

JANUARY 23 1980

DISTRIBUTION:

- Docket File
- NSIC
- ORB#4 Rdg
- NRC PDR
- NRR Rdg
- L PDR
- HDenton
- TERA
- DEisenhut
- RVollmer
- WGammill
- LShao
- JRMiller
- BGrimes
- TJCarter

- WRussell
- RReid
- PERickson
- PCheck
- RIngram
- OELD
- I&E (3)
- JHeltemes-AEOD
- ACRS (16)
- BJones (4)
- BScharf (10)
- Gray File +4
- DBrinkman
- RDiggs, LFMB
- CMiles, OPA

Docket No. 50-335

Dr. Robert E. Uhrig  
 Vice President  
 Florida Power & Light Company  
 Advanced Systems & Technology  
 P. O. Box 529100  
 Miami, Florida 33152

Dear Dr. Uhrig:

The Commission has issued the enclosed Amendment No. 34 to Facility Operating License No. DPR-67 for the St. Lucie Plant, Unit No. 1. The amendment consists of a change to the Technical Specifications (TS) in response to your application dated October 4, 1979 as supplemented by letter dated December 12, 1979. We have revised your proposed change as discussed with and agreed to by your staff.

This amendment deletes the fuel enrichment limit from TS 5.3.1 and adds a fuel enrichment limit to TS 5.6.1.

As discussed with your staff, our authorization of this proposed TS does not indicate any decision by the NRC with respect to whether the next refueling (Cycle 4) or subsequent refuelings involve any unreviewed safety questions. A licensee must make this determination with respect to 10 CFR 50.59. We note that your proposed fuel management scheme in your December 12, 1979 submittal may require augmented surveillance. This matter will be discussed with your staff.

Copies of the Safety Evaluation and Notice of Issuance are also enclosed.

Sincerely,

Original signed by  
Robert W. Reid

Robert W. Reid, Chief  
 Operating Reactors Branch #4  
 Division of Operating Reactors

Enclosures:

1. Amendment No. 34
2. Safety Evaluation
3. Notice

cc w/enclosures:  
 See next page

11013530

STS *WJ*  
 1/22/80 *DBB*

8002110 195  
*cover up to form of Amendment and notice*

*GD*

OFFICE	ORB#4:DOR-LA	ORB#4:DOR-PM	C-ORB#4:DOR	A-AD-ORB:DOR	W/OELD	RSB/DOR-C
SURNAME	RIngram	PERickson/cp	<i>REID</i>	WGammill	<i>Olmsattel</i>	PCheck
DATE	1/18/80	1/18/80	1/18/80	1/21/80	1/22/80	1/18/80



UNITED STATES  
 NUCLEAR REGULATORY COMMISSION  
 WASHINGTON, D.C. 20555  
**January 23, 1980**

DISTRIBUTION:  
 Docket File  
 ORB#4 Rdg  
 Roberta Ingram

Docket No. **50-335**

Docketing and Service Section  
 Office of the Secretary of the Commission

SUBJECT: **ST. LUCIE UNIT NO. 1**

Two signed originals of the Federal Register Notice identified below are enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies (12 ) of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s): Time for Submission of Views on Antitrust Matters.
- Notice of Availability of Applicant's Environmental Report.
- Notice of Proposed Issuance of Amendment to Facility Operating License.
- Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- Notice of Availability of NRC Draft/Final Environmental Statement.
- Notice of Limited Work Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Other: Amendment No. 34

Referenced documents have been provided PDR

**Division of Operating Reactors, ORB#4**  
 Office of Nuclear Reactor Regulation

Enclosure:  
 As Stated

OFFICE →	ORB#4: DOR					
SURNAME →	RIngram/cb					
DATE →	1/24/80					

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-335FLORIDA POWER AND LIGHT COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 34 to Facility Operating License No. DPR-67 issued to Florida Power and Light Company (the licensee), which revised Technical Specifications (TS) for operation of St. Lucie Plant, Unit No. 1 (the facility), located in St. Lucie County, Florida. The amendment is effective as of its date of issuance.

