

50-335

NRC DISTRIBUTION FOR PART 50 DOCKET MATERIAL

FILE NUMBER

TO:

MR. VICTOR STELLO

FROM:

FLORIDA POWER & LIGHT COMPANY
MIAMI, FLORIDA
ROBERT UHRIG

DATE OF DOCUMENT

5/11/76

DATE RECEIVED

5/19/76

☒ LETTER☐ NOTORIZED

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THREE SIGNED

DESCRIPTION

LTR. WITH ATTACHEDREQUEST TO
AMEND APPENDIX A OF FACILITY OPERATING
LICENSE DPR-67.

ENCLOSURE

PLANT NAME:

ST. LUCIE #1

ACKNOWLEDGED

DO NOT REMOVE

SAFETY

FOR ACTION/INFORMATION

ENVIRO 5/20/76 RJL

ASSIGNED AD :

ASSIGNED AD :

☒ BRANCH CHIEF :

ZIEMANN

BRANCH CHIEF :

☒ PROJECT MANAGER:

SILVER

PROJECT MANAGER :

☒ LIC. ASST. :

DIGGS

LIC. ASST. :

INTERNAL DISTRIBUTION

☒ REG FILE

SYSTEMS SAFETY

PLANT SYSTEMS

ENVIRO TECH

☒ NRC PDR

HEINEMAN

TEDESCO

ERNST

☒ I & E (2)

SCHROEDER

BENAROYA

BALLARD

☒ OELD

JAINAS

IPOLITO

SPANGLER

☒ GOSSICK & STAFF

ENGINEERING

MLPC

MACCARY

CASE

KNIGHT

OPERATING REACTORS

SITE TECH

HANAUER

STIEBEL

STELLO

GANNILL

HARLESS

PAWLICKI

OPERATING TECH

STEPP

HULMAN

PROJECT MANAGEMENT

REACTOR SAFETY

☒ EISENHUT

SITE ANALYSIS

BOYD

ROSS

☒ SHAO

VOLLMER

P. COLLINS

NOVAK

☒ BAER

BUNCH

HOUSTON

ROSZTOCZY

☒ SCHWENCER☒ J. COLLINS

PETERSON

CHECK

☒ GRIBES

KREGER

MELTZ

HELTHERS

AT & I

SITE SAFETY & ENVIRO

SKOVHOLT

SALTZMAN

ANALYSIS

RUTBERG

DENTON & MULLER

EXTERNAL DISTRIBUTION

CONTROL NUMBER

☒ LPDR: FT. PIERCE, FLA.

NATL LAB

BROOKHAVEN NATL LAB

☒ TIC

REG. V-IE

ULRIKSON (ORNL)

☒ NSIC

LA PDR

☒ ASLB

CONSULTANTS

☒ ACRS 16 HOLDING/SENT

DIGGS

5061

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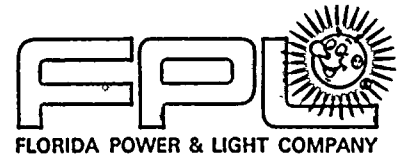
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May 11, 1976
L-76-191

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

In accordance with 10 CFR 50.30, Florida Power and 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.

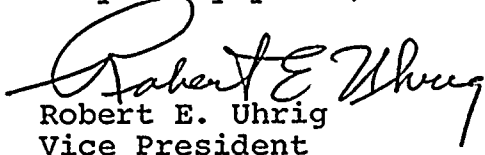
St. Lucie Unit 1 is currently in the pre-operational phase. Initial criticality was accomplished on April 22 and will be followed by the power ascension phase. This submittal proposes one change which is intended to update the Technical Specifications in support of power ascension. The proposed change is as described below and as shown on the accompanying Technical Specification page bearing the date of this letter in the lower right hand corner.

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The applicability of Specification 3.2.3 to Mode 2 is deleted.

The proposed amendment has been reviewed and the conclusion reached that it does not involve a significant hazards consideration, therefore, prenoticing pursuant to 10 CFR 2.105 should not be required. A written safety evaluation is attached.

