS 4.5.2b
- h. OP 1400058, "Seismic Instrumentation Periodic Check;" TS Table 4.3.4, item 1
- i. OP 0810050, "Main Steam Isolation Valve Periodic Test;" TS 4.7.1.5.a
- j. OP 0010125, Data Sheet No. 7 - "Containment Isolation Valves;" TS 4.6.3.1.1.a

Review of the completed procedures on file and discussions with licensee personnel resulted in no unanswered questions on OP 0110055 (or 56); OP 1200051; OP 1400051; OP 0010125, Data Sheet No. 1; OP 0410050; OP 0810050; and OP 0010125, Data Sheet No. 7.

A copy of OP 1400058 (monthly frequency) was not on file for the time frame May 2 - June 18, 1976. Licensee Event Report RO 335-76-29, dated July 8, 1976, documented that this surveillance could not be accomplished due to high radiation levels in containment. The inspector had no questions on this item.

A copy of OP 0010125, Check Sheet #1 (shiftly frequency) was not on file for May 27, 1976. The data sheet for OP 1400054 (weekly) had not been completely filled out to denote completion of certain functions, although the total sheet had been signed by the operators on April 30, May 14, and June 11, 1976. Licensee personnel stated that these two problems would be investigated. The inspector stated that they would be discussed during a subsequent inspection.

6. Review of Nonroutine Event Reports

Three licensee reportable events were reviewed to ascertain whether: (1) details were reported clearly and in a timely manner; (2) specified corrective action had been completed; (3) events were reviewed and evaluated as required by Technical Specifications; and (4) Technical Specification limits, if exceeded, had been identified. The events reviewed were:

- a. RO 76-13, "C" Steam Driven Auxiliary Feedwater Pump Wiring,
- b. RO 76-23, Hot Shutdown Control Panel Temperature Indication, and
- c. RO 76-30, RCS Overpressure Transient.

Review of the event reports, FRG minutes, licensee safety evaluations, and other documents related to these events revealed that all requirements related to reporting, review, and evaluation had been met. Also, applicable Technical Specification Limiting Conditions for Operation action statements had been complied with and corrective and preventive actions committed to had been taken.

A supplementary report on RO 76-9, dated June 10, 1976, was also reviewed. This report outlined additional findings on mechanical pipe restraints which had locked up during post core loading hot functional testing. The inspector had no questions on this report.

DETAILS II

Prepared by: D. J. Burke 8/20/76  
D. J. Burke, Reactor Inspector  
Nuclear Support Section  
Reactor Operations and Nuclear  
Support Branch  
Date.

Dates of Inspection: July 26-27 and August 2-5, 1976

Reviewed by: H. C. Dance 5/31/76  
H. C. Dance, Acting Chief  
Nuclear Support Section  
Reactor Operations and Nuclear  
Support Branch  
Date

### 1. Individuals Contacted

J. H. Barrow - Operations Supervisor  
P. B. Dillon - Technical Staff Supervisor  
R. K. Ryall - Reactor Supervisor  
A. J. Collier - Instrument and Control (I&C) Supervisor  
P. Sharp - Associate Plant Engineer  
P. Shell - Plant Engineer  
L. J. Cowan - Engineering, FP&L  
D. Smith - Engineering, FP&L  
J. N. Burford - Licensing, FP&L  
G. E. Crowell - Projects, FP&L  
C. Freeman - I&C Engineering, Ebasco  
V. Oniunas - I&C Engineering, Ebasco  
W. Silva - I&C Engineering, Ebasco  
V. Cox - Electrical Design, Ebasco  
L. Gradin - Electrical Design, Ebasco

### 2. Flux Anomaly

On July 6, 1976, the St. Lucie Unit 1 power ascension testing and analysis indicated that the neutron flux and the actual power distribution in the core were not as predicted for 80% power. The reactor was reduced to 50% power on July 6, 1976, for further testing and was subsequently shut down on July 10, 1976. When the operating data was reviewed, the licensee decided to perform inspections of the reactor pressure vessel internals and of certain fuel assemblies. The inspector reviewed various reactor operating data, including the generalized incore data analysis system (GINCA) information, to verify that the testing and reactor operations were conducted in accordance with Technical Specification 3/4.2 and the

license requirements. Within the areas inspected, no discrepancies were identified. Although the azimuthal power tilt (APT) peaked near 5% on July 7, 1976, the total radial peaking factor appeared to be within the limits of TS 3.2.2; the licensee also stated that the APT limits (TS 3.2.3) were temporarily suspended during the physics testing as permitted by TS 3.10.2. The peak linear heat generation rate (LHGR) observed from the GINCA printout was some 9.8 Kw/ft - the maximum allowable LHGR is 12.7 Kw/ft. The inspector had no further questions at this time.

