AEC DISTRIBUTION FOR PART 50 DOCKET MATERIAL
(TEMPORARY FORM)

CONTROL NO: 5907

FILE:

FROM:	DATE OF DOC	DATE REC'D	LTR	TWX	RPT	OTHER
Florida Power & Light Company Miami, Fla. 33101 Mr. R.E. Uhrig	6-21-74	6-28-74	X			

TO:	ORIG	CC	OTHER	SENT AEC PDR	SENT LOCAL PDR
J.F. O'Leary	3 signed			XXX	XXX

CLASS	UNCLASS	PROP INFO	INPUT	NO CYS REC'D	DOCKET NO:
	XXX		XXX	40	50-250/251

DESCRIPTION:
Ltr notarized 6-21-74...trans the following....

ENCLOSURES:
Proposed changes to tech specs for Turkey Point 3 & 4.....

ACKNOWLEDGED

DO NOT REMOVE

PLANT NAME: Turkey Point 3 & 4

FOR ACTION/INFORMATION 7-1-74 JB

BUTLER (L) W/ CYS	SCHWENCER (L) W/ CYS	ZIEMANN (L) W/ CYS	REGAN (E) W/ CYS
CLARK (L) W/ CYS	STOLZ (L) W/ CYS	DICKER (E) W/ CYS	✓ Lear W/ CYS
PARR (L) W/ CYS	VASSALLO (L) W/ CYS	KNIGHTON (E) W/ CYS	W/ CYS
KNIEL (L) W/ CYS	PURPLE (L) W/ CYS	YOUNGBLOOD (E) W/ CYS	W/ CYS

INTERNAL DISTRIBUTION

~~REG FILE~~	TECH REVIEW	DENTON	LIC ASST	A/T IND
✓ AEC PDR	HENDRIE	GRIMES	DIGGS (L)	BRAITMAN
✓ OGC	SCHROEDER	GAMMILL	GEARIN (L)	SALTZMAN
✓ MUNTZING/STAFF	MACCARY	KASTNER	GOULBOURNE (L)	B. HURT
CASE	KNIGHT	BALLARD	KREUTZER (E)	
GIAMBUSSO	PAWLICKI	SPANGLER	LEE (L)	PLANS
BOYD	SHAO		MAIGRET (L)	MCDONALD
MOORE (L)(LWR-2)	STELLO	ENVIRO	REED (E)	CHAPMAN
DEYOUNG (L)(LWR-1)	HOUSTON	MULLER	SERVICE (L)	✓ DUBE w/input
SKOVHOLT (L)	NOVAK	DICKER	SHEPPARD (L)	✓ E. COUPE
✓ GOLLER (L)	ROSS	KNIGHTON	SLATER (E)	✓ Schemel
P. COLLINS	IPPOLITO	YOUNGBLOOD	SMITH (L)	D. THOMPSON (2)
DENISE	TEDESCO	REGAN	✓ TEETS (L)	KLECKER
✓ REG OPR	LONG	✓ PROJECT MGR	WILLIAMS (E)	EISENHUT
FILE & REGION (3)	LAINAS	Cleveland	WILSON (L)	
MORRIS	BENAROYA	HARLESS		
STEELE	VOLLMER			

EXTERNAL DISTRIBUTION

✓ 1 - LOCAL PDR Homestead, Fla.	(1)(2)(10)-NATIONAL LABS	1-PDR-SAN/LA/NY
✓ 1 - TIC (ABERNATHY)	1-ASLBP(E/W Bldg, Rm 529)	1-BROOKHAVEN NAT LAB
✓ 1 - NSIC (BUCHANAN)	1-W. PENNINGTON, Rm E-201 GT	1-G. ULRIKSON, ORNL
1 - ASLB	1-B&M SWINEBROAD, Rm E-201 GT	1-AGMED (RUTH GUSSMAN) Rm B-127 GT
1 - P. R. DAVIS	1-CONSULTANTS	
✓ 16 - ACRS ~~HOLDING~~ Sent to Teets 7-1-74	NEWMARK/BLUME/AGBABIAN	1-RD..MUELLER, Rm F-309 GT

Regulatory File Cy.

P.O. BOX 3100 MIAMI, FLORIDA 33101

FLORIDA POWER & LIGHT COMPANY

June 21, 1974

Mr. John F. O'Leary, Director
Directorate of Licensing
Office of Regulation
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. O'Leary:

Re: Turkey Point Plant Units 3 & 4
Docket Nos 50-250 & 50-251
Proposed Amendment to Facility
Operating Licenses DPR-31 & DPR-41

In accordance with 10 CFR 50.59, Florida Power & Light Company submits herewith three signed originals and forty (40) conformed copies of a proposed amendment to Facility Operating Licenses DPR-31 & DPR-41.

