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TO: V. Stello	FROM: Florida Power & Light Co. Miami, Florida R.E. Uhrig	DATE OF DOCUMENT 2-25-76
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DESCRIPTION Ltr. notarized 2-25-76...  
Ltr. trans the following.....

PLANT NAME: Turkey Point # 3 & 4

ENCLOSURE  
Proposed Amdt. to OL/Change to Tech. Specs:  
Consisting of revisions to Tech. Spec, with  
regards to Control Rod and Power Distribution  
Limits.....W/Attachments

(1 Signed Cy. Received)

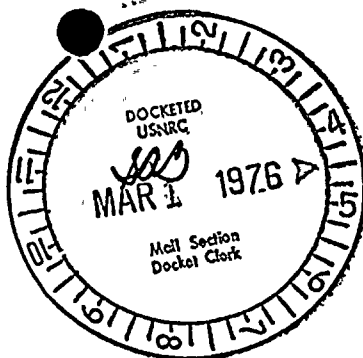
ACKNOWLEDGMENT

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MELTZ			
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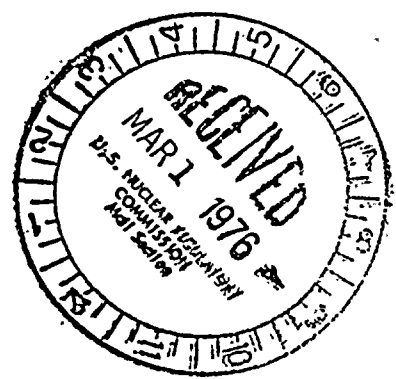
February 25, 1976  
L-76-69

FILE COPY

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

Dear Mr. Stello:

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



In accordance with 10 CFR 50.30, Florida Power & Light Company submits herewith three (3) signed originals and forty (40) conformed copies of a request to amend Appendix A of Facility Operating License DPR-41.

Unit 4 is currently in its second cycle of operation. A refueling outage is scheduled for April 19, 1976 with Cycle 3 startup planned for late May. This submittal proposes Technical Specification changes relating to the Control rod insertion limits for Unit 4, Cycle 3. The changes are minor and clarify the control rod insertion limit curves and explanatory text which will be applicable to Cycle 3.

The proposed Technical Specification changes are as described below and as shown in the accompanying Technical Specification pages bearing the date of this letter in the lower right hand corner.

Page 3.2-1

Sections 3.2.1.b, 3.2.1.c, and 3.2.1.d are amended to clarify the applicability of control group insertion limit curves for Units 3 and 4. Sections 3.2.1.b and 3.2.1.c are reworded to be consistent with one insertion limit applicable for an entire fuel cycle.

Figure 3.2-1

The control group insertion limit graph for Unit 4 three loop operation is revised to be consistent with one insertion

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February 25, 1976.

limit which is applicable for the entire cycle. The revised graph is identical to the dashed-line portion of the Cycle 2 graph.

Figure 3.2-1(a)

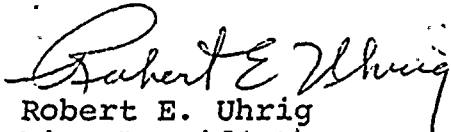
More conservative control group insertion limits are provided for Unit 4 two loop operation.

Page B3.2-1

The bases for specification 3.2 are amended to be consistent with one insertion limit which is applicable for an entire fuel cycle.

The proposed amendment has been reviewed and the conclusion reached that it does not involve a significant hazards consideration because the proposed control group insertion limits are more conservative than current limits. Therefore, prenoticing pursuant to 10 CFR 2.105 should not be required.

