

Docket No. 50-335

MAR 25 1977

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Florida Power & Light Company
 ATTN: Dr. Robert E. Uhrig
 Vice President
 Nuclear and General Engineering
 Post Office Box 013100
 Miami, Florida 33101

Gentlemen:

The Commission has issued the enclosed Amendment No. 14 to Facility License No. DPR-67 for the St. Lucie Plant Unit No. 1. The amendment consists of a revision in Enclosure 1 to License No. DPR-67 in response to your requests dated February 25, 1977 (L-77-59), and March 9, 1977, as supplemented by filings dated March 2 and 11, 1977.

The amendment (1) deletes Section C of Enclosure 1 to the license in its entirety since our review as set forth in the enclosed Safety Evaluation Report concludes that the requirements of Section C.1 and C.2 relating to performances of certain tests, prior to completion of power ascension testing, have been completed to the satisfaction of the Commission, (2) extends the date in Section F of Enclosure 1 for completion of installation of water flow control valves in the ultimate heat sink barrier dam, and (3) issues a revised version of Enclosure 1 which deletes those items that are no longer applicable because they have been completed to our satisfaction. For convenience and record, we have indicated the amendment number that deleted each respective obsolete item.

A copy of the Notice of Issuance of the amendment is enclosed.

Sincerely,

Original signed by

Don K. Davis

Don K. Davis, Acting Chief
 Operating Reactors Branch #2
 Division of Operating Reactors

*Notified FPL (Leskojan)
 by telecon 2:30 PM 3-25-77
 of issuance of this amendment.
 E.A. Reeves
 3-25-77*

Enclosures:

- Amendment No. 14 to License No. DPR-67
- Safety Evaluation
- Notice

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GO*

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SURNAME →	RMDiggs	RDSilver	RTedesco	DEisenhut	WDPlaton	DKDavis
DATE →	3 12/1/77	3 12/1/77	3 12/1/77	3 12/1/77	3 12/31/77	3 12/5/77

cc w/enclosures:

Jack R. Newman, Esquire
 Lowenstein, Newman, Reis & Axelrad
 1025 Connecticut Avenue, N. W.
 Washington, D. C. 20036

Norman A. Coll, Esquire
 McCarthy, Steel, Hector & Davis
 14th Floor, First National Bank Building
 Miami, Florida 3313L

Indian River Junior College Library
 3209 Virginia Avenue
 Ft. Pierce, Florida 33450

Chief, Energy Systems Analyses
 Branch (AW-459)
 Office of Radiation Programs
 U. S. Environmental Protection Agency
 Room 645, East Tower
 401 M Street, S. W.
 Washington, D. C. 20460

U. S. Environmental Protection Agency
 Region IV Office
 ATTN: EIS COORDINATOR
 345 Courtland Street, N. E.
 Atlanta, Georgia 30308

Weldon B. Lewis
 County Administrator
 St. Lucie County
 Post Office Box 700
 Ft. Pierce, Florida 33450

cc w/enclosures and copy of FP&L
 filings dated 2/25/77, 3/2, 3/9
 and 3/11/77:

Bureau of Intergovernmental
 Relations
 660 Apalachee Parkway
 Tallahassee, Florida 32304

Hamilton Owen, Jr.,
 Administrator
 Department of Environmental
 Regulation
 Power Plant Siting Section
 State of Florida
 Montgomery Building
 2562 Executive Center Circle, E.
 Tallahassee, Florida 32301

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FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-335

ST. LUCIE PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 14
License No. DPR-67

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The applications for amendment by the Florida Power & Light Company (the licensee) dated February 25, 1977, and March 9, 1977, as supplemented by filings dated March 2 and 11, 1977, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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2. Accordingly, the license is hereby amended to delete Section C of Enclosure 1 to the license in its entirety and revise Section F. Replace the previously issued Enclosure 1 with the appended revised Enclosure 1 which deletes those items that have been satisfactorily completed and approved by the Commission.
3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Don K. Davis, Acting Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Revised Enclosure 1 to
License No. DPR-67

Date of Issuance:

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REVISED

ENCLOSURE 1 TO LICENSE NO. DPR-67
ST. LUCIE PLANT UNIT NO. 1
ITEMS WHICH MUST BE COMPLETED

This enclosure identifies certain items which shall be completed to the satisfaction of the Commission prior to (1) achieving certain specified operating conditions or (2) proceeding with operations beyond certain specified dates. The licensee shall neither operate the facility beyond the specified operating conditions, nor operate the facility after the specified dates without prior written authorization from the Commission. All items in this enclosure shall be conducted and/or completed (a) in accordance with the applicable section(s) of the Final Safety Analysis Report, as approved in the Safety Evaluation Report, and the Supplements to the Safety Evaluation Report or (b) as approved by Amendment to the license.