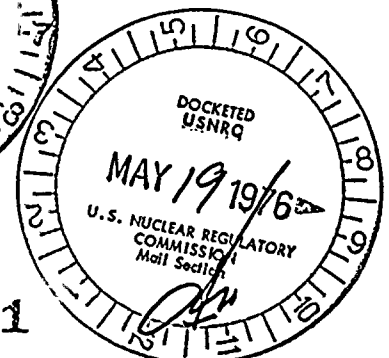
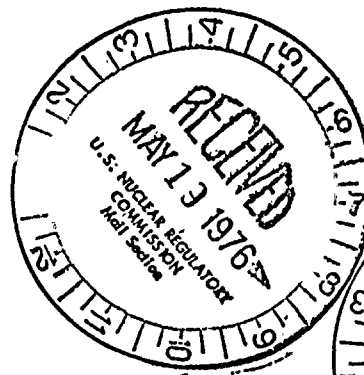
Very truly yours,


Robert E. Uhrig
Vice President

MAS/cyb

Attachments

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



Regulatory Docket File

5361

POWER DISTRIBUTION LIMITS

AZIMUTHAL POWER TILT - T_q

LIMITING CONDITION FOR OPERATION

3.2.3 The AZIMUTHAL POWER TILT (T_q) shall not exceed 0.02.

APPLICABILITY: MODE 1*

ACTION:

- a. With the indicated AZIMUTHAL POWER TILT determined to be > 0.02 but ≤ 0.10 , either correct the power tilt within two hours or determine within the next 2 hours and at least once per subsequent 8 hours, that the TOTAL RADIAL PEAKING FACTOR (F_r) is within the limit of Specification 3.2.2.
- b. With the indicated AZIMUTHAL POWER TILT determined to be > 0.10 , operation may proceed for up to 2 hours provided F_r or the combination of F_r and THERMAL POWER is maintained within the limit of Specification 3.2.2. Subsequent operation for the purpose of measurement and to identify the cause of the tilt is allowable provided:
 1. The THERMAL POWER level is restricted to $\leq 20\%$ of the maximum allowable THERMAL POWER level for the existing Reactor Coolant Pump combination, and.
 2. The Local Power Density-High and Thermal Margin/Low Pressure trip setpoints and Power Ratio Calculator setpoints are reduced by a factor equivalent to $\geq \frac{F_r (\text{meas})}{(1.36)}$.

SURVEILLANCE REQUIREMENT

4.2.3.1 The provisions of Specification 4.0.4 are not applicable.

4.2.3.2 The AZIMUTHAL POWER TILT shall be determined to be within the limit by:

- a. Calculating the tilt at least once per 7 days when the Subchannel Deviation Alarm is OPERABLE,

* See Special Test Exception 3.10.2.

SAFETY EVALUATION

Introduction

When the St. Lucie Unit 1 operating license was issued, FPL and the NRC staff were discussing several revisions to the Technical Specifications. However, because of the lack of implementation time, they were not incorporated into the Technical Specifications issued with the operating license. As a result, some Technical Specifications are too restrictive and require revision to provide operational flexibility.

Discussion

Specification 3.2.3 currently applies to Modes 1 and 2. The effect of severe tilt at or below 5% power (Mode 2) on F_R^T has been analyzed. The analysis indicates that at these conditions the tilts that might be encountered while operating within Technical Specification limits do not reduce the margin of safety as defined in the bases.

Specific Analysis

Calculations for F_R^T were generated using a full core, 3 dimensional model as follows:

1. All rods in 3/4 of the core were fully withdrawn and rods in the remaining 1/4 core were inserted 11.4". This conservatively simulates rod misalignment at its most severe condition since only 7" misalignment is allowed by Technical Specifications. This condition was established at full power with equilibrium xenon.
2. Power was reduced to 5% and the relative positions of the rods were reversed (1/4 core unrodded, 3/4 core rodded 11.4"). This condition was maintained for 8 hours to allow peak xenon to build up for this rod configuration. Since the previously rodded 1/4 core was now unrodded, the power peaked in the unrodded portion of the core, producing extreme tilts.

The calculated peak F_R^T occurred in the unrodded position of the core and was 2.82.

The average linear heat rate at 5% power is .305 kw/ft.

Therefore, the peak linear heat rate for the most severe allowable operating condition at 5% power is 0.86 kw/ft.

Applying a conservative uncertainty factor of 2 yields a peak linear heat rate of 1.62 kw/ft. at 5% power which is well below the Technical Specification limit.

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 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.