

October 28, 1987

Docket Nos. 50-335
and 50-389

Mr. C. O. Woody
Group Vice President
Nuclear Energy
Florida Power & Light Company
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Dear Mr. Woody:

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. 66014 AND 66015)

The Commission has issued the enclosed Amendment Nos. 87 and 26 to Facility Operating License Nos. DPR-67 and NPF-16 for the St. Lucie Plant, Unit Nos. 1 and 2. These amendments consist of changes to the Technical Specifications in response to your application dated August 17, 1987.

These amendments change a surveillance requirement dealing with a special test exception on shutdown margin. The time period within which a scram test must be performed prior to reducing the shutdown margin below specified limits is increased from 24 hours to 7 days.

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

Sincerely,

Original signed by

E. G. Tourigny, Project Manager
Project Directorate II-2
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 87 to DPR-67
- 2. Amendment No. 26 to NPF-16
- 3. Safety Evaluation

cc w/enclosures:
See next page

LA:PMR22
D:Miller
9/2/87

PM:PD22
ETourigny
9/1/87

RSB
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OGC
9/10/87

D:PD22
HBerkow
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representative
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OGC
myoung
10/20/87

Mr. C. O. Woody
Florida Power & Light Company

St. Lucie Plant

cc:

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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. 87
License No. DPR-67

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 17, 1987, 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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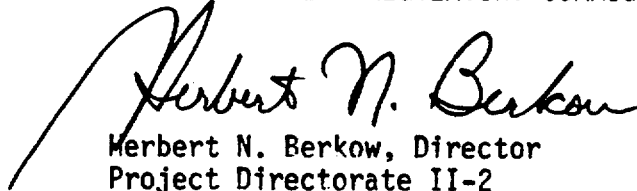
2. Accordingly, Facility Operating License No. DPR-67 is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and by amending paragraph 2.C.(2) to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 87, 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



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 28, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 87

TO FACILITY OPERATING LICENSE NO. DPR-67

DOCKET NO. 50-335

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Remove Pages

3/4 10-1

Insert Pages

3/4 10-1

3/4.10 SPECIAL TEST EXCEPTIONS

SHUTDOWN MARGIN

LIMITING CONDITION FOR OPERATION

3.10.1 The SHUTDOWN MARGIN requirement of Specification 3.1.1.1 may be suspended for measurement of CEA worth and shutdown margin provided reactivity equivalent to at least the highest estimated CEA worth is available for trip insertion from OPERABLE CEA(s).

APPLICABILITY: MODE 2.

ACTION:

- a. With any full length CEA not fully inserted and with less than the above reactivity equivalent available for trip insertion, immediately initiate and continue boration at > 40 gpm of 1720 ppm boric acid solution or its equivalent until the SHUTDOWN MARGIN required by Specification 3.1.1.1 is restored.
- b. With all full length CEAs inserted and the reactor subcritical by less than the above reactivity equivalent, immediately initiate and continue boration at ≥ 40 gpm of 1720 ppm boric acid solution or its equivalent until the SHUTDOWN MARGIN required by Specification 3.1.1.1 is restored.

SURVEILLANCE REQUIREMENTS

4.10.1.1 The position of each full length CEA required either partially or fully withdrawn shall be determined at least once per 2 hours.

4.10.1.2 Each CEA not fully inserted shall be demonstrated capable of full insertion when tripped from at least the 50% withdrawn position within 7 days prior to reducing the SHUTDOWN MARGIN to less than the limits of Specification 3.1.1.1.



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

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. 26
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 17, 1987, 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.

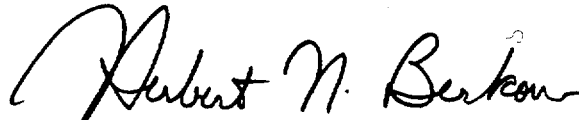
2. Accordingly, Facility Operating License No. NPF-16 is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and by amending paragraph 2.C.2 to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 26, 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



Herbert N. Berkow, Director
Project Directorate II-2
Division of Reactor Projects-I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 28, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 26
TO FACILITY OPERATING LICENSE NO. NPF-16
DOCKET NO. 50-389

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Remove Pages

3/4 10-1

Insert Pages

3/4 10-1

3/4.10 SPECIAL TEST EXCEPTIONS

3/4.10.1 SHUTDOWN MARGIN

LIMITING CONDITION FOR OPERATION

3.10.1 The SHUTDOWN MARGIN requirement of Specification 3.1.1.1 may be suspended for measurement of CEA worth, MTC, and SHUTDOWN MARGIN provided reactivity equivalent to at least the highest estimated CEA worth is available for trip insertion from OPERABLE CEA(s).

APPLICABILITY: MODES 2 and 3*.

ACTION:

- a. With any full-length CEA not fully inserted and with less than the above reactivity equivalent available for trip insertion, immediately initiate and continue boration at greater than or equal to 40 gpm of a solution containing greater than or equal to 1720 ppm boron or its equivalent until the SHUTDOWN MARGIN required by Specification 3.1.1.1 is restored.
- b. With all full-length CEAs fully inserted and the reactor subcritical by less than the above reactivity equivalent, immediately initiate and continue boration at greater than or equal to 40 gpm of a solution containing greater than or equal to 1720 ppm boron or its equivalent until the SHUTDOWN MARGIN required by Specification 3.1.1.1 is restored.