The changes are as set forth in the revised Technical Specifications' pages (Appendix A to DPR-31 & DPR-41) and are as described below:

Page 3.2-3

In specification 3.2.6, Section (a), the hot channel factor limits have been broadened to include any range in the flux difference.

Page 3.2-4

In specification 3.2.6, a new Section (f) has been added to provide corrective action required in case the indicated axial flux difference exceeds the permissible range.

Page 3.2-5

Previous paragraph (f) has been redesignated (g).

Subparagraph (1) has been changed and subparagraph (4) has been added to clarify the requirement for taking movable incore detector maps.

5307

Previous paragraph (h) has been redesignated (i).

Page 3.2-6

Paragraph (i) (previously on Page 3.2-5) has been redesignated (j).

Page 3.2-7

Specification 3.2-7, Paragraph (b) (previously on Page 3.2-6) was relocated to a new page. No changes have been made to the text.

Page B3.2-5

The bases have been made consistent with the proposed Technical Specifications.

These changes have been reviewed by the Plant Nuclear Safety Committee and the Company Nuclear Review Board. These groups have independently determined that the changes do not degrade but, in fact, improve the safety of the facility.

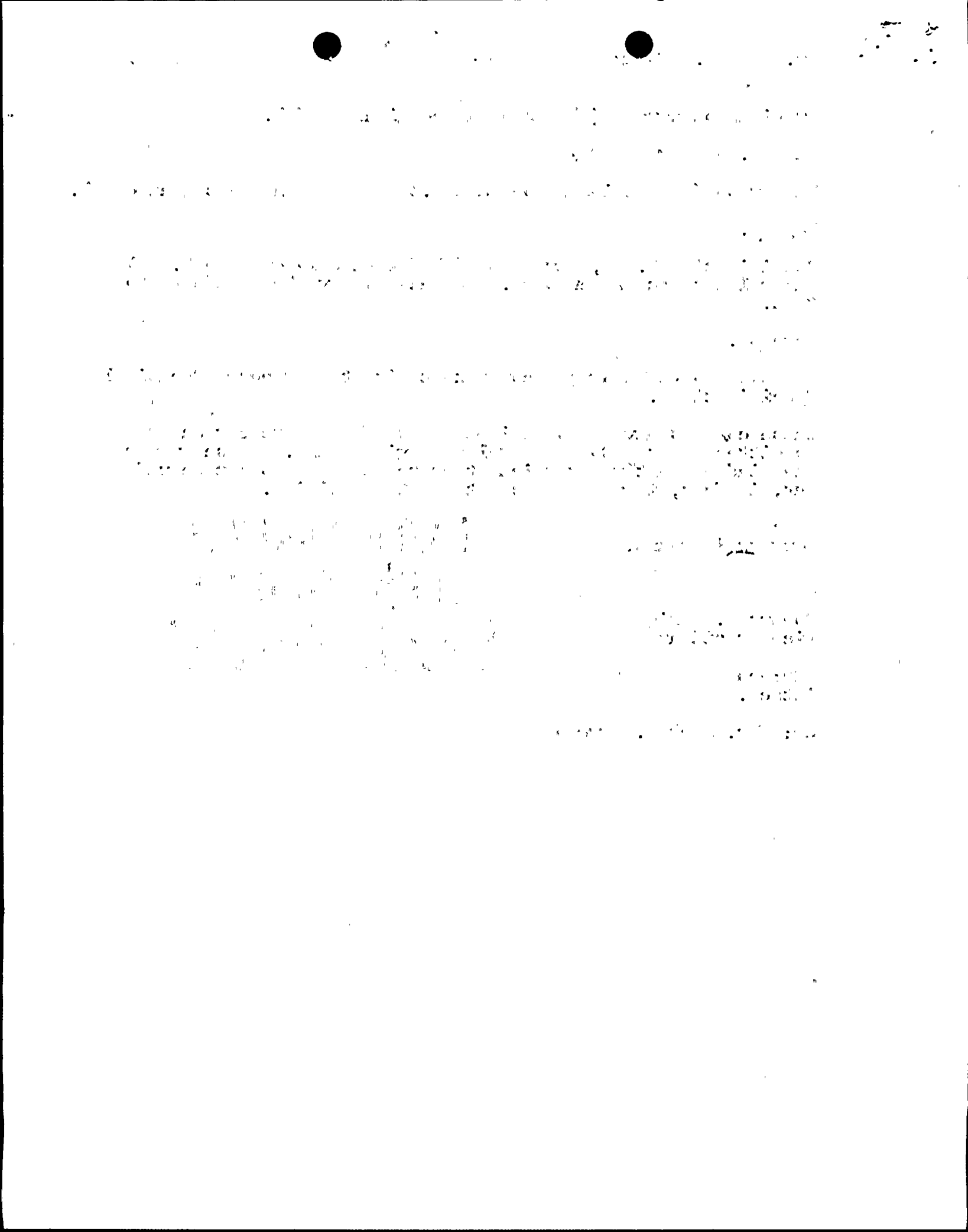
Very truly yours,

Robert E. Uhrig

Robert E. Uhrig
Vice President

REU:nch
Attach.

cc: Mr. Jack R. Newman



STATE OF FLORIDA)
)
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 instrument; that the statements made in this said instrument are true and correct to the best of his knowledge, information and belief; and that he is authorized to execute the instrument of said Licensee.

Robert E. Uhrig

Robert E. Uhrig

Subscribed and sworn to before me

this 21st day of June, 1974.

Rebecca H. Powell

Notary Public in and for the County of Dade, State of Florida

NOTARY PUBLIC, STATE of FLORIDA at LARGE
MY COMMISSION EXPIRES APRIL 2, 1976
BONDED THRU MAYNARD BONDING AGENCY

reactivity insertion upon ejection greater than 0.3% Δ k/k at rated power. Inoperable rod worth shall be determined within 4 weeks.

b. A control rod shall be considered inoperable if
   (a) the rod cannot be moved by the CRDM, or
   (b) the rod is misaligned from its bank by more than 15 inches, or
   (c) the rod drop time is not met.

c. If a control rod cannot be moved by the drive mechanism, shutdown margin shall be increased by boron addition to compensate for the withdrawn worth of the inoperable rod.

