Docket No. 50-335

JAN 10 1977

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Florida Power & Light Company
ATTN: Dr. Robert E. Uhrig
Vice President
Nuclear and General Engineering
Post Office Box 013100
Miami, Florida 33101

Gentlemen:

The Commission has issued the enclosed Amendment No. 11 to Facility Operating License No. DPR-67 for the St. Lucie Plant Unit No. 1. The amendment consists of a revision to License No. DPR-67 in response to your request dated July 9, 1976. Your proposed amendment has been modified and the modification has been discussed with representatives of your staff.

The amendment revises the Control Element Assembly (CEA) Block Circuit surveillance requirements.

Copies of the related Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Original Signed by:
Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Enclosures:
1. Amendment No. 11 to License No. DPR-67
2. Safety Evaluation
3. Notice

cc w/enclosures:
See next page

I notified FPL on 1/10/77 that this amendment was issued.
R. Silver

OELD
1/7/77

OFFICE	DOR:ORB #2	DOR:ORB #2	DOR:STS	DOR:RSB/OT	DOR:AD/OT	DOR:ORB #2
SURNAME	RDSilver:ah	RMDiggs	JMMcGough	RBaer	DEisenhut	DLZiemann
DATE	1/3/77	1/3/77	1/10/77	1/10/77	1/10/77	1/10/77

Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U.S. GOVERNMENT PRINTING OFFICE: 1974-526-166

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Weldon B. Lewis
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cc w/enclosures and cy of
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Power Plant Siting Section
State of Florida
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FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-335

ST. LUCIE PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 11
License No. DPR-67

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by the Florida Power & Light Company (the licensee) dated July 9, 1976, 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, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C(2) of Facility Operating License No. DPR-67 is hereby amended to read as follows:

"(2) Technical Specifications

The Technical Specifications contained in Appendices A and B as revised by this license amendment and all previously issued license amendments are hereby incorporated in this license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised."

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by:
Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance:

JAN 10 1977

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ATTACHMENT TO LICENSE AMENDMENT NO. 11

FACILITY OPERATING LICENSE NO. DPR-67

DOCKET NO. 50-335

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change. The corresponding overleaf page 3/4 1-21 is also provided to maintain document completeness. No changes were made on 3/4 1-21.

Page
3/4 1-22

LIMITING CONDITION FOR OPERATION (Continued)

2. Declared inoperable. After declaring the CEA inoperable, operation in MODES 1 and 2 may continue for up to 7 days per occurrence with a total accumulated time of $\leq$ 14 days per calendar year provided all of the following conditions are met:

   a) The THERMAL POWER level shall be reduced to $\leq$ 70% of the maximum allowable THERMAL POWER level for the existing Reactor Coolant Pump combination within one hour; if negative reactivity insertion is required to reduce THERMAL POWER, boration shall be used.

   b) Within one hour after reducing the THERMAL POWER as required by a) above, the remainder of the CEAs in the group with the inoperable CEA shall be aligned to within 7.5 inches of the inoperable CEA while maintaining the allowable CEA sequence and insertion limits shown on Figure 3.1-2; the THERMAL POWER level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation.

e. With one full length CEA misaligned from any other CEA in its group by 15 inches or more, reduce THERMAL POWER to $\leq$ 70% of the maximum allowable THERMAL POWER level for the existing Reactor Coolant Pump combination within one hour; if negative reactivity insertion is required to reduce THERMAL POWER, boration shall be used. Within one hour after reducing THERMAL POWER as required above, either:

   1. Restore the CEA to within the above specified alignment requirements, or

   2. Declare the CEA inoperable. After declaring the CEA inoperable, POWER OPERATION may continue for up to 7 days per occurrence with a total accumulated time of $\leq$ 14 days per calendar year provided the remainder of the CEAs in the group with the inoperable CEA are aligned to within 7.5 inches of the inoperable CEA while maintaining the allowable CEA sequence and insertion limits shown on Figure 3.1-2; the THERMAL POWER level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation.

FULL LENGTH CEA POSITION (Continued)

LIMITING CONDITION FOR OPERATION (Continued)

f. With more than one full length CEA inoperable or misaligned from any other CEA in its group by 15 inches (indicated position) or more, be in HOT STANDBY within 6 hours.

SURVEILLANCE REQUIREMENTS

4.1.3.1.1 The position of each full length CEA shall be determined to be within 7.5 inches (indicated position) of all other CEAs in its group at least once per 12 hours except during time intervals when the Deviation Circuit and/or CEA Block Circuit are inoperable, then verify the individual CEA positions at least once per 4 hours.

4.1.3.1.2 Each full length CEA not fully inserted shall be determined to be OPERABLE by movement of at least 7.5 inches in any one direction at least once per 31 days.

4.1.3.1.3 The CEA Block Circuit shall be demonstrated OPERABLE at least once per 31 days by a functional test which verifies that the circuit prevents any CEA from being misaligned from all other CEAs in its group by more than 7.5 inches (indicated position).

4.1.3.1.4 The CEA Block Circuit shall be demonstrated OPERABLE by a functional test which verifies that the circuit maintains the CEA group overlap and sequencing requirements of Specification 3.1.3.6 and that the circuit prevents the regulating CEAs from being inserted beyond the Power Dependent Insertion Limit of Figure 3.1-2:

*a. Prior to each entry into MODE 2 from MODE 3, except that such verification need not be performed more often than once per 31 days, and

b. At least once per 6 months.

