

50-335

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TO: Mr. Victor Stello

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## DESCRIPTION

2 pages.

## ENCLOSURE

Notorized, 06-30-77... Amdt to Appendix A, Operating License DPR-67/Change to Tech Specs... consisting of Page 3/4 1-26 and Page B 3/4 1-4 concerning The maximum allowable CEA drop time in specification 3.1.3.4 is changed from 3.3 seconds to 3.0 seconds to be consistent with the previously performed accident analysis....

4 pages

PLANT NAME: ST LUCIE UNIT # 1  
jcm 07-06-77

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ACKNOWLEDGED

## SAFETY

## FOR ACTION/INFORMATION

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ASSIGNED AD: V. MOORE (LTR)

BRANCH CHIEF:

BRANCH CHIEF:

PROJECT MANAGER:

PROJECT MANAGER:

LICENSING ASSESTANT:

LICENSING ASSISTANT:

B. HARLESS

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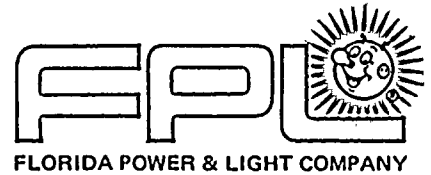
## CONTROL NUMBER

LPRD: F. F. Pierce, F. F. H.  
TIC  
NAT LAB  
REG IV (J. HANCHETT)  
16 CYS ACRS SENT CATEGORY B

NSIC

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## Regulatory Docket File

June 30, 1977  
L-77-197

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

Dear Mr. Stello:

Re: St. Lucie Unit 1  
Docket No. 50-335  
Proposed Amendment to  
Facility Operating License DPR-67



During a recent NSSS vendor review of the St. Lucie Unit 1 Technical Specifications, it was noted that the CEA drop time specification is nonconservative with respect to the accident analysis. The specified drop time is  $<3.3$  seconds, whereas the accident analysis assumes a drop time of 3.0 seconds. The discrepancy has had no safety significance because the measured drop times at St. Lucie Unit 1 have all been well below 3.0 seconds (about 2.4 seconds maximum). However, Technical Specification 3.1.3.4 should be amended to be consistent with the accident analysis.