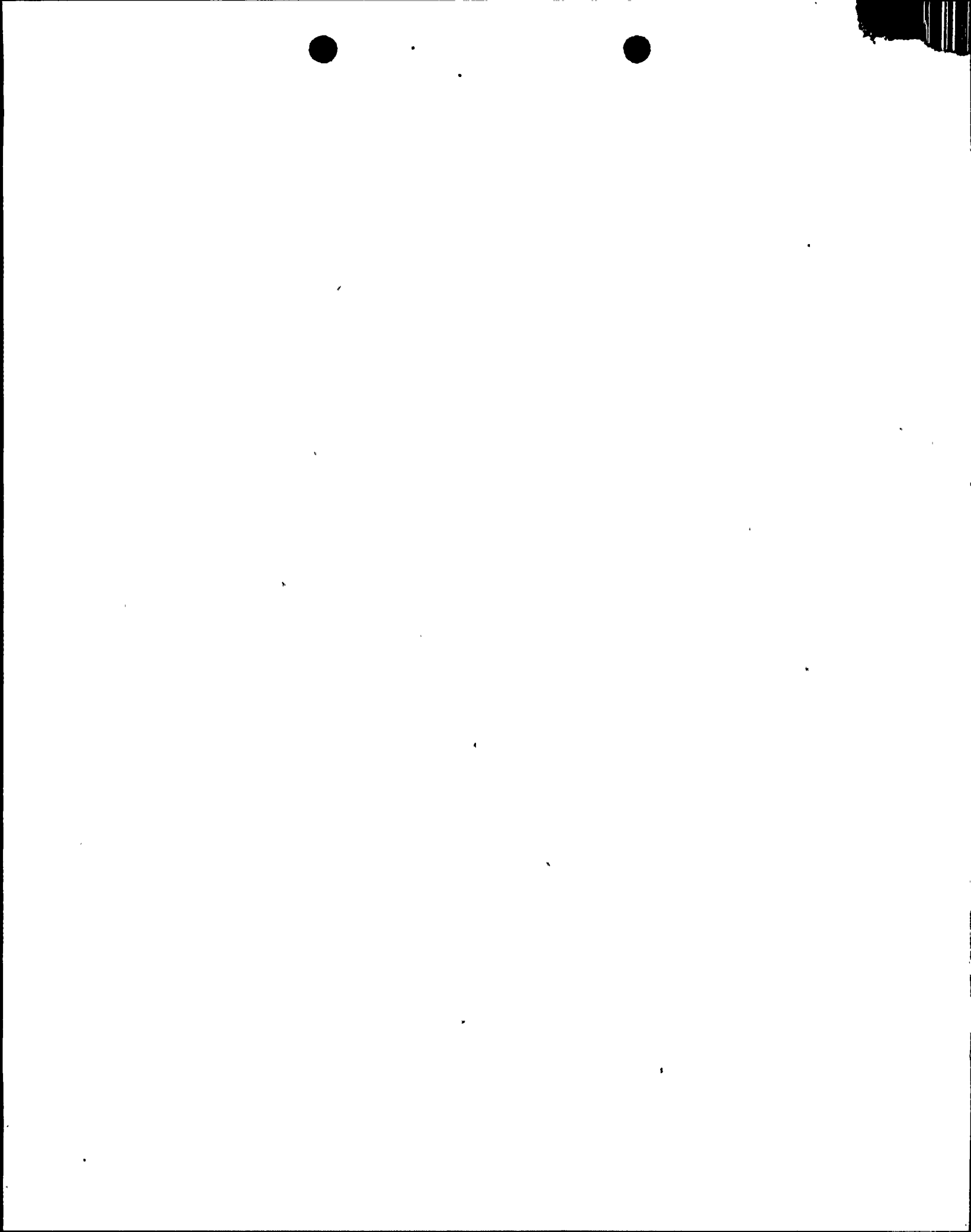
Very truly yours,



Robert E. Uhrig  
Vice President

REU:MAS:nch  
Attachments

cc: Mr. Norman C. Moseley  
Jack R. Newman, Esquire

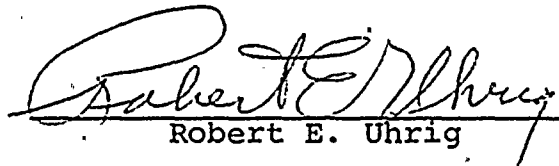


STATE OF FLORIDA )  
                          )     SS  
COUNTY OF DADE    )

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

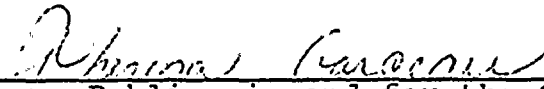
That he is a Vice President of Florida Power & Light Company,  
the Licensee herein;

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

Subscribed and sworn to before me

this 25<sup>th</sup> day of February, 1976

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

My Commission expires: NOTARY PUBLIC STATE OF FLORIDA AT LARGE  
MY COMMISSION EXPIRES JAN. 26, 1979  
BONDED THREE THOUSAND DOLLARS

Applicability: Applies to the operation of the control rods and power distribution limits.

