

March 20, 1996

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

SUBJECT: ST. LUCIE UNIT 2 - ISSUANCE OF AMENDMENT RE: CHANGES IN THE  
SHIELD BUILDING VENTILATION SYSTEM (SBVS) TECHNICAL  
SPECIFICATIONS (TAC NO. M93338)

Dear Mr. Plunkett:

The Commission has issued the enclosed Amendment No. 81 to Facility Operating License No. NPF-16 for the St. Lucie Plant, Unit No. 2. This amendment consists of changes to the Technical Specifications in response to your application dated August 16, 1995.

This amendment modifies Technical Specification 3.6.6.1, Shield Building Ventilation System (SBVS), to more effectively address the design functions performed by the SBVS for both the Shield Building and the Fuel Handling Building.

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,

Original signed by:

Jan A. Norris, Senior Project Manager  
Project Directorate II-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-389

Enclosures:

- 1. Amendment No. 81 to NPF-16
- 2. Safety Evaluation

cc w/enclosures:  
See next page

FILENAME - G:\STLUCIE\M93338.AMD \*Previously Concurred

OFFICE	LA:PDII-1	PM:PDII-1	D:PDII-1	OGC*	
NAME	Dunnington <i>ED</i>	JNorris	Elmbro <i>EE</i>	RWeisman	
DATE	03/15/96	03/19/96	03/19/96	03/08/96	
COPY	Yes/No	Yes/No	Yes/No	Yes/No	

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

St. Lucie Plant

cc:

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DATED: March 20, 1996

AMENDMENT NO. 81 TO FACILITY OPERATING LICENSE NO. NPF-16 - ST. LUCIE, UNIT 2

**Docket File**

PUBLIC

PDII-1 Reading

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

FLORIDA POWER & LIGHT COMPANY

ORLANDO UTILITIES COMMISSION OF

THE CITY OF ORLANDO, FLORIDA

AND

FLORIDA MUNICIPAL POWER AGENCY

DOCKET NO. 50-389

ST. LUCIE PLANT UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 81  
License No. NPF-16

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Florida Power & Light Company, et al. (the licensee), dated August 16, 1995, 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.

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2. Accordingly, Facility Operating License No. NPF-16 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. 81, 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 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Eugene V. Imbro, Director  
Project Directorate II-1  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 20, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 81

TO FACILITY OPERATING LICENSE NO. NPF-16

DOCKET NO. 50-389

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by amendment number and contains a vertical line indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

Remove Page

3/4 6-27

Insert Page

3/4 6-27

## CONTAINMENT SYSTEM

### 3/4.6.6 SECONDARY CONTAINMENT

#### SHIELD BUILDING VENTILATION SYSTEM (SBVS)

##### LIMITING CONDITION FOR OPERATION

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3.6.6.1 Two independent Shield Building Ventilation Systems shall be OPERABLE.

**APPLICABILITY:** At all times in MODES 1, 2, 3, and 4.  
In addition, during movement of irradiated fuel assemblies or during crane operations with loads over irradiated fuel assemblies in the Spent Fuel Storage Pool in MODES 5 and 6.

**ACTION:**

- a. With the SBVS inoperable solely due to loss of the SBVS capability to provide design basis filtered air evacuation from the Spent Fuel Pool area, only ACTION-c is required. If the SBVS is inoperable for any other reason, concurrently implement ACTION-b and ACTION-c.
- b. (1) With one SBVS inoperable in MODE 1, 2, 3, or 4, restore the inoperable system to OPERABLE status within 7 days; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.  
(2) With both SBVS inoperable in MODE 1, 2, 3, or 4, immediately enter LCO 3.0.3.
- c. (1) With one SBVS inoperable in any MODE, restore the inoperable system to OPERABLE status within 7 days; otherwise, suspend movement of irradiated fuel assemblies within the Spent Fuel Storage Pool and crane operations with loads over irradiated fuel in the Spent Fuel Storage Pool.  
(2) With both SBVS inoperable in any MODE, immediately suspend movement of irradiated fuel assemblies within the Spent Fuel Storage Pool and crane operations with loads over irradiated fuel in the Spent Fuel Storage Pool.

##### SURVEILLANCE REQUIREMENTS

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4.6.6.1 Each Shield Building Ventilation System shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters on.
- b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire, or chemical release in any ventilation zone communicating with the system by:
  1. Performing a visual examination of SBVS in accordance with ANSI N-510-1980.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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2. Performing airflow distribution to HEPA filters and charcoal adsorbers in accordance with ANSI N-510-1980. The distribution shall be  $\pm 20\%$  of the average flow per unit.
  3. Verifying that the charcoal adsorbers remove  $\geq 99\%$  of a halogenated hydrocarbon refrigerant test gas when they are tested in place in accordance with ANSI N-510-1980 while operating the system at a flow rate of 6000 cfm  $\pm 10\%$ .
  4. Verifying that the HEPA filter banks remove  $\geq 99.825\%$  of the DOP when they are tested in place in accordance with ANSI N-510-1980 while operating the system at a flow rate of 6000 cfm  $\pm 10\%$ .
  5. Verifying a system flow rate of 6000 cfm  $\pm 10\%$  during system operation when tested in accordance with ANSI N-510-1980.
- c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a 2-inch laboratory sample from the installed sample canisters demonstrates a removal efficiency of  $\geq 90\%$  for radioactive methyl iodine and  $\geq 99\%$  for radioactive elemental iodine when tested in accordance with ANSI N-510-1980 (130°C, 95% R.H.).
- d. At least once per 18 months by:
1. Verifying that the pressure drop across the demisters, electric heaters, HEPA filters, and charcoal adsorber banks is less than 8.5 inches Water Gauge (WG) while operating the system at a flow rate of 6000 cfm  $\pm 10\%$ .
  2. Verifying that the system starts on a Unit 2 containment isolation signal and on a fuel pool high radiation signal.
  3. Verifying that the filter cooling makeup and cross connection valves can be manually opened.
  4. Verifying that each system produces a negative pressure of greater than or equal to 2.0 inches WG in the annulus within 99 seconds after a start signal.
  5. Verifying that the main heaters dissipate  $30 \pm 3$  kW and the auxiliary heaters dissipate  $1.5 \pm 0.25$  kW when tested in accordance with ANSI N-510-1980.





