

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. 2, EXEMPTION FROM THE REQUIREMENTS  
OF 10 CFR PART 54, SECTION 54.17(c) REGARDING SCHEDULE FOR  
LICENSE RENEWAL APPLICATION (TAC NO. MB0418)

Dear Mr. Plunkett:

The Commission has approved the enclosed exemption from the specific requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Part 54, Section 54.17(c), for St. Lucie Plant, Unit 2. This action is in response to your letter of October 30, 2000.

A copy of the exemption and the supporting safety evaluation are enclosed. The exemption has been forwarded to the Office of the Federal Register for publication.

Sincerely,

***/RA by B. Moroney Acting for/***

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

Docket No. 50-389

Enclosures: 1. Exemption  
2. Safety Evaluation

cc w/encls: See next page

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
FLORIDA POWER AND LIGHT COMPANY, ET AL.  
ST. LUCIE PLANT, UNIT NO. 2  
DOCKET NO. 50-389  
EXEMPTION

1.0 BACKGROUND

The Florida Power and Light Company, et al. (FPL, the licensee) is the holder of Facility Operating License No. NPF-16, which authorizes operation of St. Lucie Unit No. 2. The license provides, among other things, that the facility is subject to all rules, regulations, and orders of the U.S. Nuclear Regulatory Commission (NRC, the Commission) now or hereafter in effect.

The facility consists of a pressurized water reactor located in St. Lucie County, Florida.

2.0 PURPOSE

Title 10 of the *Code of Federal Regulations* (10 CFR), Part 54 addresses the various requirements for renewal of operating licenses for nuclear power plants. Section 54.17(c) of Part 54 specifies:

An application for a renewed license may not be submitted to the Commission earlier than 20 years before the expiration of the operating license currently in effect.

By letter dated October 30, 2000, the licensee requested an exemption from 10 CFR 54.17(c) for St. Lucie Unit 2. At the time of the request, there were more than 22 years remaining until the expiration of the current operating license for St. Lucie Unit 2. The exemption would allow FPL to process and submit the St. Lucie Unit 2 license renewal application concurrent with the St. Lucie Unit 1 license renewal application. Because of the similarities in design, operation,

maintenance, operating experience and environments of the two St. Lucie units, many of the analyses to be performed for Unit 1 would be directly applicable to Unit 2.

Based on an anticipated submittal of a renewal application in June 2002, this exemption would permit the licensee to submit a license renewal request for St. Lucie Unit 2 approximately 1 year earlier than the date specified by 10 CFR 54.17(c), in order to allow it to be prepared and submitted concurrently with the license renewal application for St. Lucie Unit 1.

### 3.0 DISCUSSION

Pursuant to 10 CFR 54.15, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 54, in accordance with the provisions of 10 CFR 50.12, when (1) the exemptions are authorized by law, will not present an undue risk to public health or safety, and are consistent with the common defense and security; and (2) when special circumstances are present.

The requirements for exemption are discussed below:

#### 3.1 Authorized by Law

The Commission's basis for establishing the 20-year limit contained in Section 54.17(c) is discussed in the 1991 Statements of Consideration for Part 54 (56 FR 64963). The limit was established to ensure that substantial operating experience was accumulated by a licensee before a renewal application is submitted such that any plant-specific concerns regarding aging would be disclosed. In amending the rule in 1995, the Commission indicated that it was willing to consider plant-specific exemption requests by applicants who believe that sufficient information is available to justify applying for license renewal earlier than 20 years from expiration of the current license. FPL's exemption request is consistent with the Commission's intent to consider plant-specific requests and is permitted by Section 54.15 of its regulations.

### 3.2 No Undue Risk to Public Health and Safety

FPL's exemption request seeks only schedular relief regarding the date of submittal, and not substantive relief from the requirements of Parts 51 or 54. FPL must still conduct all environmental reviews required by Part 51 and all safety reviews and evaluations required by Part 54 when preparing the applications for St. Lucie Units 1 and 2. Following submittal, the staff's review will verify that all applicable Commission regulations have been met before issuing the renewed licenses. Therefore, the staff finds that granting this schedular exemption will not represent an undue risk to public health and safety.

### 3.3 Consistent with the Common Defense and Security

As discussed previously, the exemption requested is only a schedular exemption. The NRC staff will subsequently review the renewal application to be submitted by FPL, pursuant to the requested exemption, to determine whether all applicable requirements are fully met. Accordingly, granting the requested exemption is consistent with the common defense and security.