Objective: To ensure (1) core subcriticality after a reactor trip, (2) a limit on potential reactivity insertions from a hypothetical control rod ejection, and (3) an acceptable core power distribution during power operation.

Specification: 1. CONTROL ROD INSERTION LIMITS

- a. Whenever the reactor is critical, except for physics tests and control rod exercises, the shutdown control rods shall be fully withdrawn.
- b. For Unit 4, whenever the reactor is critical, except for physics tests and control rod exercises, the control group rods shall be no further inserted than the limits shown on Figure 3.2-1 for three loop operation and on Figure 3.2-1(a) for two loop operation.
- c. For Unit 3, whenever the reactor is critical, except for physics tests and control rod exercises, the control group rods shall be no further inserted than the limits shown on Figure 3.2-1(b) for three loop operation and on Figure 3.2-1(c) for two loop operation.
- d. The Unit 4 control rod insertion limits shown on Figure 3.2-1 and the Unit 3 control rod insertion limits shown on Figure 3.2-1(b) may be revised on the basis of physics calculations and physics data obtained during startup and subsequent operation.
- e. Part length rods shall not be permitted in the core except for low power physics tests and for axial offset calibration tests performed below 75% of rated power.

UNIT 4

CONTROL GROUP INSERTION LIMITS  
FOR THREE LOOP OPERATION

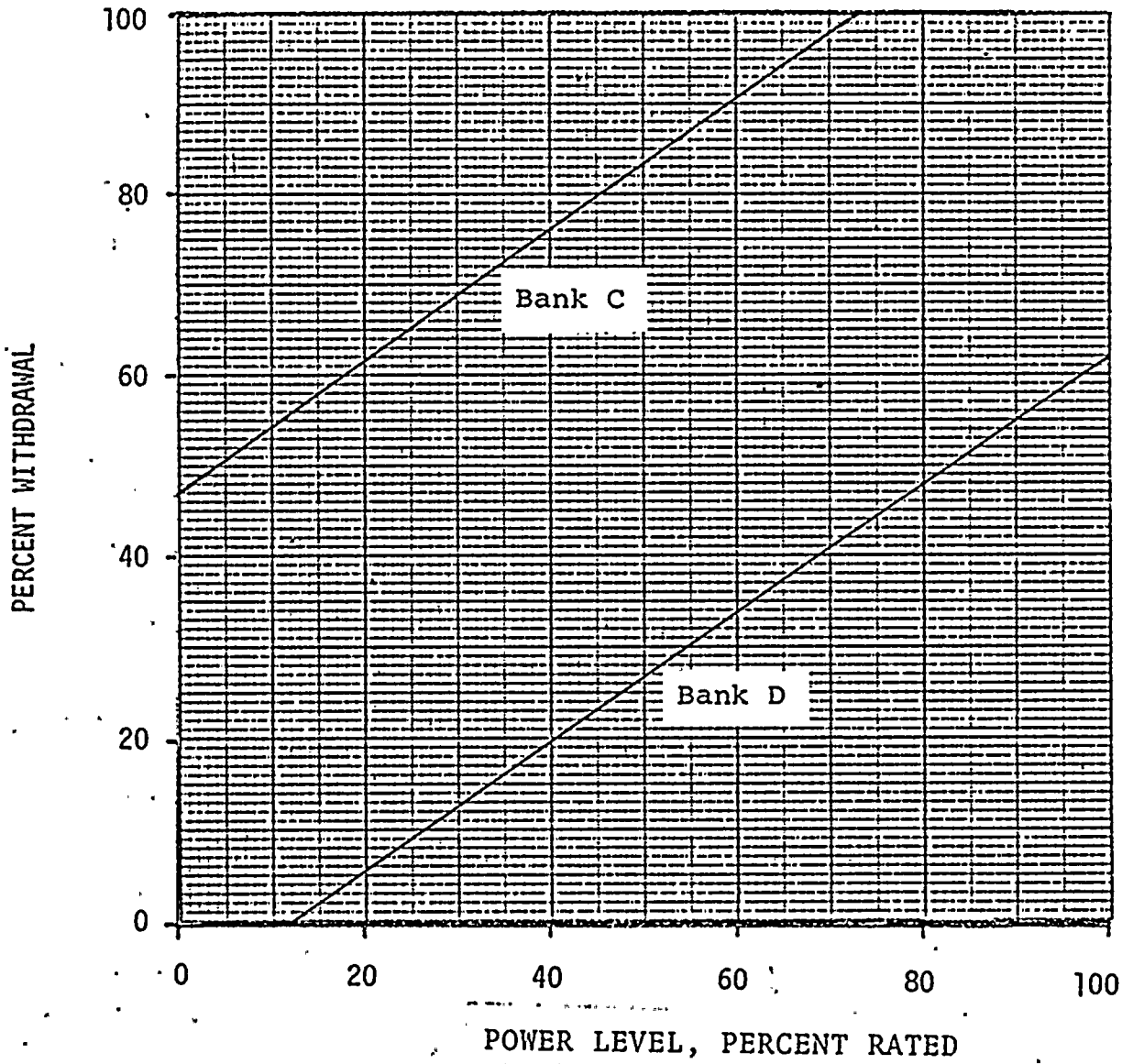


FIGURE 3.2-1



UNIT 4

CONTROL GROUP INSERTION LIMITS  
FOR TWO LOOP OPERATION

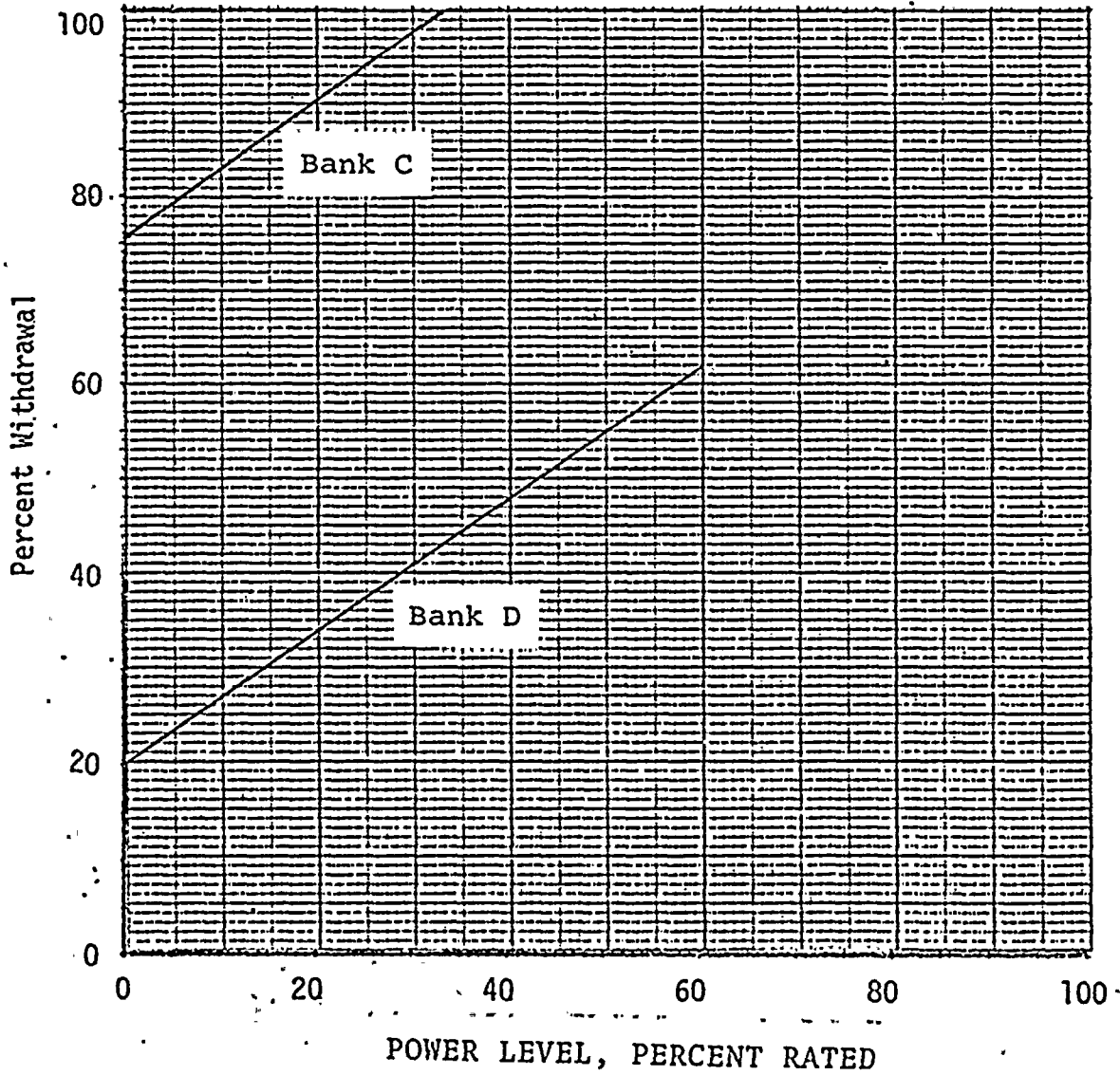


FIGURE 3.2-1(a)