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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 81

TO FACILITY OPERATING LICENSE NO. NPF-16

FLORIDA POWER AND LIGHT COMPANY, ET AL.

ST. LUCIE PLANT, UNIT NO. 2

DOCKET NO. 50-389

1.0 INTRODUCTION

By letter dated August 16, 1995, Florida Power and Light (FPL) Company (licensee) submitted a request for changes to the St. Lucie Unit 2, Technical Specifications (TS). The requested changes would revise TS 3.6.6.1, "Shield Building Ventilation system (SBVS)," to more effectively address the design functions performed by the SBVS for both the Shield Building (secondary containment) and the Fuel Handling Building.

2.0 THE SHIELD BUILDING VENTILATION SYSTEM DESCRIPTION

The containment system of St. Lucie 2 consists of a free-standing steel primary containment and a reinforced concrete shield building that encloses the primary containment. The function of the SBVS is to collect and filter radioactive airborne fission products that may leak from the primary containment to the annulus formed by these structures in the event of a loss-of-coolant accident (LOCA). Upon receipt of a Containment Isolation Actuation Signal (CIAS), the SBVS will automatically actuate to remove the fission product that results following a LOCA.

The SBVS consists of two independent, redundant, full-capacity fan and filter subsystems (trains). Each train of the SBVS is also connected, via normally closed motor-operated butterfly valves, to the corresponding exhaust duct of the Fuel Handling Building Ventilation System (FHBVS). Upon receipt of a high radiation signal from the spent fuel storage pool area, the normally operating FHBVS will automatically de-energize and appropriate isolation dampers will close, the FHBVS-to-SBVS cross tie valves will open and the SBVS will automatically actuate to evacuate and filter air from the spent fuel storage pool area. The SBVS thereby provides the fission product removal function that is assumed for the postulated fuel handling accident. To limit offsite radiation exposures that could result from either a LOCA or a fuel handling accident, assuming single active failure criteria, Limiting Condition for Operation (LCO) 3.6.6.1 requires two independent SBVSs to be operable during all modes of operations involving movement of irradiated fuel within the spent

fuel storage pool or crane operations with loads over the spent fuel storage pool with irradiated fuel in the spent fuel storage pools.

### 3.0 DESCRIPTION AND ANALYSIS OF PROPOSED TECHNICAL SPECIFICATION CHANGES

Section 3.6.6.1 Limiting Condition for Operation for the two independent SBVSs is currently written in three distinctive statements--an applicability statement and two action statements. The licensee-proposed changes clarify these statements and portray them in two distinct sections--the applicability section and one action section. The existing single applicability statement is a single run-on sentence that could result in misinterpretation of the plant conditions that require the availability of an operable SBVS. The proposed applicability section is written as two distinct statements to clearly reflect the separate, but overlapping, plant conditions that require an operable SBVS.

As for the action statement, the existing statements are in two parts: the first statement addresses modes 1 through 4; and the second action statement addresses modes 5 and 6. The way it is currently stated may unnecessarily penalize the licensee since it requires the transition to cold shutdown if the inoperable SBVS train is not restored to operable status within 7 days. This action is appropriate for a condition where the SBVS is unable to perform its design safety function for mitigating the effects of a LOCA. However, the specified action provides no compensatory measures for the probable concurrent condition where the SBVS cannot perform its design safety function for mitigating a fuel handling accident. Additionally, should a condition develop in the FHB during modes 1 through 4 that impacts only the SBVS capability to mitigate a fuel handling accident, the specified action could result in unnecessary unit shutdown and cooldown without requiring the proper compensatory measures until entering mode 5.

The proposed action statement consists of three parts. Part "a" distinguishes between the actions required for the condition where only the SBVS capability to perform the fuel handling accident safety function is affected, and the case where both the fuel handling accident and the LOCA safety functions are affected. We find that this proposed change provides clear direction to the operators.

Parts "b" and "c" are consistent with the previously approved existing specification. They clarify that the compensatory measures are mode-independent and assure availability of the LOCA mitigation safety function in part "b," and the fuel handling accident safety function in part "c," consistent with the plant safety analysis and NUREG-1432, LCO 3.6.13, "Shield Building Exhaust Cleanup System (SBEACS)" (for part "b"), and LCO 3.7.14, "Fuel Building Air Cleanup System (FBACS)" (for part "c").

### 4.0 TECHNICAL FINDING

The NRC staff concludes that the proposed changes provide a clearer and more concise direction to the FPL operators and will, therefore, enhance safety. The changes are consistent with the format and content of the current plant TS

as well as the technical substance of the corresponding specifications in NUREG-1432. Thus, we find the proposed changes acceptable.

#### 5.0 STATE CONSULTATION

Based upon the written notice of the proposed amendments, the Florida State official had no comments.

#### 6.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change to a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. We have determined that this 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding (60 FR 49937). 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 this amendment.

#### 7.0 CONCLUSION

We have 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, and (2) 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.

Principal Contributor: Amira Gill

Date: March 20, 1996