This amendment deletes the fuel enrichment limit from TS 5.3.1 (Reactor Core/Fuel Assemblies) and adds a fuel enrichment limit to TS 5.6.1 (Fuel Storage/Criticality). This places the enrichment limit in the appropriate part of the TS.

The application for the amendment complies 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.

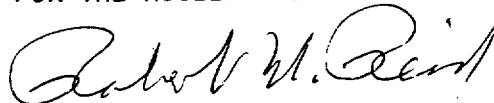
The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR Section 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with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

8002110 206

For further details with respect to this action, see (1) the application for amendment dated October 4, 1979, as supplemented December 12, 1979, (2) Amendment No. 34 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. A 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 23rd day of January, 1980.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors



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

January 23, 1980

Docket No. 50-335

Dr. Robert E. Uhrig  
Vice President  
Florida Power & Light Company  
Advanced Systems & Technology  
P. O. Box 529100  
Miami, Florida 33152

Dear Dr. Uhrig:

The Commission has issued the enclosed Amendment No. 34 to Facility Operating License No. DPR-67 for the St. Lucie Plant, Unit No. 1. The amendment consists of a change to the Technical Specifications (TS) in response to your application dated October 4, 1979, as supplemented by letter dated December 12, 1979. We have revised your proposed change as discussed with and agreed to by your staff.

This amendment deletes the fuel enrichment limit from TS 5.3.1 and adds a fuel enrichment limit to TS 5.6.1.

As discussed with your staff, our authorization of this proposed TS does not indicate any decision by the NRC with respect to whether the next refueling (Cycle 4) or subsequent refuelings involve any unreviewed safety questions. A licensee must make this determination with respect to 10 CFR 50.59. We note that your proposed fuel management scheme in your December 12, 1979 submittal may require augmented surveillance. This matter will be discussed with your staff.

Copies of the Safety Evaluation and Notice of Issuance are also enclosed.

Sincerely,

A handwritten signature in cursive script that reads "Robert W. Reid".

Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Enclosures:

1. Amendment No. 34
2. Safety Evaluation
3. Notice

cc w/enclosures:  
See next page

Omaha Public Power District

cc w/enclosure(s):

Margaret R. A. Paradis  
LeBoeuf, Lamb, Leiby & MacRae  
1333 New Hampshire Avenue, NW.  
Washington, D. C. 20036

Mr. Emmett Rogert  
Chairman, Washington County  
Board of Supervisors  
Blair, Nebraska 68023

Omaha Public Power District  
ATTN: Mr. William Dermeyer  
Plant Manager  
Fort Calhoun Plant  
1623 Harney Street  
Omaha, Nebraska 68102

Director, Technical Assessment  
Division  
Office of Radiation Programs  
(AW-459)  
U. S. Environmental Protection Agency  
Crystal Mall #2  
Arlington, Virginia 20460

U. S. Environmental Protection Agency  
Region VII  
ATTN: EIS COORDINATOR  
1735 Baltimore Street  
Kansas City, Missouri 64108

Mr. Frank Gibson  
W. Dale Clark Library  
215 South 15th Street  
Omaha, Nebraska 68102

cc w/enclosures & incoming dtd:  
10/4 & 12/12/79  
Director, Nebraska Department of  
Environmental Control  
Post Office Box 94877, State House Station  
Lincoln, Nebraska 68509



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

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-335

ST. LUCIE PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 34  
License No. DPR-67

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Florida Power & Light Company (the licensee) dated October 4, 1979, as supplemented December 12, 1979, complies 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.