Reactivity changes accompanying changes in reactor power are compensated by control rod motion. Reactivity changes associated with xenon, samarium, fuel depletion, and large changes in reactor coolant temperature (operating temperature to cold shutdown) are compensated by changes in the soluble boron concentration. During power operation, the shutdown groups are fully withdrawn and control of reactor power is by the control groups. A reactor trip occurring during power operation will put the reactor into the hot shutdown condition.

The control rod insertion limits provide for achieving hot shutdown by reactor trip at any time, assuming the highest worth control rod remains fully withdrawn, with sufficient margins to meet the assumptions used in the accident analysis.<sup>(1)</sup> In addition, they provide a limit on the maximum inserted rod worth in the unlikely event of a hypothetical rod ejection, and provide for acceptable nuclear peaking factors. Figures 3.2-1 and 3.2-1(a) meet the shutdown requirements of Unit 4. Figures 3.2-1(b) and 3.2-1(c) meet the shutdown requirements of Unit 3. The Unit 4 and Unit 3 rod insertion limits may be determined on the basis of startup and operating data to provide a more realistic limit which will allow for more flexibility in operation and still assure compliance with the shutdown requirement. The maximum shutdown margin requirement occurs at end-of-core life and is based on the value used in analysis of the hypothetical steam break accident. Early in core life, less shutdown margin is required, and Figure 3.2-2 shows the shutdown margin equivalent to 1.77% reactivity at end-of-core-life with respect to an uncontrolled cooldown. All other accident analyses are based on 1% reactivity shutdown margin.



12-1-1952

## SAFETY EVALUATION

### Introduction

By letter dated February 25, 1976, Florida Power and Light Company (FPL) proposes changes to the Technical Specifications of Facility Operating Licenses DPR-31 and DPR-41 for Turkey Point Nuclear Generating Units 3 and 4. The proposed changes clarify the control rod insertion limits, a limiting condition for operation (LCO), for Unit 4 Cycle 3.