- A. (Deleted by Amendment No. 4 to license issued on April 16, 1976)
- B. (Deleted by Amendment No. 5 to license issued on April 30, 1976)
- C. (Deleted by Amendment No. 14 to license issued March , 1977)
- D. A report summarizing the results of the neutron streaming measurements to be conducted during power ascension testing shall be submitted to the Commission within 30 days of the completion of power ascension testing. If additional shielding is required, a design approved by the Commission shall be installed as soon as practicable, but not later than the first regularly scheduled refueling outage.
- E. (Deleted by Amendment No. 6 issued June 30, 1976, and Amendment No. 8 to license issued on August 31, 1976)
- F. The following item shall be completed to the satisfaction of the Commission by July 31, 1977:
 - 1. Installation of the gates/valves to control water flow in the ultimate heat sink barrier dam.
- G. The following item shall be completed to the satisfaction of the Commission by June 30, 1977:
 - 1. Installation of erosion protection for that part of the discharge canal peninsula associated with St. Lucie Plant Unit No. 1.

- H. (Deleted by Amendment No. 8 to license issued on August 31, 1976)
- I. The following items shall be completed to the satisfaction of the Commission either (1) prior to startup following the first regularly scheduled refueling outage, or (2) March 1, 1979, whichever occurs first:
1. Installation of the NaOH containment spray additive system.
 2. Installation of auxiliary heaters in each train of the shield building ventilation system.
 3. Installation of redundant and independent valve position indication for the miniflow bypass valves (V-3659 and V-3660).
 4. Installation of a permanent means of providing a tornado-protected source of makeup water to the reactor coolant system to accommodate moderator shrinkage upon plant shutdown.
 5. Installation of the necessary hardware associated with St. Lucie Plant Unit No. 1 to permit future interties to Unit No. 2. The systems to be so intertied are:
 - a. diesel generator fuel oil storage tanks
 - b. auxiliary feedwater system (condensate storage tank)
- J. (Deleted by Amendment No. 12 to license issued on February 16, 1977)
- K. (Deleted by Amendment No. 13 to license issued on February 18, 1977)
- L. (Deleted - Only effective through August 31, 1976)
- M. The following additional monitoring in Mode 1 shall be performed if the excore mode described in Paragraph 4.2.1.3 of the Technical Specifications is used when the core burnup is less than 10,000 megawatt days per metric ton of uranium.
1. The axial peaking factor shall be monitored using all operable fixed incore Rh detectors. The surveillance period shall be sufficient to ensure that the axial peaking factor increases less than 3% between measurements based on the average growth rate from the most recent measurements, but not to exceed 7 operating days.

A 3% per day growth rate in the axial peaking factor shall be assumed until measurements are available. All measured growth rates shall be doubled to account for measurement and projection uncertainties.

2. Core power maps shall be taken at least once per 7 days of accumulated operation in Mode 1 and compared with predicted distributions.
3. If an axial peaking factor in excess of the design basis value (1.5) is observed, it shall be reported to the Commission within 24 hours and the "THERMAL POWER" limit of Technical Specification 4.2.1.3.c shall be multiplied by the factor $(1.5/\text{measured axial peaking})$ whenever the axial peaking factor exceeds 1.5.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. TO LICENSE NO. DPR-67

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE PLANT UNIT NO. 1

DOCKET NO. 50-335

INTRODUCTION

By application dated February 25, 1977, as supplemented by letters dated March 2 and 11, 1977, and by application dated March 9, 1977, Florida Power & Light Company (FPL) requested amendments to the St. Lucie Plant Unit No. 1 license. The amendments would: (1) delete Section C of Enclosure 1 to the license which identifies actions to be completed to the satisfaction of the Commission prior to completion of power ascension testing, and (2) extend the date in Section F of Enclosure 1 for completion of installation of the gates/valves to control water flow in the ultimate heat sink barrier dam.

DISCUSSION

Section C.1 of Enclosure 1 requires performance of tests to determine the maximum steam generator refill rate which does not result in a water hammer. Our Supplement No. 2 to the Safety Evaluation of the St. Lucie Plant Unit No. 1 dated March 1, 1976, stated that the objective of the tests was to show that unacceptable feedwater hammer will not result during normal operation on anticipated transients. We concluded that completion of testing under specified conditions without unacceptable feedwater hammer damage would accomplish the test objectives. FPL submitted their proposed test procedures for our review, and by letters of January 10 and 27, 1977, we informed FPL that their proposed test procedure, as modified in accordance with our comments, would be acceptable. By letter of January 28, 1977, FPL committed to performing the test as described in our January 27 letter. The accepted test program simulated the operation of the motor driven auxiliary feedwater pumps at flow rates anticipated in the event of a loss of offsite power and in the event of isolation of one steam generator. In addition, the test simulated a delayed operator response to these events which would result in draining of the feedwater ring and thereby establishing

conditions conducive to generating a feedwater hammer. The tests were performed on February 2, 1977, and were witnessed by a member of our staff. No indications of feedwater hammer were observed. We therefore conclude that the requirements of Section C.1 have been satisfactorily completed and that this section should be deleted from the license. As stated in our March 1, 1976 supplement to the Safety Evaluation Report, a generic review of the effects of secondary system fluid flow instability for pressurized water reactors is continuing. Should any additional data, analyses and/or measures to further preclude or mitigate secondary system flow instability be needed, such may be required as a result of the staff's generic review.

Section C.2 of Enclosure 1 requires performance of power reactivity coefficient tests at 50%, 80% and 100% of full rated power. Prior to issuance of the operating license, FPL had proposed to conduct these tests only at 50% and 100% of rated power. Our March 1, 1976 supplement to the Safety Evaluation Report concluded that an adequate measure of the power coefficient would be obtained if the measurement included tests at 80% as well as 50% and 100% of rated power. In their letters of March 2 and 11, 1977, FPL provided the results of the power coefficient tests conducted at the 50%, 80% and 100% power levels. Measured values were $-1.07 \times 10^{-4} \Delta k/k\%$ power, $-1.1 \times 10^{-4} \Delta k/k\%$ power and $-.965 \times 10^{-4} \Delta k/k\%$ power for the 50%, 80% and 100% power levels. The acceptance limit was $(-1.0 \pm .1) \times 10^{-4} \Delta k/k\%$ power for all three cases. Thus, at all three power levels the measured values were within the acceptance limit. The test method and the test results have been reviewed and found to be acceptable.

We therefore conclude that the requirements of Section C.2 have been satisfactorily completed and that this section should be deleted from the license.

Section F of Enclosure 1 requires installation of the gates/valves to control water flow in the ultimate heat sink barrier dam by March 31, 1977. By letter of March 9, 1977, FPL requested that the time allowed for satisfactory installation be extended to July 31, 1977. The license requirement to install the valves by March 31, 1977, was based on FPL's estimate, in a letter of February 10, 1976 (FPL letter #L-76-53), that the valves would be installed and the barrier dam would be fully operational in March 1977. In that letter, FPL noted that the schedule was dependent on valve availability and installation. In their March 9, 1977 letter, FPL stated that problems with equipment tests, materials acceptance, and factory work stoppages precluded installation in accordance with the predicted schedule.

The purpose of the ultimate heat sink barrier dam is to prevent water flow from the alternate ultimate heat sink to the plant intake canal forebay during normal operation but permit such flow after a safe shutdown earthquake. The dam has been constructed as described in the FSAR and is operational with the exception that stop logs rather than the valves are used to prevent water flow during normal operation. Water flow after a safe shutdown earthquake can be initiated by removal of the stop logs in accordance with an established emergency procedure. The use of the stop logs as an interim water flow control method was discussed in FPL's February 10, 1976 letter and approved by our staff. Since the permanent barrier wall is installed and is operational, we consider that the proposed 4-month extension of time for replacement of the stop logs by the valves would have a negligible effect on plant safety.

ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of the amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that:

- (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration,
- (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and
- (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date:

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-335

FLORIDA POWER & LIGHT COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 14 to Facility Operating License No. DPR- 67, issued to Florida Power & Light Company (the licensee), which revised Enclosure 1 of the license for operation of the St. Lucie Plant Unit No. 1 (the facility) located in St. Lucie County, Florida. The amendment is effective as of its date of issuance.

The amendment (1) deleted those provisions of Enclosure 1 that required performance of (a) tests at greater than 30% of full rated power to determine the maximum steam generator refill rate which does not result in unacceptable feedwater hammer and (b) tests of power reactivity coefficients at 50%, 80% and 100% of full rated power prior to completion of power ascension testing program for the facility; and (2) revised the provision of Section F of Enclosure 1 to extend the date for completion of installation of water flow control valves in the ultimate heat sink barrier dam from March 31, 1977 to July 31, 1977. The requirements of item (1) have been completed to the satisfaction of the Commission and therefore are no longer relevant.

The applications for the amendment comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the applications for amendment dated February 25, 1977, and March 9, 1977, and supplements thereto dated March 2 and 11, 1977, (2) Amendment No. 14 to License No. DPR-67, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Indian River Junior College Library, 3209 Virginia Avenue, Ft. Pierce, Florida 33450. A single copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this

FOR THE NUCLEAR REGULATORY COMMISSION

Don K. Davis, Acting Chief
Operating Reactors Branch #2
Division of Operating Reactors

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