*The licensee shall be excepted from compliance during the startup test program for an entry into MODE 2 from MODE 3 made in association with a measurement of power defect.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 11 TO LICENSE NO. DPR-67

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE PLANT UNIT NO. 1

DOCKET NO. 50-335

INTRODUCTION

By letter dated July 9, 1976, Florida Power & Light Company (FPL) requested an amendment to Facility Operating License No. DPR-67 for the St. Lucie Plant Unit No. 1. The amendment request would revise the Control Element Assembly (CEA) Block Circuit surveillance requirements. The amendment proposed by FPL has been modified to meet NRC requirements and the modification has been discussed with representatives of the FPL staff.

BACKGROUND

The control element assembly (CEA) configuration is controlled during startup, power and controlled shutdown operations to assure that: (1) acceptable power distribution limits are maintained, (2) minimum shutdown margin is maintained and (3) the potential effects of a CEA ejection accident are limited to acceptable levels. Automatic controls or procedural controls by operators maintain the configuration within acceptable limits. The CEA block circuit provides a backup to assure that the CEA configuration remains acceptable even if there is a failure of automatic control or procedural control.

The CEAs are normally moved in groups. The CEA block circuit monitors CEA position to detect conditions of excessive individual CEA deviation within a group, CEA group insertion or withdrawal out of proper sequence, CEA group insertion or withdrawal in a manner to cause excessive overlap in position with other CEA groups, and CEA group power dependent insertion limit violations. An alarm and a CEA motion inhibit (rod block) is activated upon the detection of any of the above conditions.

Technical specifications require that the CEA block circuit be operable during startup and power operation. If the CEA block circuit is inoperable, operations may continue provided the CEA drive system mode switch is in "manual" or "off" position and if all full-length CEA groups are withdrawn except for a specified group (group 7) which may be inserted to 5% of its travel length.

The technical specifications require functional testing of the CEA block circuit every 31 days. FPL has proposed that the frequency of functional testing of the group configuration control features of the circuit be changed to once per refueling interval (approximately every 18 months). According to discussions with FPL, a mandatory complete functional test of the group configuration control features of the CEA block circuit would necessitate a shutdown once per month.

The specification proposed by FPL would require a functional test every 31 days to verify that the circuit prevents excessive individual CEA deviation within a group.

EVALUATION

The plant will be operated at steady state power with the full-length CEAs virtually withdrawn as required by Section 3.1.3.6 of the Technical Specifications. If a failure caused deep insertion of a rod group out of sequence, and/or beyond the power dependent insertion limit, periodic operator surveillance of group positions required by technical specifications would alert the operator to take corrective action. If the inadvertent insertion caused significant power distribution effects, it is probable that systems which monitor power distribution would cause alarms. Therefore, during routine steady state operation, it is highly unlikely that reliance for maintenance of acceptable conditions would be placed on the CEA block circuit even if single failure caused an inadvertent CEA group insertion. The fact that safety during normal operation does not heavily rely on the operability of the CEA block circuit is implicit in the limiting conditions for operation which allow continued operation in manual operation modes even if the CEA block circuit is known to be inoperable. Therefore, a surveillance requirement for this circuit which is likely to force the reactor to be shut down periodically is not considered warranted nor was it ever intended. However, the CEA block circuit does provide backup protection to assure that CEA group configurations remain within analyzed conditions. Because

the circuit provides considerable assurance that the CEA group configurations are correct and because FPL has not provided sufficient analyses to justify a relaxation in functional test frequency to once per 18 months, we are instead revising the Technical Specifications to maintain a frequent functional test requirement, but essentially eliminating the need for forced shutdowns to perform the test. The revised specification would require a test of the group configuration control features of the CEA block circuit at each startup but not more frequently than once per 31 days and no less frequently than once per 6 months. In addition, FPL has informed us that the next scheduled shutdown will be followed by a test which requires a rapid return to power which would not be compatible with a functional test of the CEA block circuit. Since the CEA block circuit was successfully tested early in December, a single exception associated with the next scheduled outage will have a negligible effect on assurance of the circuits operability. We consider that the revised specifications, as we have modified them, provide assurance of circuit operability and assurance of availability of protection against improper CEA group configuration which is essentially equivalent to the original specifications.

ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: January 10, 1977

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-335

FLORIDA POWER & LIGHT COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. [illegible] to Facility Operating License No. DPR-67, issued to Florida Power & Light Company (the licensee), which revised the Technical Specifications for operation of the St. Lucie Plant Unit No. 1 (the facility) located in St. Lucie County, Florida. The amendment is effective as of its date of issuance.

The amendment revises the Control Element Assembly (CEA) Block Circuit surveillance requirements.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

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The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated July 9, 1976, (2) Amendment No. 11 to License No. DPR-67, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Indian River Junior College Library, 3209 Virginia Avenue, Ft. Pierce, Florida 33450. A single copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 10th day of January, 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed by:
Dennis L. Ziemann

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

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SURNAME ➤						
DATE ➤						