NRC FORM 195 (2-76)

U.S. NUCLEAR REGULATORY COMMISSION

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DOCKET NUMBER 50-250

FILE NUMBER

TO: Mr Stello

FROM: Florida Power & Light Co
Miami, Fla
R E Uhrig

DATE OF DOCUMENT 1-7-77

DATE RECEIVED 1-13-77

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PROP

INPUT FORM

NUMBER OF COPIES RECEIVED three signed

DESCRIPTION

Ltr notarized 1-7-77....trans the following:

2p

PLANT NAME: Turkey Point #3

ENCLOSURE

Amdt to OL/Change to Tech Specs: Consisting of revisions with regard to change to permit operation at original normal operating pressure of 2250 psia.....

5p

ACKNOWLEDGED
DO NOT REMOVE

FOR ACTION/INFORMATION ENVIRO 1-14-77 ehf

	ASSIGNED AD:		ASSIGNED AD:
✓	BRANCH CHIEF: Lear (5)		BRANCH CHIEF:
✓	PROJECT MANAGER: Elliot		PROJECT MANAGER:
✓	LIC. ASST.: Parrish		LIC. ASST.:

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							SITE TECH.
	PROJECT MANAGEMENT		REACTOR SAFETY		OPERATING TECH.		GAMMILL
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	HOUSTON		ROSZTOCZY	✓	BAER		
	PETERSON		CHECK	✓	BUTLER		SITE ANALYSIS
	MELTZ			✓	GRIMES		VOLLMER
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CONTROL NUMBER

381 A2

NRC FORM 195 (2-76)

P. O. BOX 013100, MIAMI, FL 33101

FLORIDA POWER & LIGHT COMPANY

January 7, 1977
L-77-7

Regulatory Docket File

RECEIVED JAN 13 1977 U.S. NUCLEAR REGULATORY COMMISSION Mail Section

DOCKETED USNRC JAN 13 1977 U.S. NUCLEAR REGULATORY COMMISSION Mail Section

Office of Nuclear Reactor Regulation
Attn: Victor Stello, Jr., Director
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Stello:

Re: Turkey Point Unit 3
Docket No. 50-250
Proposed Amendment to Facility
Operating License DPR-31

In accordance with 10 CFR 50.30, Florida Power & Light Company hereby submits three (3) signed originals and forty (40) copies of a request to amend Appendix A of Facility Operating License DPR-31.

This proposal will allow Unit 3 to be operated at its original normal operating pressure of 2250 psia. A safety evaluation supporting this pressure change has been prepared and is attached for your review. The proposed change is discussed below and shown on the accompanying Technical Specification pages bearing the date of this letter in the lower right hand corner. Approval of this proposed amendment is requested by February 18, 1977.

Page 1-6

The Unit 3 fuel residence time limit of Specification 1.16.1 is changed to 27,000 EFPH.

Pages 2.3-2 and 2.3-3

The equations for Overtemperature ΔT and Overpower ΔT in Specification 2.3 are revised to support operation at 2250 psia. The limit for low pressurizer pressure is also revised.

The Unit 3 DNB parameters of Specification 3.1.6 are revised to support operation at 2250 psia.

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The proposed amendment has been reviewed by the Turkey Point Plant Nuclear Safety Committee and the Florida Power & Light Company Nuclear Review Board. They have concluded that it does not involve an unreviewed safety question. A safety evaluation is attached.

Very truly yours,

Robert E. Uhrig

Robert E. Uhrig
Vice President

REU/MAS/GDW/hlc
Attachments

cc: Norman C. Moseley, Region II
Robert Lowenstein, Esq.

STATE OF FLORIDA)
) ss.
COUNTY OF DADE)

Robert E. Uhrig, being first duly sworn, deposes and says:

That he is a Vice President of Florida Power & Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this said document are true and correct to the best of his knowledge, information, and belief, and that he is authorized to execute the document on behalf of said Licensee.

Robert E. Uhrig

Robert E. Uhrig

Subscribed and sworn to before me this

7th day of January, 1977

Helen L. Carson

NOTARY PUBLIC, in and for the County of Dade, State of Florida

NOTARY PUBLIC STATE OF FLORIDA AT LARGE
MY COMMISSION EXPIRES NOV. 30 1979
BONDED THRU GENERAL INS. UNDERWRITERS

My commission expires: _____

1.16 INTERIM LIMITS

1.16.1 Fuel Residence Time Limit

The fuel residence time for Unit 3 shall be limited to 27,000 EFPH. The fuel residence time for Unit 4 shall be limited to 30,000 EFPH.

1.16.2 Reactor Coolant Pumps Operation

The reactor shall not be operated with less than three reactor coolant pumps in operation.

1.17 LOW POWER PHYSICS TESTS

Low power physics tests are tests below a nominal 5% of rated power which measure fundamental characteristics of the reactor core and related instrumentation.