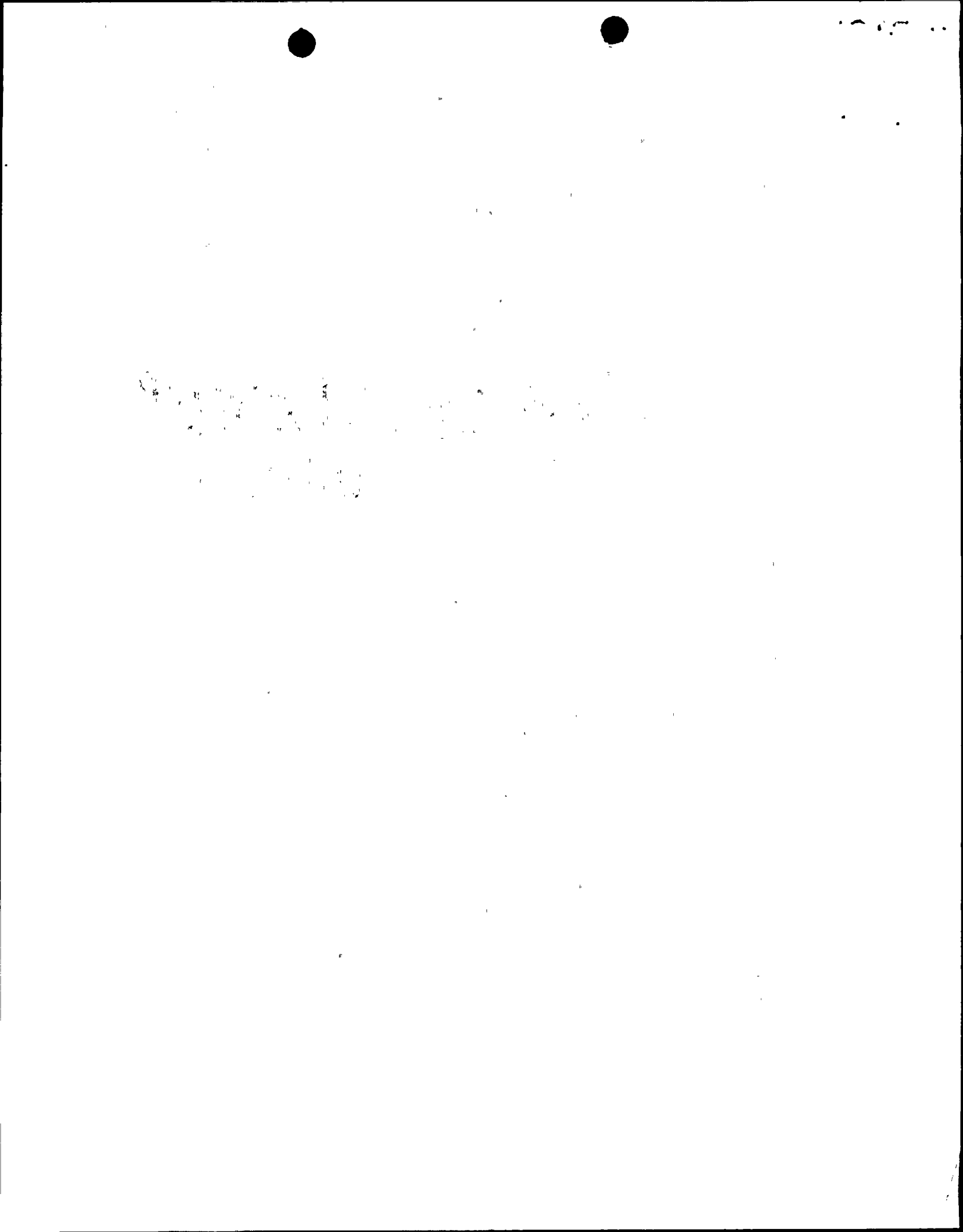
In accordance with 10 CFR 50.30, Florida Power & Light Company submits herewith three (3) signed originals and forty (40) conformed copies of a request to amend Appendix A of Facility Operating License DPR-67. The proposed change is described below and shown on the accompanying Technical Specification pages bearing the date of this letter in the lower right hand corner.

Page 3/4 1-26 and Page B 3/4 1-4

The maximum allowable CEA drop time in Specification 3.1.3.4 is changed from 3.3 seconds to 3.0 seconds to be consistent with the previously performed accident analysis.

The proposed amendment has been reviewed by the St. Lucie Facility Review Group (FRG) and the Florida Power & Light Company Nuclear Review Board (CNRB). They have concluded that it is an

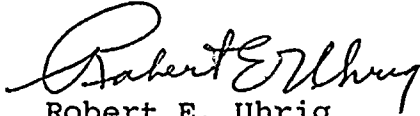
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Director of Nuclear Reactor Regulation  
Page Two

administrative change to bring the Technical Specifications into conformance with the accident analysis and does not involve an unreviewed safety question.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Robert E. Uhrig".

Robert E. Uhrig  
Vice President

REU/MAS/cpc

Attachment

cc: Mr. Norman C. Moseley, Region II  
Robert Lowenstein, Esquire

## REACTIVITY CONTROL SYSTEMS

### CEA DROP TIME

#### LIMITING CONDITION FOR OPERATION

3.1.3.4 The individual full length (shutdown and control) CEA drop time, from a fully withdrawn position, shall be  $\leq 3.0$  seconds from when electrical power is interrupted to the CEA drive mechanism until the CEA reaches its 90 percent insertion position with:

- a.  $T_{avg} \geq 515^{\circ}\text{F}$ , and
- b. All reactor coolant pumps operating.

APPLICABILITY: MODE 3.

#### ACTION:

- a. With the drop time of any full length CEA determined to exceed the above limit, restore the CEA drop time to within the above limit prior to proceeding to MODE 1 or 2.
- b. With the CEA drop times within limits but determined at less than full reactor coolant flow, operation may proceed provided THERMAL POWER is restricted to less than or equal to the maximum THERMAL POWER level allowable for the reactor coolant pump combination operating at the time of CEA drop time determination.