5. CONTROL ROD POSITION INDICATION

If either the power range channel deviation alarm or the rod deviation monitor alarm are not operable rod positions shall be logged once per shift and after a load change greater than 10% of rated power. If both alarms are inoperable for two hours or more, the nuclear overpower trip shall be reset to 93% of interim power.

6. POWER DISTRIBUTION LIMITS

a. At all times the hot channel factors defined in the basis must meet the following limits:

$F_q^N \leq 2.50\ [1 + 0.2\ (1-P)]$ in the flux difference range +10 to -14 percent

$F_{\Delta H}^N \leq 1.55\ [1 + 0.2\ (1-P)]$

where P is the fraction of interim power at which the core is operating

$(P \leq 1.0)$

For every percent outside of the indicated flux difference of +10 percent, the allowed F_q^N may be increased above 2.50 by 3.5 percent. For every percent outside of the indicated flux difference of -14 percent, the allowed F_q^N may be increased above 2.50 by 2 percent.

b. If peaking factors exceed the limits of Section 6a, the reactor power and high neutron flux trip setpoint shall be reduced by 1 percent for every percent excess over $F^N_{\Delta H}$ or F^N_q, whichever is limiting. If the peaking factors cannot be corrected within 1 day, the overpower ΔT and overtemperature ΔT trip setpoints shall be similarly reduced.

c. The permissible fraction of rated power, N, not to exceed the power levels given in Figure 3.2-3, at which the reactor can be operated shall be determined by

$$N = \frac{Q}{5.56 \times 1.02 \times 1.019 \times 1.007 \times M}$$

where $M = 2.58 \times \frac{F_{xy}}{1.435} [1 + 2 (T/100 - 0.02)]$;

Q = limiting local power from Figure 3.2-4;

F_{xy} is 1.435, or the value of the unrodded horizontal plane peaking factor appropriate to F_q as determined by a movable in-core detector map taken on at least a monthly basis; and

T is the percentage operating quadrant tilt limit, having a value of 2% if F_{xy} is 1.435 or a value up to 10% as selected by the operator if a measured F_{xy} value is used.

d. At interim power the indicated axial flux difference must be maintained within the range +10 percent to -14 percent.

e. For every 3.5 percent below interim power the permissible positive flux difference range is extended by +1 percent. For every 2 percent below interim power the permissible negative flux difference is extended by 1 percent.