3. System Verification

The inspector verified that certain reactor protection system (RPS) channels are installed as described in the FSAR. For example, the four independent RCS pressure channels were traced from the pressure sensors at the pressurizer through the various conduit and cable trays to the RPS cabinets in the reactor control room. The RPS channels which monitor RCS flow and RCS or primary water temperature (RTD's) were also inspected. No discrepancies were identified. The inspector also reviewed the separation of the RPS cables run between the RTG board and the characterizer with respect to Section 3 and 7 of the FSAR; the licensee stated that this cable run will be specifically reviewed to confirm channel separation. The inspector had no further questions; the remaining RPS installation appeared to meet the independence and separation criteria described in FSAR, Sections 3, 7 and 8.

DETAILS III

Prepared by:

R. C. ParkerR. C. Parker, Reactor Inspector  
Reactor Projects Section No. 2  
Reactor Operations and Nuclear  
Support Branch8-24-76

Date

Dates of Inspection: August 9-13, 1976

Reviewed by:

R. C. LewisR. C. Lewis, Chief  
Reactor Projects Section No. 2  
Reactor Operations and Nuclear  
Support Branch9/10/76

Date

1. Persons Contacted

K. N. Harris - Plant Manager  
J. H. Barrow - Operations Superintendent  
P. B. Dillion - Technical Staff Supervisor  
R. K. Ryall - Reactor Supervisor  
A. W. Bailey - Quality Assurance Engineer

2. Reactor Vessel Internals and Fuel Inspections

The reactor vessel internals and selected irradiated fuel bundles were being inspected by FP&L and Combustion Engineering (CE) to identify any mechanical abnormality that could be related to observed power distribution anomalies (see Reportable Occurrence 50-335-76-35 and Details II, paragraph 2 of this report). A total of twenty six (26) fuel bundles had been removed from the northwest and southeast quadrants of the core for inspection. Inspection activities were being conducted in accordance with the following procedures: (a) General Maintenance Procedure M-0706, Rev. 1, "Reactor Vessel Internals Inspection Procedure," and (b) General Maintenance Procedure M-0707, Rev. 1, "Inspection of Fuel in Spent Fuel Pool." These procedures specifically detailed inspections to be performed and described abnormal conditions that might be observed.

The inspector reviewed the above procedures and observed portions of the reactor vessel internals and irradiated fuel inspections to evaluate the adequacy and effectiveness of the inspection program. Within the areas inspected no discrepancies were noted.

As of August 13, 1976, the reactor vessel internals inspection had been essentially completed and seventeen fuel bundles had been inspected. The following abnormal conditions had been observed:

- a. An approximately 1" x 4" piece of apparent woven fabric, possibly asbestos, was observed lying in the bottom of the reactor vessel.
- b. An approximately 1" x 4" metallic appearing object was located resting against the lower outside diameter of the flow skirt and the lower reactor vessel head. A small portion of the object extended below the flow skirt passing through the gap between the flow skirt and the reactor vessel. When touched, the object moved easily indicating that it was light in weight and not lodged in place.
- c. A blister was observed on the cladding of a burnable poison pin in each of four fuel bundles. Of the seventeen fuel bundles inspected only eight contained burnable poison pins. Therefore, burnable poison pin anomalies were observed in four of eight fuel bundles observed. No abnormal conditions were observed on the fuel pins.

The licensee plans to retrieve the foreign objects from the reactor vessel. Additional fuel inspections were planned. FP&L and CE were formulating what corrective action would be required as a result of the burnable poison pin defects.

### 3. Review

Activities of the Facility Review Group (FRG) and Company Nuclear Review Board (CNRB) were reviewed to determine if they are functioning as required by Technical Specifications 6.5.1 and 6.5.2. FRG and CNRB meeting minutes covering the period from January through July 1976 were reviewed to verify that selected proposed technical specification changes, reportable occurrences, and plant design changes were reviewed.

Within the areas inspected no discrepancies were identified.

### 4. Audits

Quality assurance audit activities were reviewed to determine if they are being performed as required by FSAR Section 17.2.18 and

Technical Specification 6.5.2.8. Specifically the scope of audit activities, audit checklists, qualifications of auditors, and audit followup for the following audit reports were reviewed:

- a. QAO-PSL-75-11-068 - "Power Resources Final Baseline Data,"  
dated 3/8/76
- b. QAO-PSL-76-01-071 - "Power Resources Pre-Core Loading,"  
dated 1/16/76
- c. QAO-PSL-76-02-073 - "Power Resources Initial Fuel Loading,"  
dated 3/23/76
- d. QAO-PSL-76-03-074 - "Corrective Action Program," dated 4/30/76
- e. QAO-PSL-76-04-076 - "Power Resources Initial Criticality,"  
dated 6/8/76
- f. QAO-PSL-76-04-077 - "Maintenance Department-Planning, Scheduling  
and Completion of Maintenance Through PWO Program, dated 4/30/76
- g. QAO-PSL-76-05-81 - "Power Resources Power Ascension Testing  
0-50% Reactor Power," dated 6/23/76

Within the areas inspected no discrepancies were identified.



