

Docket File

FEBRUARY 22 1980

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REGULATORY DOCKET FILE COPY

Docket No. 50-251

Dr. Robert E. Uhrig, Vice President
Advanced Systems and Technology
Florida Power and Light Company
Post Office Box 529100
Miami, Florida 33152

Dear Dr. Uhrig:

The Commission has issued the enclosed Amendment No. 44 to Facility Operating License No. DPR-41 for the Turkey Point Plant Unit No. 4. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letter dated January 23, 1980, supplemented February 1 and February 14, 1980.

The amendment permits continued operation of the Turkey Point Plant, Unit No. 4 for an additional four equivalent full power weeks from that authorized by Amendment No. 43 dated December 14, 1979 for a total of eight equivalent full power months plus four equivalent full power weeks from June 1, 1979 but not later than April 1, 1980, at which time the steam generators shall be inspected.

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

Sincerely,

Original Signed By

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Enclosures:

1. Amendment No. 44 to DPR-41
2. Safety Evaluation
3. Notice of Issuance

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

Dup

February 22, 1980

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Dr. Robert E. Uhrig, Vice President
Advanced Systems and Technology
Florida Power and Light Company
Post Office Box 529100
Miami, Florida 33152

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

Sincerely,

A handwritten signature in cursive script, appearing to read "A. Schwencer".

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Enclosures:

1. Amendment No. 44 to DPR-41
2. Safety Evaluation
3. Notice of Issuance

cc: w/enclosures
See next page

Robert E. Uhrig
Florida Power and Light Company

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Florida Power and Light Company
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Honorable Dewey Knight
County Manager of Metropolitan
Dade County
Miami, Florida 33130

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U. S. Nuclear Regulatory Commission
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-251

TURKEY POINT NUCLEAR GENERATING, UNIT NO. 4

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 44
License No. DPR-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power and Light Company (the licensee) dated January 22, 1980 supplemented February 1 and February 14, 1980 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, paragraph 3.D is modified to amend sub-paragraphs 3.D.(1) and 3.D.(2). Sub-paragraphs 3.D.(1) and 3.D.(2) read as follows:

D. Steam Generator Operation

- (1) After operation in Cycle 6 of eight equivalent full power months and four equivalent full power weeks from June 1, 1979, but not later than April 1, 1980, Turkey Point Unit 4 shall be brought to the cold shutdown condition and the steam generators shall be inspected unless: (1) an inspection of the steam generators is performed within this period as a result of the requirements in 2, 3 and 4 below, or (2) an acceptable analysis of the susceptibility for stress corrosion cracking of tubing is submitted to explicitly justify continued operation of Unit No. 4 beyond the authorized period of operation. Any analysis justifying continued operation must be submitted at least 45 days prior to the expiration date of the authorized period of operation. For the purpose of this requirement, equivalent operation is defined as operation with the reactor coolant at a temperature greater than 350°F. Nuclear Regulatory Commission (NRC) approval shall be obtained before resuming power operation following this inspection.
- (2) Reactor coolant to secondary leakage through the steam generator tubes shall be limited to 0.3 gpm per steam generator. With a steam generator tube leakage greater than this limit, the reactor shall be brought to the cold shutdown condition within 24 hours. A full steam generator inspection shall be performed and NRC approval shall be obtained before resuming power operation following this inspection. In addition if, during the period to April 1, 1980, Unit 4 is shutdown to repair a steam generator tube leak, a full steam generator inspection shall be performed.

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

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachment:
Changes to Facility Operating
License No. DPR-41

Date of Issuance: February 22, 1980

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 44 TO FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NO. 50-251

Replace the following pages of the Facility Operating License No. DPR-41 with the attached pages as indicated. The changed area in the license is indicated by a marginal line.