Because Units 3 and 4 share joint Technical Specifications, FPL proposes to modify the Technical Specifications for Unit 3 to reflect the proposed revision to the Unit 4 Technical Specifications. However, the operating limits for Unit 3 are unchanged by the Unit 4 reload for core Cycle 3.

### Discussion

Section 3.2 of the Technical Specifications contains graphs which define the control group insertion limits for two-loop and three-loop operation. A description of what the insertion limits provide is contained in Section B3.2. Current Sections 3.2.1 and B3.2 have provisions for adjusting the Unit 4 insertion limits after 70% burnup of Cycle 2. Cycle 3, however, will have one insertion limit which is applicable for the entire cycle. Therefore, appropriate revisions have been made to the text and figures applicable to the Unit 4 insertion limits. The revisions are minor and are intended to clarify the text and graphs associated with Unit 4 to avoid confusion between Cycle 2 and Cycle 3 insertion limits.

The three loop insertion limit for all of Cycle 3 is the same as the corresponding limit for the end of Cycle 2. The two-loop insertion limit for Cycle 3 is more conservative than the corresponding limit for Cycle 2.

### Conclusions

The proposed amendment will not result in any physical change to plant equipment or systems and will not effect previously performed applicable safety analyses. Comparison of Cycle 2 and Cycle 3 insertion limits shows that the proposed limits are at least as conservative as current limits and will provide an adequate shutdown margin throughout Cycle 3 life. The proposed amendment is consistent with the plant operation necessary for the design and safety evaluation conclusions contained in the Unit 4 Cycle 3 Reload Submittal to remain valid.

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.