DETAILS IV

Prepared by: *G. L. Troup*8/23/76

G. L. Troup, Radiation Specialist  
Radiation Support Section  
Fuel Facility and Materials  
Safety Branch

Date

Dates of Inspection: August 7, 1976

Reviewed by: *A. F. Gibson*8/24/76

A. F. Gibson, Chief  
Radiation Support Section  
Fuel Facility and Materials  
Safety Branch

Date

1. Individuals Contacted

J. H. Barrow - Operations Superintendent (Acting Plant Manager)  
C. A. Moore - Chemistry Supervisor  
R. J. Frechette - Plant Results Assistant

2. Scope of Inspection

Paragraph H of enclosure 1 to operating license DPR-67 states "prior to the transfer of spent fuel to the fuel handling building, the fuel handling building charcoal filters shall be installed to the satisfaction of the Commission." This inspection was for the purpose of verifying satisfactory installation of the charcoal filters and verifying satisfactory testing of the filters. The inspection consisted of a physical inspection of the filter unit, review of appropriate test procedures and results and discussions with cognizant personnel.

3. Filter Installation

- a. The inspector observed the installation of the charcoal filters and compared the installation with Regulatory Guide 1.52 "Design, Testing, and Maintenance Criteria for Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants" and ORNL-NSIC-65, "Design, Construction and Testing of High-Efficiency Air Filtration Systems for Nuclear Application." Included in the installation inspection were orientation of filter trays, determination that the trays were loaded with charcoal, installation of sealing gaskets, independent clamping at a minimum of four points on the downstream side, water drains in the housing, screen supports in the filter trays, sample

test connections upstream and downstream of the filters and differential pressure and temperature indication. The inspector also determined by physical count that 30 trays were installed as required by FSAR Table 9.4-7.

- c. Technical Specification Section 4.9.12.b.3 requires that test samples of charcoal be periodically removed for laboratory analysis and states that the samples can be from special test sample canisters or from the beds. The inspector observed that four test sample canisters were installed and that the canisters were filled with charcoal.
- b. A licensee representative informed the inspector that the trays had been installed by a contractor and that the installation had been observed by the licensee representative. The licensee representative stated that the installation was performed in accordance with the contractor's written procedure which included orientation, installation requirements and torque requirements for the hold-down bolts (clamps).
- d. As the charcoal filters were installed as a backfit into an existing filter housing, the inspector asked what structural work was performed in the housing which might have affected the HEPA filters previously installed in the housing. A licensee representative informed the inspector that all necessary structural work had been accomplished prior to the testing of the HEPA filters and that no structural work had been done since. The only work involved had been the installation and clamping of the charcoal filters to the existing frames. During the inspection of the filters the inspector noticed no evidence of structural work after the housing had been painted (which was accomplished prior to the HEPA filter tests) and advised the licensee he had no further questions.

#### 4. Test Procedures

- a. As the charcoal filters were installed in the fuel handling building ventilation as a backfit, the initial testing was performed as a surveillance test rather than as a preoperational test. Technical Specification Section 6.8.1 requires that surveillance tests be performed in accordance with written procedures and Technical Specifications Section 6.8.2 requires that such procedures be reviewed by the Facility Review Group (FRG) and approved by the Plant Manager. A licensee representative stated that the charcoal filter testing was performed by a contractor using his written procedure. The inspector reviewed FRG minutes 76-137, dated

July 20, 1976, and noted that the FRG had reviewed the contractor's procedure and had determined that it met plant procedure QI-5 PRPSL-1, did not involve an unreviewed safety question, and recommended approval; the procedure was approved by the Plant Manager.

- b. Technical Specifications Section 4.9.12.b.1 states that the charcoal filters shall be tested in-place in accordance with ANSI N510-1975. The inspector reviewed the contractor's procedure against paragraph 12.5 of ANSI N510-1975 and had no questions concerning the procedure.

## 5. Test Results

- a. The test results were submitted by the contractor and were reviewed by the FRG on August 7, 1976, (FRG meeting 76-152) and approved by the Acting Plant Manager. The results were approved by the licensee as meeting the requirements of Technical Specifications Section 4.9.12.b.1.
- b. The inspector reviewed the contractor's test report and results for conformance with Technical Specifications and ANSI N510-1975 for removal efficiency at the specified flow rate. The inspector had two minor comments on the report but had no further questions on the results.
- c. A licensee representative advised the inspector that charcoal samples had been collected and sent for laboratory analysis but that the results had not been received. This test was to provide a baseline data for the periodic laboratory analysis required by Technical Specifications Section 4.9.12.b.3. and did not affect the in-place test results.