Remove Pages

4
5

Insert Pages

4
5

B. Technical Specifications

The Technical Specifications contained in Appendices A and B as revised through Amendment No. 43 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

C. This license is subject to the following conditions for the protection of the environment:

- (1) The applicant shall pursue evaluations of alternatives to the proposed cooling channel system during construction, interim operation, and evaluation of the channel system. These evaluations shall include at least the following:
 - (a) Study of availability of groundwater or other alternative sources of surface water to use in the cooling system.
 - (b) Study of applicability of mechanical cooling devices, including powered spray modules and cooling towers.
 - (c) Study of marine environmental impacts of once-through cooling alternatives (described in Section X of the AEC Final Environmental Statement on Turkey Point Units 3 and 4, July 1972).
- (2) The applicant shall take appropriate corrective action on any adverse effects determined as a result of monitoring and study programs. To the fullest extent practicable, the applicant shall utilize results of study programs in improving and modifying the operation of the facility and its cooling system so as to achieve a minimal adverse environmental impact.

D. Steam Generator Operation

- (1) After operation in Cycle 6 of eight equivalent full power months and four equivalent full power weeks from June 1, 1979, but not later than April 1, 1980, Turkey Point Unit 4 shall be brought to the cold shutdown condition and the steam generators shall be inspected unless: (1) an inspection

of the steam generators is performed within this period as a result of the requirements in 2, 3 and 4 below, or (2) an acceptable analysis of the susceptibility for stress corrosion cracking of tubing is submitted to explicitly justify continued operation of Unit No. 4 beyond the authorized period of operation. Any analysis justifying continued operation must be submitted at least 45 days prior to the expiration date of the authorized period of operation. For the purpose of this requirement, equivalent operation is defined as operation with the reactor coolant at a temperature greater than 350°F. Nuclear Regulatory Commission (NRC) approval shall be obtained before resuming power operation following this inspection.

- (2) Reactor coolant to secondary leakage through the steam generator tubes shall be limited to 0.3 gpm per steam generator. With a steam generator tube leakage greater than this limit, the reactor shall be brought to the cold shutdown condition within 24 hours. A full steam generator inspection shall be performed and NRC approval shall be obtained before resuming power operation following this inspection. In addition if, during the period to April 1, 1980, Unit 4 is shutdown to repair a steam generator tube leak, a full steam generator inspection shall be performed.
- (3) The concentration of radioiodine in the reactor coolant shall be limited to 1.0 microcurie/gram during normal operation and to 30 microcuries/gram during power transients.
- (4) Reactor operation shall be terminated and NRC approval shall be obtained prior to resuming operation if primary to secondary leakage attributable to the denting phenomena is detected in 2 or more tubes during any 20 day period.
- (5) The Metal Impact Monitoring System (MIMS) shall be contained in operation with the capability of detecting loose objects. If the MIMS is out of service in other than cold shutdown or refueling mode of operation, this fact shall be reported to the NRC. Any abnormal indications from the MIMS shall also be reported to the NRC by telephone by the next working day and by a written evaluation within two weeks.
- (6) Following each startup from below 350°F, core barrel movement shall be evaluated using neutron noise techniques.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 44 TO FACILITY OPERATING LICENSE NO. DPR-41
FLORIDA POWER AND LIGHT COMPANY
TURKEY POINT NUCLEAR GENERATING, UNIT NO. 4
DOCKET NO. 50-251

INTRODUCTION AND BACKGROUND

By letter (1-79-122) dated May 18, 1979, Florida Power and Light Company (the licensee) submitted the results of the most recent steam generator inspection for Turkey Point Unit 4 and requested authorization to operate for ten (10) equivalent ^(18/2) months, beginning June 1, 1979, prior to the next steam generator inspection. The technical basis for the preventative plugging program implemented subsequent to the inspection was consistent with that for programs performed previously at this and other similarly degraded units. These programs have been determined adequate by the NRC to support six (6) equivalent months of operation. The plugging criteria implemented during this inspection were more conservative than those implemented previously for six (6) months operation to support the request for ten (10) equivalent months of operation.

As indicated in our Safety Evaluation dated June 15, 1979, we did not have an adequate technical basis to predict steam generator performance for periods longer than six (6) months at a time, and that our consideration of extended operation beyond six months would depend on the operating experience at this and similarly degraded PWR units. Accordingly, license Amendment 41 authorized Turkey Point Unit 4 to operate for only six (6) equivalent months.

By letter (1-79-215) dated August 7, 1979, the licensee again requested an amendment to the operating license for Turkey Point Unit 4 to allow ten (10) equivalent months of operation prior to the next steam generator inspection. On the basis that (1) the implemented plugging criteria were significantly more conservative than the criteria already accepted by NRC as being adequate to support six (6) equivalent months of operation, and (2) the authorized six (6) month operating interval had essentially been completed with no detectable steam generator leakage, License Amendment 43 authorized extended operation beyond six (6) equivalent months for an additional two (2) equivalent months.

(1) Equivalent operation is defined as operation with the primary coolant temperature greater than 350°F.

(2) The licensee submittals refer to "effective full power" months which we interpret to mean "equivalent months."

By letter (L-80-32) dated January 23, 1980, the licensee has again requested an additional two (2) month extension which would increase the total operating interval to ten (10) equivalent months and which would permit operation of Turkey Point Unit 4 until its next scheduled outage. The licensee submitted its technical justification by letter dated February 1, 1980 which cited the previous inspection results, preventive tube plugging for ten (10) equivalent months, leak free operating experience since the previous inspection, and submitted analyses.

EVALUATION

We have reviewed the licensee's submittals dated January 23 and February 1 and 14, 1980 and find that the technical basis claimed to support a ten (10) month operating interval is essentially the same as submitted previously by the licensee in its letter dated May 18, 1979. This technical basis was discussed and evaluated in our Safety Evaluation Report supporting License Amendments 41 and 43 which authorized a six (6) month operating interval and a subsequent two (2) month extension, respectively.

We continue to have reservations about the validity of extrapolating the prediction methodology beyond the operating interval of six (6) months. We believe there is not a sufficient technical basis to reasonably conclude that the previously implemented plugging criteria are sufficiently conservative to support a ten (10) month operating interval between steam generator inspections at this unit. However, we believe a four (4) equivalent weeks of operation beyond the currently authorized eight (8) month operating interval can be justified on the basis that (1) the currently authorized eight month interval has essentially been completed with no detectable leakage, (2) the 0.30 gpm primary to secondary leakage rate limit ensures that appropriate corrective action will be taken, should a leak actually occur, such that an individual crack will not become unstable during normal operation or a design basis accident, (3) the probability of a design basis accident during a four (4) week period of operation is small, and (4) the probability that a design basis accident would occur during the short period of time between leak detection and subsequent plant shutdown is even smaller.

Therefore, we find that the operation of Turkey Point Unit 4 may be extended by four (4) equivalent weeks beyond the currently authorized interval of eight (8) equivalent months without undue risk to public health or safety. We do recommend, however, that the licensee be required to perform a steam generator inspection (in all steam generators) in the event of a plant shutdown during the current operating interval due to steam generator leakage in excess of the 0.3 gpm license restriction on the leakage rate.

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: February 22, 1980

7590-01

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-251FLORIDA POWER AND LIGHT COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 44 to Facility Operating License No. DPR-41 issued to Florida Power and Light Company (the licensee), which revised Technical Specifications for operation of the Turkey Point Nuclear Generating, Unit No. 4 (the facility) located in the Dade County, Florida. The amendment is effective as of the date of issuance.

The amendment permits continued operation of the Turkey Point Plant, Unit No. 4 for an additional four equivalent full power weeks from that authorized by Amendment No. 43 dated December 14, 1979 for a total of eight equivalent full power months and four equivalent full power weeks from June 1, 1979 but not later than April 1, 1980, at which time the steam generators shall be inspected.

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 this amendment does not involve a significant hazards consideration.

- 2 -

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 January 23, 1980 supplemented February 1 and February 14, 1980, (2) Amendment No. 44 to License No. DPR-41, 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 Environmental and Urban Affairs Library, Florida International University, Miami, Florida 33199. A 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 22nd day of February, 1980.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors