



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

February 27, 2001

Mr. T. F. Plunkett  
President - Nuclear Division  
Florida Power and Light Company  
P.O. Box 14000  
Juno Beach, Florida 33408-0420

SUBJECT: ST. LUCIE PLANT, UNIT NO. 1 - ISSUANCE OF AMENDMENT REGARDING  
CONTAINMENT PERSONNEL AIRLOCKS DURING REFUELING  
OPERATIONS (TAC NO. MB0417)

Dear Mr. Plunkett:

The Commission has issued the enclosed Amendment No.172 to Facility Operating License No. DPR-67 for the St. Lucie Plant, Unit No. 1. This amendment consists of a revision to the Technical Specifications (TS) in response to your application dated October 30, 2000.

This amendment revises TS Limiting Condition For Operation 3.9.4.b to allow both doors of the containment personnel airlock to be open during core alterations if: (1) at least one personnel airlock door is capable of being closed, (2) the plant is in Mode 6 with at least 23 feet of water above the fuel in the reactor core, and (3) a designated individual is available outside the personnel airlock to close the door.

A copy of the Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink that reads "Kahtan N. Jabbour" with a stylized flourish at the end.

Kahtan N. Jabbour, Senior Project Manager, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-335

Enclosures:

1. Amendment No.172 to DPR-67
2. Safety Evaluation

cc w/encls: See next page

NRR-058

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**/Brendan T. Moroney RA for/**

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Mr. T. F. Plunkett  
Florida Power and Light Company

**ST. LUCIE PLANT**

cc:

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UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-335

ST. LUCIE PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 172  
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 30, 2000, 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, Facility Operating License No. DPR-67 is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and by amending paragraph 2.C.(2) to read as follows:

- (2) Technical Specifications

- The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 172 , 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 its date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Richard P. Correia, Chief, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: February 27, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 172

TO FACILITY OPERATING LICENSE NO. DPR-67

DOCKET NO. 50-335

Replace the following page of the Appendix "A" Technical Specifications with the attached page. The revised page is identified by amendment number and contains vertical lines indicating the area of change.

Remove Pages

3/4 9-4

Insert Pages

3/4 9-4

## REFUELING OPERATIONS

### CONTAINMENT PENETRATIONS

#### LIMITING CONDITION FOR OPERATION

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- 3.9.4 The containment penetrations shall be in the following status:
- a. The equipment door closed and held in place by a minimum of four bolts,
  - b. A minimum of one door in each airlock is closed, or, both doors of the containment personnel airlock may be open if:
    1. at least one personnel airlock door is capable of being closed,
    2. the plant is in MODE 6 with at least 23 feet of water above the fuel in the reactor core, and
    3. a designated individual is available outside the personnel airlock to close the door.
  - c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:
    1. Closed by isolation valve, blind flange, or manual valve except for valves that are open on an intermittent basis under administrative control, or
    2. Be capable of being closed by an OPERABLE automatic containment isolation valve, or
    3. Be capable of being closed by an OPERABLE containment vacuum relief valve.

**APPLICABILITY:** During CORE ALTERATIONS or movement of irradiated fuel within the containment.

#### **ACTION:**

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment. The provisions of Specification 3.0.3 are not applicable.

#### **SURVEILLANCE REQUIREMENTS**

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- 4.9.4 Each of the above required containment penetrations shall be determined to be either in its closed/isolated condition or capable of being closed by an OPERABLE automatic containment isolation valve within 72 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment by:
- a. Verifying the penetrations are in their closed/isolated condition, or
  - b. Testing of containment isolation valves per the applicable portions of Specifications 4.6.3.1.1. and 4.6.3.1.2.



UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 172 TO FACILITY OPERATING LICENSE NO. DPR-67

FLORIDA POWER AND LIGHT COMPANY

ST. LUCIE PLANT, UNIT NO. 1

DOCKET NO. 50-335

1.0 INTRODUCTION

By letter dated October 30, 2000, Florida Power and Light Company, the licensee for the St. Lucie Plant, Unit 1, requested an amendment to the St. Lucie Unit 1 Technical Specifications. Specifically, the licensee proposed to revise the Limiting Condition for Operation (LCO) 3.9.4.b, which establishes requirements for airlock door closure during refueling operations. The proposed amendment would allow both containment personnel airlock (PAL) doors to be open during core alterations or movement of irradiated fuel in the containment during refueling operations if: (1) at least one PAL door is capable of being closed, (2) the plant is in Mode 6 with at least 23 feet of water above the fuel in the reactor core, and (3) a designated individual is available outside the PAL to close the door. The current LCO 3.9.4.b requires a minimum of one door to be closed during core alterations or movement of irradiated fuel within the containment during refueling operations.

2.0 EVALUATION

The containment air locks, which are part of the containment pressure boundary, provide a means for personnel access during reactor operation. During core alterations or movement of irradiated fuel assemblies within containment, containment integrity is required; therefore, at least one air lock door must always remain closed. The requirement for containment penetration closure ensures that a release of fission products from containment due to a fuel handling accident (FHA) will be restricted from escaping to the environment. During core alterations or movement of irradiated fuel assemblies within containment, the most limiting radiological consequences result from a fuel handling accident.

The licensee performed an analysis of the radiological consequences resulting from a fuel handling accident with the PAL doors open and concluded that the release of fission products,



Enclosure

subsequent to a FHA, will result in doses that are well within the dose guideline values specified in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 100 for the site boundary and the dose acceptance criteria specified in General Design Criteria (GDC) 19 for control room operators.

The licensee reached this conclusion based on the following assumptions:

- (1) one whole fuel assembly with the highest radial peaking factor is damaged, releasing its fission products in the fuel gap into the water in the reactor vessel or spent fuel pool
- (2) a fission product decay period of 72 hours (time period from the reactor shutdown to the first fuel movement), and
- (3) an overall decontamination factor of 100 for the iodine isotopes in the spent fuel pool and the reactor vessel with minimum water depth of 23 feet above the damaged fuel assembly.

The staff reviewed the licensee's analysis and found that the calculational methods used for the radiological consequence analysis are consistent with those provided in the Standard Review Plan (SRP) Sections 6.4 and 15.7.4, and Regulatory Guide 1.25, "Assumptions Used for Evaluating the Potential Radiological Consequence of Fuel Handling Accident and Storage Facility for Boiling and Pressurized Water Reactors." The staff performed a confirmatory radiological consequence calculation, which indicated that the licensee's analyses were conservative and, therefore, acceptable.

The doses calculated by the staff and the licensee are well within the dose guideline values specified in 10 CFR Part 100, and meet the acceptance dose criteria specified in the SRP Section 15.7.4. The dose to the control room operators calculated by the staff and the licensee is within the acceptable dose criterion given in the SRP Section 6.4 and GDC 19 of Appendix A to 10 CFR Part 50. Therefore, the staff concludes that the radiological consequences analyzed by the licensee are acceptable.

Based upon the above, the staff concludes that the proposed amendment to have the PAL doors open during core alterations or movement of irradiated fuels in containment during refueling operations is acceptable.

### 3.0 STATE CONSULTATION

Based upon a letter dated March 8, 1991, from Mary E. Clark of the State of Florida, Department of Health and Rehabilitative Services, to Deborah A. Miller, Licensing Assistant, U.S. Nuclear Regulatory Commission (NRC), the State of Florida does not desire notification of issuance of license amendments.

#### 4.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (65 FR 81920). Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

#### 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: J. Y. Lee

Date: February 27, 2001