### 3.4 Special Circumstances Supporting Issuance of the Exemption

An exemption will not be granted unless special circumstances are present as defined in 10 CFR 50.12(a)(2). Specifically, Section 50.12(a)(2)(ii) states that a special circumstance exists when "application of the regulation in the particular circumstances ... is not necessary to achieve the underlying purpose of the rule." In initially promulgating Section 54.17(c) in 1991, the Commission stated that the purpose of the time limit was "to ensure that substantial operating experience is accumulated by a licensee before it submits a renewal application" (56 FR 64963). At that time, the Commission found that 20 years of operating experience provided a sufficient basis for renewal applications. However, in issuing the amended Part 54 in 1995, the Commission indicated it would consider an exemption to this requirement if sufficient information was available on a plant-specific basis to justify submission of an application to renew a license before completion of 20 years of operation (60 FR 22488). The

20-year limit was imposed by the Commission to ensure that sufficient operating experience was accumulated to identify any plant-specific aging concerns. As set forth below, St. Lucie Unit 2 is sufficiently similar to Unit 1, such that the operating experience for Unit 1 is applicable to Unit 2. In addition, Unit 2 has accumulated significant operating experience. Accordingly, under the requested exemption, sufficient operating experience will have been accumulated to identify any plant-specific aging concerns for both units.

The licensee states that the two St. Lucie units are similar in design, operation, maintenance, use of operating experience, and environments, and, as such, Unit 1 operating experience is directly applicable to Unit 2. Both St. Lucie units are 2700 megawatt (thermal) pressurized water reactors designed by Combustion Engineering, Inc., with the same architect/engineer. The licensee states that the materials of construction for systems, structures, and components on both units are typically identical or similar. These statements are supported by a review of the St. Lucie Unit 2 Updated Final Safety Analysis Report (UFSAR). In particular, Section 1.3 of the UFSAR describes the similarities in design between the units. Table 1.3-1 of the UFSAR lists significant similarities between systems, structures, and components installed at both Units 1 and 2, including elements of the reactor system, the reactor coolant system, and engineered safety features.

St. Lucie Unit 2 is physically located adjacent to Unit 1. As such, the external environments would be similar for both units. Internal environments for both units are also similar due to the similarity in plant design and operation.

FPL also stated that many of the procedures that govern site activities are not unit specific and require the consideration of operating experience at the St. Lucie Plant. An administrative procedure governs the review and dissemination of operating experience obtained from both internal and external sources. If an item is potentially applicable to the St. Lucie Plant, the item is addressed in the plant's corrective action process. Nonconforming or degraded equipment on one unit must consider the condition on the other unit.

Because of the similarities between units, FPL does not divide the plant organizations by unit and typically assigns personnel to work on either unit. Licensed operators at St. Lucie receive training on both units and are licensed by the NRC to operate either unit. Having personnel assigned to work on both units facilitates the identification and transfer of operating experience between the units.

Given the similarities between units, the operating experience at Unit 1 is applicable to Unit 2 for purposes of the license renewal review. At the time of the exemption request, Unit 1 had achieved over 24 years of operating experience, which are applicable to Unit 2. Unit 2 has operated for over 17 years, which provides a substantial period of additional plant-specific operating experience to supplement the Unit 1 operating experience. The combined years of operating experience of Unit 1 and Unit 2 should be sufficient to identify any aging concerns applicable to the two units.

Therefore, sufficient combined operating experience exists to satisfy the intent of Section 54.17(c), and the application of the regulation in this case is not necessary to achieve the underlying purpose of the rule. The staff finds that FPL's request meets the requirement in Section 50.12(a)(2)(ii) that special circumstances exist to grant the exemption.

#### 4.0 CONCLUSION

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12(a), the exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. Also, special circumstances are present. Therefore, the Commission hereby grants FPL the exemption sought from the requirements of 10 CFR 54.17(c) for St. Lucie Unit 2 based on the circumstances described herein.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will not have a significant effect on the quality of the human environment (66 FR 10759).

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 27th day of February 2001.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

John A. Zwolinski, Director  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 27th day of February 2001.

