

DEC 3 1976

Docket No. 50-251

Florida Power & Light Company
ATTN: Dr. Robert E. Uhrig
Vice President
P. O. Box 013100
Miami, Florida 33101

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TBAbernathy
GLear
RBAer
M Fletcher

Enclosed is a signed original of an Order for Modification of License dated December 3, 1976, issued by the Commission for Turkey Point Unit No. 4. This order restricts the Technical Specification limit for total nuclear peaking factor (F_0) to 2.08. This order also requires submittal of a corrected ECCS analysis within 7 days.

A copy of the Order is being filed with the Office of the Federal Register for publication.

Sincerely,

Original signed by

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosure:
Order for Modification
of License

cc: See page 2

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SEE PREVIOUS YELLOW FOR CONCURRENCES

OFFICE >						
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OPA (Clare Miles)

Enclosed is a signed original of an Order for Modification of License dated December , 1976, issued by the Commission for Turkey Point Unit No. 4. This order restricts the Technical Specification limit for total nuclear peaking factor (F) to 2.08. This order also requires submittal of a corrected ECCS analysis within 30 days.

A copy of the Order is being filed with the Office of the Federal Register for publication.

Sincerely,

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosure:
Order for Modification
of License

cc: See page 2

*with
Correction on p. A
The document is
in proper form
to be processed
12/2/76 Mr. Rusche's initials*

	OT: RSB RBAer 12/1/76	B. RUSCHE 12/2/76				
OFFICE➤	ORB #3	ORB #3	ORB #2	OELD	ORB #3	DOR
SURNAME➤	CParrish	Lear/Elliott	MFletcher		Goller/Eisenhut	Stello
DATE➤	11/30/76	11/30/76	12/1/76	11/ /76	12/3/76	12/3/76

Florida Power & Light Company

- 2 -

cc:

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Lowenstein, Newman, Reis & Axelrad
1025 Connecticut Avenue, N. W.
Suite 1214
Washington, D. C. 20036

Environmental & Urban Affairs Library
Florida International University
Miami, Florida 33199

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)	
)	
FLORIDA POWER AND LIGHT COMPANY)	Docket No. 50-251
)	
Turkey Point Plant Unit No. 4)	
)	

ORDER FOR MODIFICATION OF LICENSE

I.

The Florida Power and Light Company (the Licensee), is the holder of Facility Operating License No. DPR-41 which authorizes the operation of the nuclear power reactor known as Turkey Point Unit No. 4 (the facility) at steady state reactor power levels not in excess of 2200 thermal megawatts (rated power). The facility is a pressurized water reactor (PWR) located at the Licensee's site in Dade County Florida.

II.

In conformance with evaluations of the performance of the facilities' Emergency Core Cooling System (ECCS) submitted by the Licensee on March 10, 1975, and supplemented by letters dated April 10, April 30, May 15, and May 21, 1975, the Technical Specifications issued June 5, 1975, for the facility limit the reactor total nuclear peaking factor (FQ) to 2.32. The ECCS performance evaluation submitted by the Licensee was based upon a previously approved ECCS evaluation model developed by the Westinghouse Electric Corporation (Westinghouse), the designer of the facility, to conform with the requirements of the Commission's ECCS Acceptance Criteria, 10 CFR Part 50, §50.46 and Appendix K. The evaluation indicated that with a total nuclear peaking

factor limit as set forth above, and with the other limits set forth in the facility's Technical Specifications, the ECCS cooling performance for the facility would conform with the criteria contained in 10 CFR 50.46(b) which govern calculated peak clad temperature, maximum cladding oxidation, maximum hydrogen generation, coolable geometry and long term cooling.

On August 27, 1976, an Order for Modification of License was issued by the Commission for the Turkey Point Plant, Units Nos. 3 and 4. This Order restricted the total nuclear peaking factor (F_Q) to 2.11 in both reactors and required a submittal of an ECCS cooling performance reevaluation, as soon as possible. F_Q was restricted because the reactor upper head water temperature was found by measurement to be greater than the value used in previous evaluations of the ECCS cooling performance.