Reactor Coolant Temperature

Overtemperature $\Delta T \leq \Delta T_o \left[K_1 - 0.0107 \ (T - 574) + 0.000453 \ (P-2235) - f(\Delta q) \right]$

ΔT_o = Indicated ΔT at rated power

T = Average temperature, F

P = Pressurizer pressure, psig

$f(\Delta q)$ = a function of the indicated difference between top and bottom detectors of the power-range nuclear ion chambers; with gains to be selected based on measured instrument response during startup tests such that:

For $(q_t - q_b)$ within +10 percent and -14 percent where q_t and q_b are the percent power in the top and bottom halves of the core respectively, and $q_t + q_b$ is total core power in percent of rated power, $f(\Delta q) = 0$.

For each percent that the magnitude of $(q_t - q_b)$ exceeds +10 percent, the Delta-T trip set point shall be automatically reduced by 3.5 percent of its value at interim power.

For each percent that the magnitude of $(q_t - q_b)$ exceeds -14 percent, the Delta-T trip set point shall be automatically reduced by 2 percent of its value at interim power.

K_1 (Three Loop Operation) = 1.095

(Two Loop Operation) = 0.88

Overpower $\Delta T \leq \Delta T_o \left[1.11 - K_1 \frac{dT}{dt} - K_2 (T - T') - f(\Delta q)\right]$

ΔT_o = Indicated ΔT at rated power, F

T = Average temperature, F

T' = Indicated average temperature at nominal conditions and rated power, F

K_1 = 0 for decreasing average temperature, 0.2 sec./F for increasing average temperature

K_2 = 0.00068 for T equal to or more than T'; 0 for T less than T'

$\frac{dT}{dt}$ = Rate of change of temperature, F/sec.

$f(\Delta q)$ = As defined above

Pressurizer

Low Pressurizer pressure - equal to or greater than 1835 psig

High Pressurizer pressure - equal to or less than 2385 psig.

High Pressurizer water level - equal to or less than 92% of full scale.

Reactor Coolant Flow

Low reactor coolant flow - equal to or greater than 90% of normal indicated flow.

Low reactor coolant pump motor frequency - equal to or greater than 56.1 Hz.

Under voltage on reactor coolant pump motor bus - equal to or greater than 60% of normal voltage.

Steam Generators

Low-low steam generator water level - equal to or greater than 5% of narrow range instrument scale.

6. DNB PARAMETERS

The following DNB related parameters limits shall be maintained during power operation:

a. Reactor Coolant System Tavg $\leq$ 578.2 °F

b. Pressurizer Pressure $\geq$ 2220 psia*

c. Reactor Coolant Flow $\geq$ 268,500 gpm

With any of the above parameters exceeding its limit, restore the parameter to within its limit within 2 hours or reduce thermal power to less than 5% of rated thermal power using normal shutdown procedures.

Compliance with a. and b. is demonstrated by verifying that each of the parameters is within its limits at least once each 12 hours.

Compliance with c. is demonstrated by verifying that the parameter is within its limits after each refueling cycle.

* Limit not applicable during either a THERMAL POWER ramp increase in excess of (5%) RATED THERMAL POWER per minute or a THERMAL POWER step increase in excess of (10%) RATED THERMAL POWER.

SAFETY EVALUATION

Introduction

This safety evaluation supports the following proposed changes to the Unit 3 Technical Specifications:

> Primary system operating pressure is increased from 2100 psia to the NSSS design pressure of 2250 psia. This affects fuel residence time, the Overtemperature ΔT equation, the Overpower ΔT equation, the LSSS limit for low pressurizer pressure, and the limits for certain DNB parameters.

Discussion

The clad flattening time, assuming 2250 psia system pressure, is predicted to be 27,000 EFPH for the limiting region (Region 2) using the current Westinghouse evaluation model.[1] Therefore, at a system pressure of 2250 psia, Region 2 has a nominal Cycle 4 allowed residence time of 9,900 EFPH (Cycle 2 lifetime was 6,800 EFPH, and Cycle 1 lifetime was 10,300 EFPH). The fuel residence time limit of Technical Specification 1.16.1 is revised accordingly.

Operation at the NSSS design pressure of 2250 psia leads to changes in Technical Specification 2.3 (Limiting Safety System Settings). The LSSS limit for low pressurizer pressure and the equations for Overtemperature ΔT and Overpower ΔT are revised to correspond with system operation at 2250 psia. The proposed Unit 3 limit and equations are the same as the limit and equations being used for Unit 4, which is now operating at the NSSS design pressure of 2250 psia.

Operation at the NSSS design pressure also leads to changes in Technical Specification 3.1.6 (DNB Parameters). The DNB limits for pressurizer pressure and T_{avg} are revised to correspond with system operation at 2250 psia. A DNB limit on reactor coolant flow is added to bring the format for the Unit 3 DNB Parameters into conformance with the format for the Unit 4 DNB Parameters. The proposed Unit 3 Parameters are the same as the DNB Parameters being used for Unit 4, which is now operating at 2250 psia.

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[1] George, R. A., et al "Revised Clad Flattening Model", WCAP 8377 (Proprietary) and WCAP 8381 (Non Proprietary), July, 1974.

Conclusions

Based on these considerations, (1) the proposed change does not increase the probability or consequences of accidents or malfunctions of equipment important to safety and does not reduce the margin of safety as defined in the basis for any technical specification, therefore, the change 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.