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

February 17, 2000

Template # NRR-058

SUBJECT: ST. LUCIE UNIT 2 - ISSUANCE OF AMENDMENT REGARDING TECHNICAL SPECIFICATION CHANGES IN ACCORDANCE WITH GENERIC LETTER 99-02 (TAC NO. MA7204)

Dear Mr. Plunkett:

The Commission has issued the enclosed Amendment No. 107 to Facility Operating License No. NPF-16 for the St. Lucie Plant, Unit No. 2. This amendment consists of changes to the Technical Specifications (TS) in response to your application dated November 17, 1999. Although your application addressed both St. Lucie Units 1 and 2, this amendment applies only to St. Lucie Unit 2. The St. Lucie Unit 1 changes will be addressed in separate correspondence.

This amendment revises the TS surveillance testing of the safety-related ventilation system charcoal to meet the actions requested in Generic Letter 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999. Other systems impacted include the control room emergency ventilation system, the control room emergency air cleanup system, the shield building ventilation system, the emergency core cooling system area ventilation system, and the fuel handling building ventilation system.

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

Docket No. 50-389

Enclosures:
1. Amendment No. 107 to NPF-16
2. Safety Evaluation
cc w/enclosures: See next page

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

February 17, 200

Mr. T. F. Plunkett
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Florida Power and Light Company
P.O. Box 14000
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Project Directorate II
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Office of Nuclear Reactor Regulation

Docket No. 50-389

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cc w/enclosures: See next page

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. 107
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 November 17, 1999, 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. 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. 107 , 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

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 17, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 107

TO FACILITY OPERATING LICENSE NO. NPF-16

DOCKET NO. 50-389

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

Remove Pages	Insert Pages
3/4 6-28	3/4 6-28
3/4 7-18	3/4 7-18

SURVEILLANCE REQUIREMENTS (continued)

2. Performing airflow distribution to HEPA filters and charcoal adsorbers in accordance with ANSI N-510-1980. The distribution shall be ± 20% of the average flow per unit.

3. Verifying that the charcoal adsorbers remove ≥ 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 ± 10%.

4. Verifying that the HEPA filter banks remove ≥ 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 ± 10%.

5. Verifying a system flow rate of 6000 cfm ± 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 ≥ 90% for radioactive methyl iodide when tested in accordance with ASTM D3803-1989 (30°C, 95% RH).

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 ± 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 ± 3 kW and the auxiliary heaters dissipate 1.5 ± 0.25 kW when tested in accordance with ANSI N-510-1980.

SURVEILLANCE REQUIREMENTS

4.7.7 Each control room emergency air cleanup system shall be demonstrated OPERABLE:

a. At least once per 12 hours by verifying that the control room air temperature is less than or equal to 120°F.

b. At least once per 31 days by (1) initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 15 minutes and (2) starting, unless already operating each air conditioning unit and verifying that it operates for at least 8 hours.

c. 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 CREACS in accordance with ANSI N-510-1980.

2. Performing air flow 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 $\geq$ 99.95% of a halogenated hydrocarbon refrigerant test gas when they are tested in accordance with ANSI N-510-1980 while operating the system at 2000 cfm $\pm$ 10%.

4. Verifying that the HEPA filters remove $\geq$ 99.95% of the DOP when they are tested in accordance with ANSI N-510-1980 while operating the system at 2000 cfm $\pm$ 10%.

5. Verifying a system flow rate of 2000 cfm $\pm$10%.

d. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a 4-inch laboratory sample from the installed sample canisters demonstrates a removal efficiency of $\geq$ 99.825% for methyl iodide when tested in accordance with ASTM D3803-1989 (30°C, 95% RH).

e. At least once per 18 months by:

1. Verifying that the pressure drop across the combined prefilters, HEPA filters and charcoal adsorber banks is less than 7.4 inches Water Gauge while operating the system at a flow rate of 2000 cfm $\pm$ 10%.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 107TO FACILITY OPERATING LICENSE NO. DPR-67

FLORIDA POWER AND LIGHT COMPANY

ST. LUCIE PLANT, UNIT NO. 2

DOCKET NO. 50-389

1.0 INTRODUCTION

By letter dated November 16, 1999, Florida Power & Light Company (FPL or the licensee) provided a response to the actions requested in U.S. Nuclear Regulatory Commission (NRC) Generic Letter (GL) 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999. Also, by letter dated November 17, 1999, FPL requested changes to the Technical Specification (TS) for St. Lucie Units 1 and 2. The proposed changes would revise TS Sections 4.6.6.1, "Shield Building Ventilation System (SBVS)," 4.7.7.1, "Control Room Emergency Ventilation System (CREVS)," 4.7.7, "Control Room Emergency Air Cleanup System (CREACS)," 4.7.8.1, "ECCS Area Ventilation System," and 4.9.12, "Fuel Handling Building Ventilation System (FHBVS)," to meet the actions requested in GL 99-02.