SURVEILLANCE REQUIREMENTS

4.10.1.1 The position of each full-length CEA required either partially or fully withdrawn shall be determined at least once per 2 hours.

4.10.1.2 Each CEA not fully inserted shall be demonstrated capable of full insertion when tripped from at least the 50% withdrawn position within 7 days prior to reducing the SHUTDOWN MARGIN to less than the limits of Specification 3.1.1.1.

* Operation in MODE 3 shall be limited to 6 consecutive hours.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 87 AND 26

TO FACILITY OPERATING LICENSE NOS. DPR-67 AND NPF-16

FLORIDA POWER & LIGHT COMPANY, ET AL.

ST. LUCIE PLANT, UNITS NOS. 1 AND 2

DOCKET NOS. 50-335 AND 50-389

INTRODUCTION

By application dated August 17, 1987, the Florida Power & Light Company (the licensee), requested a change to the Technical Specifications (TS) for the St. Lucie Plant, Unit Nos. 1 and 2. The proposed change would increase from 24 hours to 7 days the time period within which a scram test must be performed prior to reducing the shutdown margin below specified limits (TS 4.10.1.2). This surveillance requirement is part of the special test exception on shutdown margin (TS 3/4.10.1). The special test exception on shutdown margin is in effect during mode 2 for each unit and no more than six consecutive hours during mode 3 for Unit 2 only.

EVALUATION

The special test exception on shutdown margin provides that a minimum amount of Control Element Assembly (CEA) worth is immediately available for reactivity control when CEA worth measurement tests are performed. The minimum amount of worth is that reactivity equivalent to the highest estimated CEA worth. The CEA worth measurement tests are part of the low power physics testing program that is followed after a refueling outage. The objective of the physics testing program is to measure various physics related parameters and ensure that they compare favorably to calculated values. The licensee must trip (fully insert) each CEA that is not fully inserted from at least the 50% withdrawn position prior to reducing the shutdown margin to less than the limits of Specification 3.1.1.1. The present specification requires the trip test within 24 hours of reducing the shutdown margin. In this way, the licensee is assured that all the CEA's that are not fully inserted can trip while the shutdown margin is suspended.

Another technical specification requirement also requires tripping the CEA's, but for a different purpose. The tripping of CEA's in this case deals with CEA drop time. The CEA drop times must be calculated before initial reactor criticality following each refueling outage. The drop time tests before initial criticality are usually performed more than one day (24 hours) before the CEA worth measurements are made. Thus, in practice, the CEA's are tripped at

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least twice following a refueling outage: once for the drop time measurements and once previous to the period of time that the shutdown margin limit is suspended.

The licensee determined that there would be a slight increase in the probability of a stuck CEA occurring between the time when the CEAs are tripped for the drop time tests and the time that the CEAs are tripped before suspending the shutdown margin limit. The licensee determined the increased probability to be 1.3×10^{-3} based upon site operating data. The licensee stated that the increased probability will have an insignificant impact to the combined probability of a positive reactivity insertion event occurring and a CEA not inserting due to the change in the surveillance requirements. The staff agrees that there is a small increase in probability that a stuck CEA may occur by changing the trip time from 24 hours to seven days.

The licensee also analyzed a number of postulated events that could occur during this period of time as part of the safety analysis. The events are uncontrolled CEA withdrawal, inadvertent boron dilution, CEA ejection, and cooldown events. The cooldown events are further divided into main steam line break, main feedwater line break, main steam safety valve spuriously opening, and inadvertent opening of an atmosphere dump valve. The staff notes that these events can be postulated to occur not only during the time period between the CEA drop time measurements and the time that the shutdown margin limit requirement is suspended, but also during the period of time that the shutdown margin limit is suspended. The licensee concluded that as a result of any one of the postulated events, there would be no significant changes in the results and consequences of that postulated event. The staff agrees that the results and consequences of any particular event are not significantly altered as a result of the licensee's proposed change.

The staff also evaluated whether there could be any core geometry changes between the time that the CEAs are tripped for drop time measurement and the time the shutdown margin limit requirement would be suspended. The period of time considered is up to seven days. Our evaluation concludes that there are no significant core geometry changes during this period of time. The reactor vessel head is bolted to the reactor pressure vessel during this period of time. Thus, all components within the reactor pressure vessel are fixed in place. The reactor protection system is operable and any scram signal would trip the withdrawn CEAs. If any problem occurs with an individual CEA, such as a CEA drive mechanism, current TS requires the drop time to be measured again for that particular CEA to ensure that the CEA will trip and insert within the required drop time. Thus the staff believes that this is adequate assurance that the CEAs would be trippable during the seven day period prior to suspending the shutdown margin limit.

Based upon the above described analyses by the licensee and the independent evaluation of the staff, the staff finds that the proposed change is acceptable.

ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or a change in a surveillance requirement. The staff has determined that the amendments involve 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 published a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these amendments meet 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.

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.

Date: October 28, 1987

Principal Contributor:

E. Tourigny