## DETAILS V

Prepared by: B. A. Byrne  
B. A. Byrne, Reactor Inspector  
Nuclear Support Section  
Reactor Operations and  
Nuclear Support Branch

8-23-76  
Date

Dates of Inspection: August 10-13, 1976

Reviewed by: H. C. Dance  
H. C. Dance, Acting Chief  
Nuclear Support Section  
Reactor Operations and  
Nuclear Support Branch

8/24/76  
Date

1. Persons Contacted

K. N. Harris, Plant Manager  
R. R. Jennings, Technical Staff Engineer

2. Design, Design Changes and Modifications

The inspector reviewed four safety related design changes on St. Lucie 1 to ascertain that the design changes were made in accordance with 10 CFR 50.59 and facility technical specifications. At the time of the inspection these four design changes were the only ones completed and reviewed.

The following plant changes/modifications (PCM) were reviewed by the inspector:

- A. Addition of Aluminum Covers for the Excore Neutron Detectors - PCM 1276 dated 2-23-76.
- B. Safety Injection System Pressure Test - PCM 22-76 dated 3-22-76
- C. Engineered Safety Features Actuation Signal Cabinet Modification - PCM 31-76 dated 3-8-76
- D. Reactor Protective System T-Hot Wiring PCM 53-76 dated 3-25-76

The reviews served to verify that the plant changes/modifications were reviewed and approved in accordance with Technical Specification 6.5.1.6 and 6.5.2.7 as well as FSAR Section 17.2.3.6. The inspector

also verified that the design changes were conducted in accordance with procedures which included acceptance tests and that as-built drawings were updated to reflect the design change. Drawings 8770-3636, 8770-5520, and FSB 8770-M-451 were reviewed by the inspector. The Company Nuclear Review Board minutes No. 81 and the Facility Review Group minutes for each plant change/modification listed above were reviewed to verify that each PCM was reviewed as required by Technical Specification 6.5.1.6. No discrepancies concerning plant changes/modifications were noted by the inspector.

DETAILS VI

Prepared by: J. D. Gifford for 9/9/76  
Date  
R. W. Wright, Reactor Inspector  
Engineering Support Section No. 1  
Reactor Construction and Engineering  
Support Branch.

Dates of Inspection: June 29, 1976

Reviewed by: T. E. Conlon 9/9/76  
Date  
T. E. Conlon, Chief  
Engineering Support Section No. 1  
Reactor Construction and Engineering  
Support Branch

1. Persons Contacteda. Florida Power and Light Company (FP&L)

B. J. Escue - Project Construction Superintendent  
N. T. Weems - Assistant QA Manager, Construction  
A. M. Anderson - QA Engineer, Electrical  
R. H. Roehn - QA Engineer

b. Contractor OrganizationsEbasco Services, Inc. (Ebasco)

J. E. Ramondo - Project Superintendent  
S. Zaist - Assistant Area Engineer

2. Scope

This inspection was conducted to determine the status of construction of items E. 1 and E. 2 of Enclosure 1 to Operating License No. DPR-67 for St. Lucie 1, which are license conditions that require completion to the satisfaction of the Commission by June 30, 1976.

3. Item E. 1 (Installation of Hurricane Sheet Piling)

The installation of all sheet piling for erosion protection has been completed in accordance with drawing No. 8770 G516 entitled "Hurricane Protection Sheet Piling" dated April 16, 1976 and FPL's letter L-76-233 to NRR dated June 22, 1976.

4. Item E. 2 (Seismic Category I, Permanent, Ultimate Heat Sink Barrier Dam)

The installation of the seismic Category I, permanent, ultimate heat sink barrier dam (not including water flow control gates/valves) has been completed as stated in the TPL's letter L-76-233 to NRR of June 22, 1976, page 2, Item B of the paragraph entitled "Projected Status of Construction for June 30, 1976," with exception that the temporary construction dike on the big mud side is only 85% removed. Complete removal of the dike is estimated for completion on July 1, 1976. Region II evaluates the remaining 15% of the dike to have no significant effect on the water supply to the ultimate heat source, in that the dike removal at 85% effects an inlet opening at about 146 feet; whereas, the outlet opening thru the concrete dam is about 4.5 feet in diameter.

Operating Procedure CP-92 has been developed and earthmoving equipment and personnel have been designated and are available at all times to effect dike excavation or perform stop log removal activities should the need develop before installation of flow control valves as stated on page 3 of the June 22, 1976, letter.