f. If the indicated axial flux difference exceeds the permissible range defined in (d) and (e) above for a period of more than eight hours, the situation shall

be corrected or the reactor power shall be reduced 3.5 percent for each percent the positive flux difference exceeds the permissible range or 2 percent for each percent the negative flux difference exceeds the permissible range.

g. Following initial loading and each subsequent reloading, a power distribution map, using the movable in-core detectors, shall be made to confirm that power distribution limits are met, in the full power configuration, before the reactor is operated above 75 percent of rated power.

h. For sustained operation of the reactor above 75% of rated power;

(1) a full movable incore detector map shall be taken within one month (not to exceed 38 days) after exceeding 75% power. A full map is defined as surveillance of a minimum of 40 fuel assembly detector thimbles with at least 8 per quadrant.

(2) A partial movable incore detector map must be taken 10 to 17 days after the full map. A partial map is defined as surveillance of a minimum of 20 fuel assembly detector thimbles with at least 4 per quadrant.

(3) Two traverses with the movable incore detectors in appropriate alternate thimbles shall be taken during each calendar week.

(4) If the reactor is operated below 75% of rated power, the intervals in (1), (2) and (3) above may be extended by the length of time the reactor was below 75% of rated power.

i. If the quadrant to average power tilt exceeds a value T% as selected in specification 6.c, except for physics and rod exercise testing, then:

1) The hot channel factors shall be determined within 2 hours and the power level and trips adjusted to meet the requirements of Section 6a and b, or

2) If the hot channel factors are not determined within two hours, the power shall be reduced from interim power 2% for each percent of quadrant tilt.

3) If the quadrant to average power tilt exceeds ±10%, except for physics tests, the power level and high neutron flux trip setpoint will be reduced from interim power, 2% for each percent of quadrant tilt.

j. If after a further period of 24 hours, the power tilt in 2) above is not corrected to less than ±T%, and

1) If design hot channel factors for interim power are not exceeded, an evaluation as to the cause of the discrepancy shall be made and reported as an abnormal occurrence to the Atomic Energy Commission.

2) If the design hot channel factors for interim power are exceeded and the power is greater than 10% - the Atomic Energy Commission shall be notified and the nuclear overpower, overpower ΔT and overtemperature ΔT trips shall be reduced one percent for each percent the hot channel factor exceeds the rated power design values.

3) If the hot channel factors are not determined, the Atomic Energy Commission shall be notified and the overpower ΔT and overtemperature ΔT trip settings shall be reduced by the equivalent of 2% power for every 1% quadrant to average power tilt.

7. IN-CORE INSTRUMENTATION

a. A minimum of 16 thimbles, at least 2 per quadrant, and the necessary associated detectors shall be operable during the check and calibration of nuclear instrumentation ion chambers.

b. Power shall be limited to 90% of interim power for 3 loop or 50% of interim power for 2 loop operation if the requirements in Section 7.a are not met.

For operation at a fraction, P, of interim power the design limits are met, provided,

$$F_q^N \leq 2.50\ [1 + 0.2\ (1-P)]$$ in the indicated flux difference range of +10 to -14 percent,

and $F_{\Delta H}^N \leq 1.55\ [1 + 0.2\ (1-P)]$

For every percent outside of the indicated flux difference of +10 percent, the allowed F_q^N may be increased above 2.50 by 3.5 percent. For every percent outside of the indicated flux difference of -14 percent, the allowed F_q^N may be increased above 2.50 by 2 percent.

The permited relaxation allows radial power shape changes with rod insertion to the insertion limits. The allowed increase in F_q^N for large flux differences is consistent with power shapes assumed in setting the overpower and overtemperature ΔT setpoints. It has been determined that provided the above conditions 1 through 5 are observed, these hot channel factor limits are met.

For normal operation and anticipated transients the core is protected from exceeding 18.0 KW/ft locally, and from going below a minimum DNBR of 1.30, by automatic protection on power, flux difference, pressure and temperature. Only conditions 1 through 4, above, are mandatory since the flux difference is an explicit input to the protection system.

Measurements of the hot channel factors are required as part of startup physics tests and whenever abnormal power distribution conditions require a reduction of core power to a level based on measured hot channel factors.

In the specified limit to F_q^N there is a 5 percent allowance for uncertainties[1] which means that normal operation of the core within the defined conditions and procedures is expected to result in $F_q^N \leq 2.50/1.05$ even on a worst case basis. When a measurement is taken experimental error must be allowed for and 5 percent is the appropriate allowance for a full core map taken with the moveable incore detector flux mapping system.