The staff has reviewed the proposed changes for St. Lucie Unit 2 only. The St. Lucie Unit 1 changes will be the subject of separate correspondence. Therefore, all the items below relate uniquely to St. Lucie Unit 2 only.

2.0 BACKGROUND

Safety-related air-cleaning units used in the engineered safety features (ESF) ventilation systems of nuclear power plants reduce the potential onsite and offsite consequences of a radiological accident by absorbing radioiodine. Analyses of design basis accidents assume particular safety related charcoal adsorption efficiencies when calculating offsite and control room operator doses. To ensure that the charcoal filters used in these systems will perform in a manner that is consistent with the licensing basis of a facility, licensees have requirements in their TS to periodically perform laboratory tests (in accordance with a test standard) of charcoal samples taken from these ventilation systems.

GL 99-02 alerted licensees that testing nuclear-grade activated charcoal to standards other than American Society for Testing and Materials (ASTM) D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," does not provide assurance for complying with their current licensing basis as it relates to the dose limits of General Design Criterion 19 of Appendix A to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR) and Subpart A of 10 CFR Part 100.

GL 99-02 requested that all licensees determine whether their TS reference ASTM D3803-1989 for charcoal filter laboratory testing. Licensees whose TS do not reference ASTM D3803-1989 were requested to either amend their TS to reference ASTM D3803-1989 or propose an alternative test protocol.

3.0 EVALUATION

3.1 Laboratory Charcoal Sample Testing Surveillance Requirements

The current and proposed laboratory charcoal sample testing TS surveillance requirements for St. Lucie Unit 2 SBVS and CREACS are shown in Table 1 and Table 2, respectively.

The proposed use of ASTM D3803-1989 is acceptable because it is consistent with the actions requested in GL 99-02. The proposed test temperature of 30 °C and relative humidity of 95 percent is acceptable because it is consistent with ASTM D3803-1989 and the actions requested in GL 99-02.

The proposed efficiency for radioactive methyl iodide for Unit 2 SBVS and CREACS of greater than or equal to 90 and 99.825 percent, respectively, results in a safety factor of 5 and 5.7, respectively. These proposed safety factors are acceptable because they are equal to or more conservative than the minimum safety factor of 2 specified in GL 99-02.

The proposed change to perform laboratory testing using methyl iodide rather than elemental iodide is acceptable because it is consistent with ASTM D3803-1989 and the actions requested in GL 99-02.

The licensee stated in its letter of November 16, 1999, that all of the above systems do not have a face velocity greater than 110 percent of 40 ft/min and it is not necessary to specify the face velocity in the proposed TS change. This is acceptable because it is consistent with the August 23, 1999, errata to GL 99-02.

3.2 Evaluation Conclusion

On the basis of its evaluation, the staff concludes that the proposed TS changes for St. Lucie Unit 2 satisfy the actions requested in GL 99-02 and are, therefore, acceptable.

TABLE 1 - CURRENT TS REQUIREMENTS										
System Description					Current TS Requirements					
	TS Section	System	Bed Thickness (inches)	Credited Efficiency (methyl iodide)	Test Penetration (methyl iodide)	Safety Factor	Test Standard	Test Temp (°C)	Test RH	Face Velocity (ft/min)
Unit 2	4.6.6.1	SBVS	2	50%	10% 1%*	5	ANSI N510-1980	130	95%	40
	4.7.7	CREACS	4	99%	0.175%	5.7	ANSI N510-1980	130	95%	40

* Elemental iodide

TABLE 2 - PROPOSED TS REQUIREMENTS										
System Description					Proposed TS Requirements					
	TS Section	System	Bed Thickness (inches)	Credited Efficiency (methyl iodide)	Test Penetration (methyl iodide)	Safety Factor	Test Standard	Test Temp (°C)	Test RH	Face Velocity (fpm)
Unit 2	4.6.6.1	SBVS	2	50%	10%	5	ASTM D3803-1989	30	95%	40
	4.7.7	CREACS	4	99%	0.175%	5.7	ASTM D3803-1989	30	95%	40

4.0 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. NRC, the State of Florida does not desire notification of issuance of license amendments.

5.0 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 1923). Accordingly, the 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.

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

Principal Contributor: J. Segala

Date: February 17, 2000

cc:
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