FOR THE NUCLEAR REGULATORY COMMISSION

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Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
EXEMPTION FROM 10 CFR 54.17(c)  
REGARDING SCHEDULE TO APPLY FOR A RENEWED OPERATING LICENSE  
FLORIDA POWER & LIGHT COMPANY, ET AL.  
ST. LUCIE UNIT 2  
DOCKET NO. 50-389

## 1.0 INTRODUCTION

Requirements for filing applications for renewed operating licenses are contained in the license renewal rule, Title 10 of the *Code of Federal Regulations* (10 CFR), Part 54, Section 54.17(c), which states: "An application for a renewed license may not be submitted to the Commission earlier than 20 years before the expiration of the operating license currently in effect."

Florida Power & Light Company (FPL) requested, in a letter dated October 30, 2000, an exemption from the 20-year restriction in Section 54.17(c) to allow it to submit a renewal application for St. Lucie Unit 2 earlier than 20 years before expiration of its operating license. Such an exemption would allow FPL to submit one application for renewal of the operating licenses of both St. Lucie Units 1 and 2, with the goal of obtaining efficiencies for preparation and review of the application. The current operating license for St. Lucie Unit 1 (DPR-67) expires on March 1, 2016, and for Unit 2 (NPF-16) on April 6, 2023. At the time the exemption request was filed, Unit 1 had over 24 years of operating experience and Unit 2 had over 17 years experience.

In its request, FPL stated that efficiencies will be gained for both FPL and the NRC by the preparation and review of one application for both Units 1 and 2 as opposed to the preparation and review of separate applications submitted at different times. FPL intends to use personnel with experience preparing the Turkey Point renewal application in preparing the St. Lucie, Units 1 and 2, application.

## 2.0 EVALUATION

Section 54.15 states that exemptions from the requirements of Part 54 may be granted by the Commission in accordance with Section 50.12. An exemption may be granted under Section 50.12 if the exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security. However, an

exemption will not be granted unless special circumstances are present as defined in Section 50.12(a)(2).

## 2.1 Authorized by Law

The Commission's basis for establishing the 20-year limit contained in Section 54.17(c) is discussed in the 1991 Statements of Consideration for Part 54 (56 FR 64963). The limit was established to ensure that substantial operating experience was accumulated by a licensee before a renewal application is submitted such that any plant-specific concerns regarding aging would be disclosed. In amending the rule in 1995, the Commission sought public comment on whether the 20-year limit should be reduced. The Commission determined that sufficient basis did not exist to generically reduce the 20-year limit. However, the Commission did indicate in the Statements of Consideration for the amended rule (60 FR 22488), that it was willing to consider plant-specific exemption requests by applicants who believe that sufficient information is available to justify applying for license renewal prior to 20 years from expiration of the current license. FPL's exemption request is consistent with the Commission's intent to consider plant-specific requests and is permitted by Section 54.15 of its regulations.

The current operating licenses for St. Lucie, Units 1 and 2, were issued in accordance with the Atomic Energy Act, as amended (AEA), and 10 CFR 50.51 which limit the duration of an operating license to a maximum of 40 years. In accordance with Section 54.31, the renewed license will be of the same class as the operating license currently in effect and cannot exceed a term of 40 years. Therefore, the term of the renewed licenses for St. Lucie, Units 1 and 2, are limited both by law and the Commission's regulations to 40 years. Additionally, Section 54.31(b) states that:

A renewed license will be issued for a fixed period of time, which is the sum of the additional amount of time beyond the expiration of the operating license (not to exceed 20 years) that is requested in a renewal application plus the remaining number of years on the operating license currently in effect. The term of any renewed license may not exceed 40 years.

The potential exists that because of FPL's decision to apply early for license renewal for St. Lucie Unit 2, FPL may not obtain the maximum 20-year period of extended operation permitted by Section 54.31(b). Any actual reduction will depend on the date the renewed licenses are issued. If a reduction in 20-year extension is required and FPL desires further extension of St. Lucie's operating licenses in the future, an additional renewal application can be submitted in accordance with Part 54.

Therefore, should the Commission determine to renew the St. Lucie Unit 2 operating license, the term of the license will not exceed 40 years, and granting of FPL's exemption request will not result in violation of the AEA or the Commission's regulations.

## 2.2 No Undue Risk to Public Health and Safety

FPL's exemption request seeks only schedular relief regarding the date of submittal, and not substantive relief from the requirements of Parts 51 or 54. FPL must still conduct all environmental reviews required by Part 51 and all safety reviews and evaluations required by Part 54 when preparing the application for St. Lucie, Units 1 and 2. The staff's review will verify

that all applicable Commission regulations have been met before issuing the renewed licenses. Therefore, the staff finds that granting this scheduler exemption will not represent an undue risk to public health and safety.