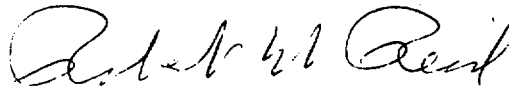
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-67 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 34, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

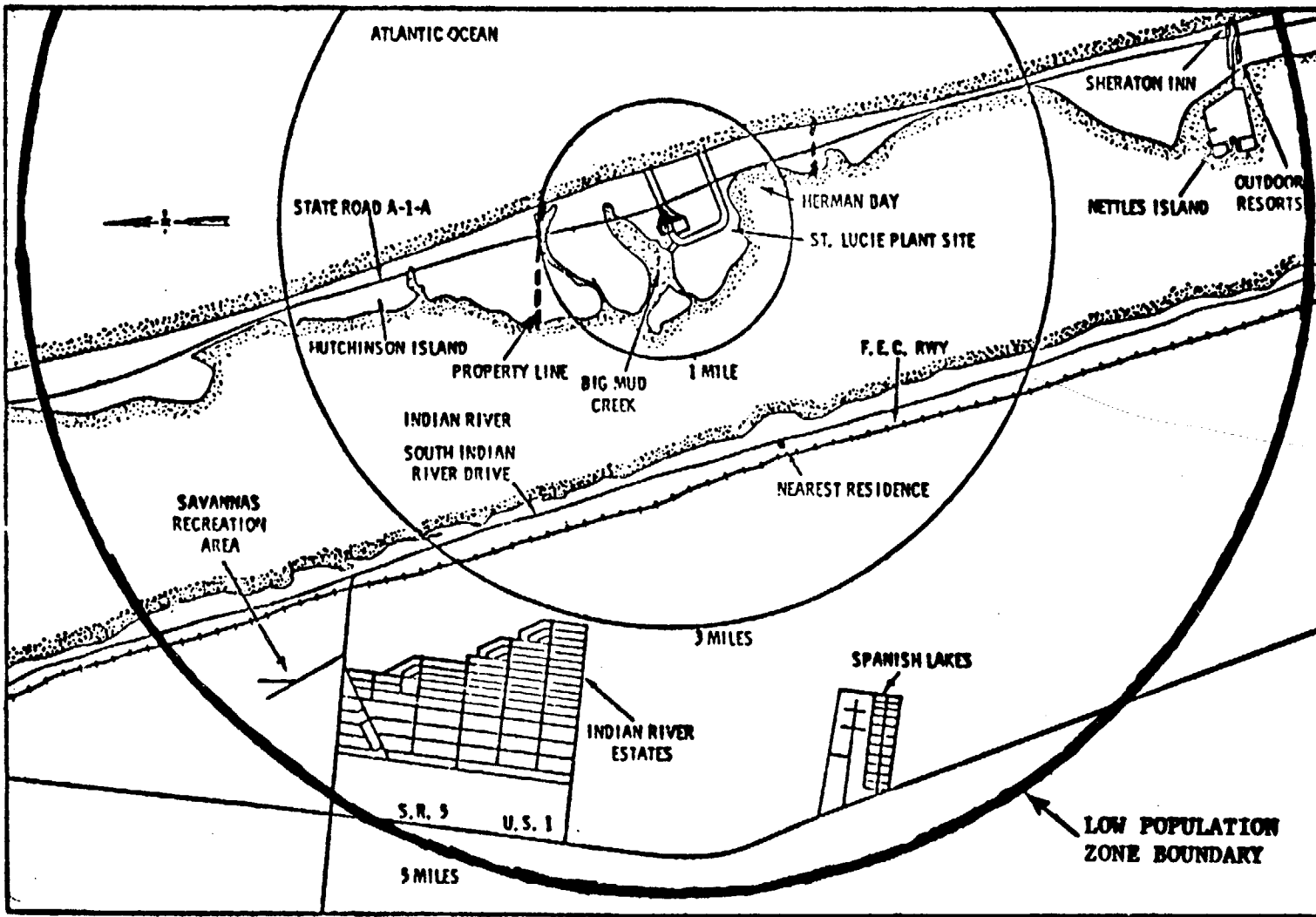
Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: January 23, 1980



FIGURE 5.1-2

LOW POPULATION ZONE



## DESIGN FEATURES

### 5.2.1.2 SHIELD BUILDING

- a. Minimum annular space = 4 feet.
- b. Annulus nominal volume = 543,000 cubic feet.
- c. Nominal outside height (measured from top of foundation base to the top of the dome) = 230.5 feet.
- d. Nominal inside diameter = 148 feet.
- e. Cylinder wall minimum thickness = 3 feet.
- f. Dome minimum thickness = 2.5 feet.
- g. Dome inside radius = 112 feet.