#### SURVEILLANCE REQUIREMENTS

4.1.3.4 The CEA drop time of full length CEAs shall be demonstrated through measurement prior to reactor criticality:

- a. For all CEAs following each removal of the reactor vessel head,
- b. For specifically affected individual CEAs following any maintenance on or modification to the CEA drive system which could affect the drop time of those specific CEAs, and
- c. At least once per 18 months.



## REACTIVITY CONTROL SYSTEMS

### BASES

#### 3/4.1.3 MOVABLE CONTROL ASSEMBLIES (Continued)

protective system would not detect the degradation in radial peaking factors and since variations in other system parameters (e.g., pressure and coolant temperature) may not be sufficient to cause trips, it is possible that the reactor could be operating with process variables less conservative than those assumed in generating LCO and LSSS setpoints. Therefore, the ACTION statement associated with the large misalignment of a CEA requires a prompt and significant reduction in THERMAL POWER prior to attempting realignment of the misaligned CEA.

The ACTION statements applicable to misaligned or inoperable CEAs include requirements to align the OPERABLE CEAs in a given group with the inoperable CEA. Conformance with these alignment requirements bring the core, within a short period of time, to a configuration consistent with that assumed in generating LCO and LSSS setpoints. However, extended operation with CEAs significantly inserted in the core may lead to perturbations in 1) local burnup, 2) peaking factors and 3) available shutdown margin which are more adverse than the conditions assumed to exist in the safety analyses and LCO and LSSS setpoints determination. Therefore, time limits have been imposed on operation with inoperable CEAs to preclude such adverse conditions from developing.

Operability of the CEA position indicators (Specification 3.1.3.3) is required to determine CEA positions and thereby ensure compliance with the CEA alignment and insertion limits and ensures proper operation of the rod block circuit. The CEA "Full In" and "Full Out" limits provide an additional independent means for determining the CEA positions when the CEAs are at either their fully inserted or fully withdrawn positions. Therefore, the ACTION statements applicable to inoperable CEA position indicators permit continued operations when the positions of CEAs with inoperable position indicators can be verified by the "Full In" or "Full Out" limits.

CEA positions and OPERABILITY of the CEA position indicators are required to be verified on a nominal basis of once per 12 hours with more frequent verifications required if an automatic monitoring channel is inoperable. These verification frequencies are adequate for assuring that the applicable LCO's are satisfied.

The maximum CEA drop time permitted by Specification 3.1.3.4 is the assumed CEA drop time of 3.0 seconds used in the accident analyses. Measurement with  $T_{avg} \geq 515^{\circ}\text{F}$  and with all reactor coolant pumps operating ensures that the measured drop times will be representative of insertion times experienced during a reactor trip at operating conditions.





## SAFETY EVALUATION

### Introduction

This evaluation supports a proposed change to the maximum allowable CEA drop time specified in Technical Specification 3.1.3.4.

### Discussion

As discussed in the cover letter, Specification 3.1.3.4 should be changed to be consistent with the accident analysis. No equipment related changes are necessary, so the amendment will not affect the probability or consequences of equipment malfunctions. Neither will it affect the probability or consequences of hypothetical accidents because we are using the existing accident analysis as the basis for administrative correction of a Technical Specification. Also, there is no decrease in safety margin because the proposed change is in the conservative direction.

### Conclusion


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, therefore, the change does not involve an unreviewed safety question, (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.

STATE OF FLORIDA     )  
                              )  
COUNTY OF DADE     )     ss.

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

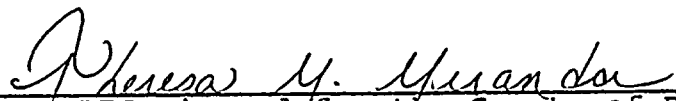
That he is a Vice President of Florida Power & Light Company,  
the Licensee herein;

That he has executed the foregoing document; that the state-  
ments 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

30 day of June, 19 77

  
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 MAY 5, 1981  
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