### 2.3 Consistent with the Common Defense and Security

As discussed previously, the exemption requested is only a scheduler exemption. The U.S. Nuclear Regulatory Commission (NRC) staff will review the renewal application FPL submits, pursuant to the requested exemption, to determine whether all applicable requirements are fully met. Accordingly, granting the requested exemption will be consistent with the common defense and security.

### 2.4 Special Circumstances Supporting Issuance of the Exemption

An exemption will not be granted unless special circumstances are present as defined in Section 50.12(a)(2). Specifically, Section 50.12(a)(2)(ii) states that a special circumstance exists when "application of the regulation in the particular circumstances ... is not necessary to achieve the underlying purpose of the rule." In initially promulgating Section 54.17(c) in 1991, the Commission stated that the purpose of the time limit was "to ensure that substantial operating experience is accumulated by a licensee before it submits a renewal application." (56 FR 64963). At that time, the Commission found that 20 years of operating experience provided a sufficient basis, for renewal applications. However, in issuing the amended Part 54 in 1995, the Commission indicated it would consider an exemption to this requirement if sufficient information was available on a plant-specific basis to justify submission of an application to renew a license before completion of 20 years of operation (60 FR 22488).

The 20-year limit was imposed by the Commission to ensure that sufficient operating experience was accumulated to identify any plant-specific aging concerns. As set forth below, St. Lucie Unit 2 is sufficiently similar to Unit 1, such that the operating experience for Unit 1 applies to Unit 2. In addition, Unit 2 has accumulated significant operating experience. Accordingly, under the requested exemption, sufficient operating experience will have been accumulated to identify any plant-specific aging concerns for both units.

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These statements are supported by a review of the St. Lucie Unit 2 Updated Final Safety Analysis Report (UFSAR). In particular, Section 1.3 of the UFSAR describes the similarities in design between the units. Table 1.3-1 of the UFSAR lists significant similarities between systems, structures, and components installed at both Units 1 and 2, including elements of the reactor system, the reactor coolant system, and engineered safety features. St. Lucie Unit 2 is physically located adjacent to Unit 1. As such, the external environments would be similar for both units. Internal environments for both units should also be similar due to the similarity in plant design and operation.

FPL also stated that many of the procedures that govern site activities are not unit specific and require the consideration of operating experience at the St. Lucie plant, comprising both units. An administrative procedure governs the review and dissemination of operating experience obtained from both internal and external sources. If an item is potentially applicable to the St. Lucie plant, the item is addressed in the plant's corrective action process. Nonconforming or degraded equipment on one unit must consider the condition on the other unit.

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Given the similarities between units, the operating experience at Unit 1 is applicable to Unit 2 for purposes of the license renewal review. At the time of the exemption request, Unit 1 has achieved over 24 years of operation and its operating experience will be applicable to Unit 2 which has over 17 years of operating experience. Unit 2 has operated for a substantial period of time which provides additional plant-specific operating experience to supplement the Unit 1 operating experience. The 20 years of operating experience of Unit 1, in conjunction with the substantial number of years of operation of Unit 2 should be sufficient to identify any aging concerns applicable to the two units.

Therefore, sufficient combined operating experience should exist to satisfy the intent of Section 54.17(c), and the application of the regulation in this case is not necessary to achieve the underlying purpose of the rule. The staff finds that FPL's request meets the requirement in Section 50.12(a)(2) that special circumstances exist to grant the exemption.

### 3.0 CONCLUSION

Based on the foregoing, the staff finds that the requested exemption is acceptable in that it is authorized by law, will not present an undue risk to the public health and safety, is consistent with the common defense and security, and special circumstances are present under 10 CFR 50.12(a)(2)(ii). Should FPL submit an application to renew the licenses for St. Lucie, Units 1 and 2, the application must demonstrate full compliance with Parts 51 and 54 for each of the units and include information addressing the similarity in design, operation, maintenance, operating experience, and environments of the units to support submittal of the dual-unit application. In the course of its review of an application to renew the licenses for the St. Lucie units, the NRC staff will examine how the actual operating experience available from both units applies to the particular systems, structures, and components evaluated.

Principal Contributor: Stephen T. Hoffman, NRR

Date: February 27, 2001

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Florida Power and Light Company

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