### DESIGN PRESSURE AND TEMPERATURE

5.2.2 The containment vessel is designed and shall be maintained for a maximum internal pressure of 44 psig and a temperature of 264°F.

### PENETRATIONS

5.2.3 Penetrations through the containment structure are designed and shall be maintained in accordance with the original design provisions contained in Sections 3.8.2.1.10 and 6.2.4 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements.

## 5.3 REACTOR CORE

### FUEL ASSEMBLIES

5.3.1 The reactor core shall contain 217 fuel assemblies with each fuel assembly containing a maximum of 176 fuel rods clad with Zircoloy-4. Each fuel rod shall have a nominal active fuel length of 136.7 inches and contain a maximum total weight of 2250 grams uranium. The initial core loading shall have a maximum enrichment of 2.83 weight percent U-235. Reload fuel shall be similar in physical design to the initial core loading.

## DESIGN FEATURES

### CONTROL ELEMENT ASSEMBLIES

5.3.2 The reactor core shall contain 73 full length and no part length control element assemblies. The control element assemblies shall be designed and maintained in accordance with the original design provisions contained in Section 4.2.3.2 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements.

### 5.4 REACTOR COOLANT SYSTEM

#### DESIGN PRESSURE AND TEMPERATURE

5.4.1 The reactor coolant system is designed and shall be maintained:

- a. In accordance with the code requirements specified in Section 5.2 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements,
- b. For a pressure of 2485 psig, and
- c. For a temperature of 650°F, except for the pressurizer which is 700°F.

#### VOLUME

5.4.2 The total water and steam volume of the reactor coolant system is 11,100 ± 180 cubic feet at a nominal  $T_{avg}$  of 567°F.

### 5.5 EMERGENCY CORE COOLING SYSTEMS

5.5.1 The emergency core cooling systems are designed and shall be maintained in accordance with the original design provisions contained in Section 6.3 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements.

### 5.6 FUEL STORAGE

#### CRITICALITY

5.6.1 The new fuel storage racks are designed and shall be maintained with a center-to-center distance of not less than 21 inches between fuel assemblies placed in the storage racks. The spent fuel storage racks are designed and shall be maintained with a center-to-center distance of not

## DESIGN FEATURES

### CRITICALITY (Continued)

less than 12.53 inches between fuel assemblies placed in the storage racks. These spacings ensure a  $K_{eff}$  equivalent to  $< 0.95$  with the storage pool filled with unborated water. The  $K_{eff}$  of  $< 0.95$  includes the conservative assumptions as described in Section 9.1 of the FSAR. In addition, fuel in the storage pool shall have a U-235 loading of  $< 41.45$  grams of U-235 per axial centimeter of fuel assembly ( $\leq$  an enrichment of 3.7 weight percent U-235).

### DRAINAGE

5.6.2 The fuel pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 56 feet.

### CAPACITY

5.6.3 The spent fuel pool is designed and shall be maintained with a storage capacity limited to no more than 728 fuel assemblies.

### 5.7 SEISMIC CLASSIFICATION

5.7.1 Those structures, systems and components identified as seismic Class I in Section 3.2.1 of the FSAR shall be designed and maintained to the original design provisions contained in Section 3.7 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements.