In performing the analysis which determined the effect that increased reactor upper head water temperature would have on the ECCS cooling performance, the NRC and the Licensee also determined the effect that plugged steam generator tubes would have on the ECCS cooling performance. Steam generator tubes are plugged when they are found (1) to be defective or (2) to have the potential for becoming defective. A defective steam generator tube could allow leakage of reactor coolant into the steam generating portion of the steam generator and the resulting release of radioactive material into the environment. The F_Q limit specified in our Order of August 27, 1976 was determined using sensitivity studies which predicted: (1) the effect of the increased reactor

upper head water temperature and (2) the effect of 4.0% plugged steam generator tubes on peak clad temperature following a loss-of-coolant accident (LOCA).

On November 24, 1976, the Licensee informed the NRC that the number of plugged generator tubes in Turkey Point Unit No. 4 would be increased from 4.0% to 7.0%. The additional number of tubes would be plugged to decrease the possibility for potential tube failure. On November 24, 1976, the Licensee submitted an evaluation which determined the effect on peak clad temperature and F_Q of the increased number of plugged steam generator tubes. The increase in plugged steam generator tubes from 4.0% to 7.0% indicated the necessity to further limit F_Q to a value of 2.08 in order to assure that the peak clad temperature following a LOCA does not exceed 2200 F. The NRC staff believes that an F_Q limit of 2.08 is appropriate and should be confirmed by NRC Order.

The F_Q limit of 2.08 was determined using the sensitivity studies available to the Licensee in August 1976. The Licensee has yet to submit his ECCS cooling performance evaluation as required by our Order of August 27, 1976. The staff expects that when the ECCS cooling performance reevaluation is submitted this reevaluation will demonstrate that operation with an F_Q limit of 2.08 will conform to the criteria of 10 CFR §50.46(b). However, the necessity to further limit F_Q at this time increases the desirability of having the ECCS cooling performance reevaluation performed as soon as possible. Therefore, an ECCS cooling performance reevaluation fully conforming to the requirements of 10 CFR §50.46 is to be provided (by the Licensee) for the facility

within 7 days following the date of this Order. The additional limitations set forth in this Order will provide reasonable assurance that the public health and safety will not be endangered.

Copies of the following documents are available for public inspection in the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C., 20555 and at the Environmental and Urban Affairs Library, Florida International University, Miami, Florida: (1) ECCS performance dated March 10, 1975 and supplemented by letters dated April 10, April 30, May 15 and May 21, 1975, (2) Amendment No. 8 to License DPR-41 dated June 5, 1975, (3) Letter dated November 24, 1975, from Florida Power and Light Company to Office of Nuclear Reactor Regulation and (4) The Order for Modification of License, In the Matter of Florida Power and Light Company (Turkey Point Plant, Units Nos. 3 and 4), Dockets Nos. 50-250 and 50-251, dated August 27, 1976, and (5) This Order for Modification of License, In the Matter of Florida Power and Light Company (Turkey Point Plant, Unit No. 4), Docket No. 50-251.

III.

Accordingly, pursuant to the Atomic Energy Act of 1954, as amended, and the Commission's Rules and Regulations in 10 CFR Parts 2 and 50, IT IS ORDERED THAT Facility Operating License No. DPR-41 are hereby amended by adding the following new provisions:

1. Within 7 days following the date of this Order, the Licensee shall submit a reevaluation of ECCS cooling performance calculated in accordance with an approved Westinghouse Evaluation Model.

2. Until further authorization by the Commission, the Technical Specification limit for total nuclear peaking factor (F_Q) shall be reduced to 2.08.

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in cursive script, appearing to read "Ben C. Rusche".

Ben C. Rusche, Director
Office of Nuclear Reactor Regulation

Dated in Bethesda, Maryland
this 3 day of December 1976