### 5.8 METEOROLOGICAL TOWER LOCATION

5.8.1 The meteorological tower location shall be as shown on Figure 5.1-1.

### 5.9 COMPONENT CYCLE OR TRANSIENT LIMITS

5.9.1 The components identified in Table 5.9-1 are designed and shall be maintained within the cyclic or transient limits of Table 5.9-1.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 34 TO FACILITY

OPERATING LICENSE NO. DPR-67

FLORIDA POWER AND LIGHT COMPANY

ST. LUCIE PLANT, UNIT NO. 1

DOCKET NO. 50-335

Introduction

By application dated October 4, 1979, as supplemented by letter dated December 12, 1979, Florida Power and Light Company (FPL) requested a change to the Technical Specifications (TS) appended to Facility Operating License No. DPR-67. The proposed change would revise TS 5.3.1 (Fuel Assemblies) to allow a maximum enrichment of 3.7 weight percent Uranium-235 (U-235) (3.7 w/o U-235) fuel instead of the current limit of 3.1 w/o U-235 fuel in the fuel assemblies.

Discussion and Evaluation

The fuel enrichment (weight percent) is not a direct input to the reactor safety analyses. The fuel enrichment, in conjunction with the number of fuel assemblies loaded during refueling, exposure of fuel assemblies which are to remain in the core, and fuel management scheme are used to derive parameters such as kinetics parameters, rod worths and peaking factors. These values are used in the safety analyses. Important measurable values of these parameters are currently included in the plant TS.

Specification of the reload fuel enrichment alone does not uniquely determine, nor limit, the values of reactor core parameters important to safety. Therefore, the enrichment limit of fuel to be used in the reload core is to be deleted.

Fuel enrichment (weight percent) is, however, an important parameter in the assessment of the adequacy of the fuel storage pool and therefore should be a TS limit for fuel storage.

During our review of the increase in spent fuel storage capacity at St. Lucie Unit No. 1 (Amendment No. 22 dated March 29, 1978), we evaluated the storage of 3.7 w/o U-235 fuel in the spent fuel pool. We concluded in our Safety Evaluation that the new spent fuel rack design would preclude criticality, in that the neutron multiplication factor of the storage rack will remain less

8002110 206

than 0.95 with the rack fully loaded with fresh fuel of 3.7 w/o U-235. In Amendment No. 22 we established a TS limit of 41.45 grams of U-235 per axial centimeter of fuel assembly (TS 5.6.1). This axial limit corresponds to the uranium content of 3.7 w/o U-235 CE-14 x 14 fuel assemblies. Therefore, we have deleted the enrichment (weight percent) limit from the fuel assembly TS (5.3.1) and have added a 3.7 w/o U-235 limit to the fuel storage TS (5.6.1). This addition to TS 5.6.1 does not change the existing limit but does clarify it in terms of fuel enrichment (weight percent). We have discussed this revision to the proposed amendment with the FPL staff and they have agreed to the revision.

#### 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 this 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: January 23, 1980

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-335FLORIDA POWER AND LIGHT COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 34 to Facility Operating License No. DPR-67 issued to Florida Power and Light Company (the licensee), which revised Technical Specifications (TS) for operation of St. Lucie Plant, Unit No. 1 (the facility), located in St. Lucie County, Florida. The amendment is effective as of its date of issuance.

This amendment deletes the fuel enrichment limit from TS 5.3.1 (Reactor Core/Fuel Assemblies) and adds a fuel enrichment limit to TS 5.6.1 (Fuel Storage/Criticality). This places the enrichment limit in the appropriate part of the TS.

The application for the amendment complies 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.

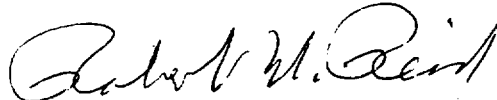
The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR Section 51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with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

8002110209

For further details with respect to this action, see (1) the application for amendment dated October 4, 1979, as supplemented December 12, 1979, (2) Amendment No. 34 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. A 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 23rd day of January, 1980.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors