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STALL,J.A. Florida Power & Light Co.
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SUBJECT: Withdraws proposed TS 5.6.1 previously represented as Insert
A in attachment 3 to 981231 request for amend to license.
Proposed TS in attachment suppl original submittal, replacing
Insert-A, Attachment 3 & revises LCO 3.4.9.11 & Bases.

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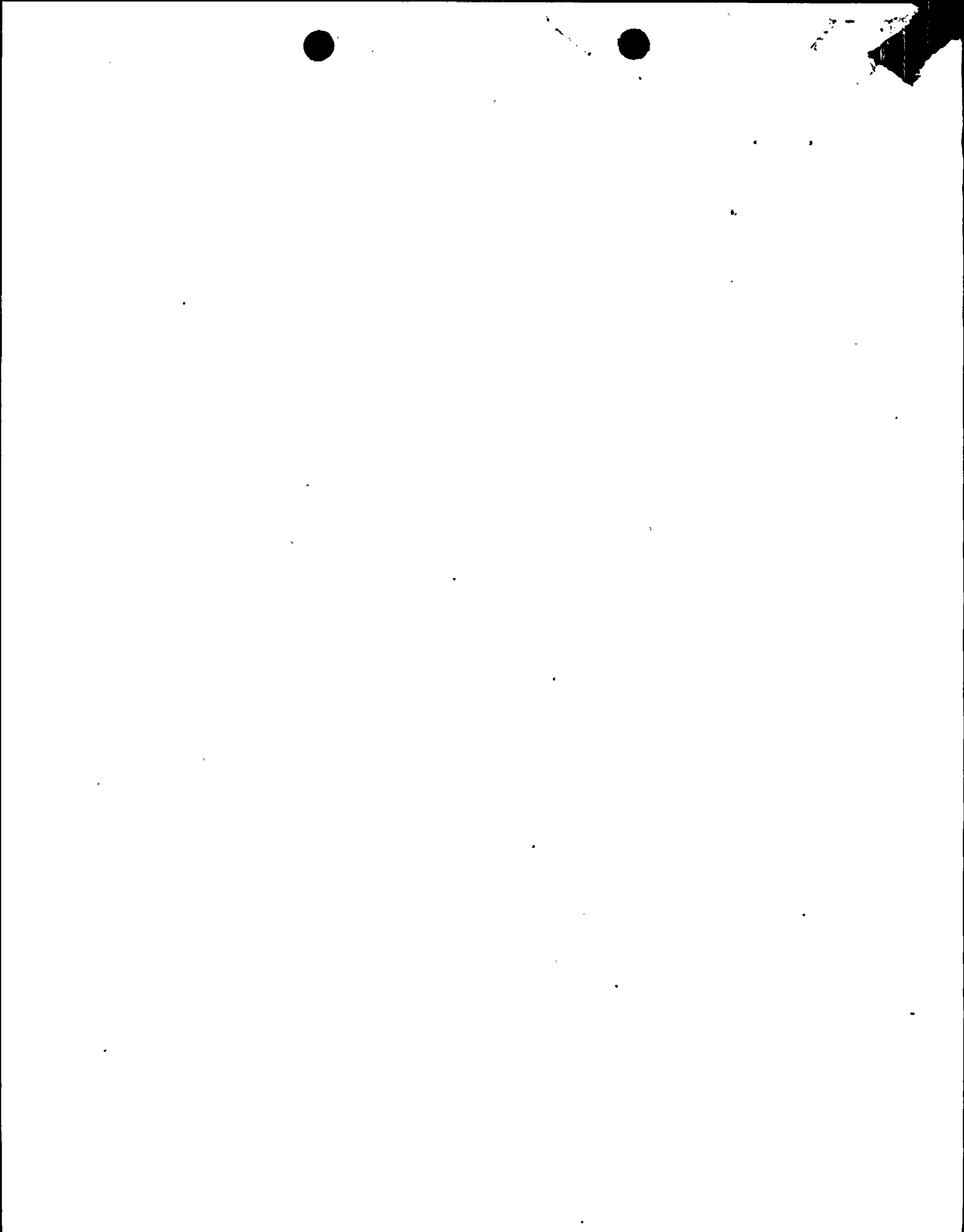
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November 25, 1998

L-98-294
10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Re: St. Lucie Unit 2
Docket No. 50-389
Proposed License Amendment: SFP Storage Capacity;
Soluble Boron Credit (TAC No. MA0666): Supplement

Ref: (1) FPL Letter L-97-325, J. A. Stall to NRC (DCD): Proposed License Amendment, SFP Storage Capacity; Soluble Boron Credit; December 31, 1997.

(2) FPL Letter L-98-132, Rajiv S. Kundalkar to NRC (DCD): Proposed License Amendment: SFP Storage Capacity; Soluble Boron Credit (TAC No. MA0666), Response to Request for Additional Information; May 15, 1998.

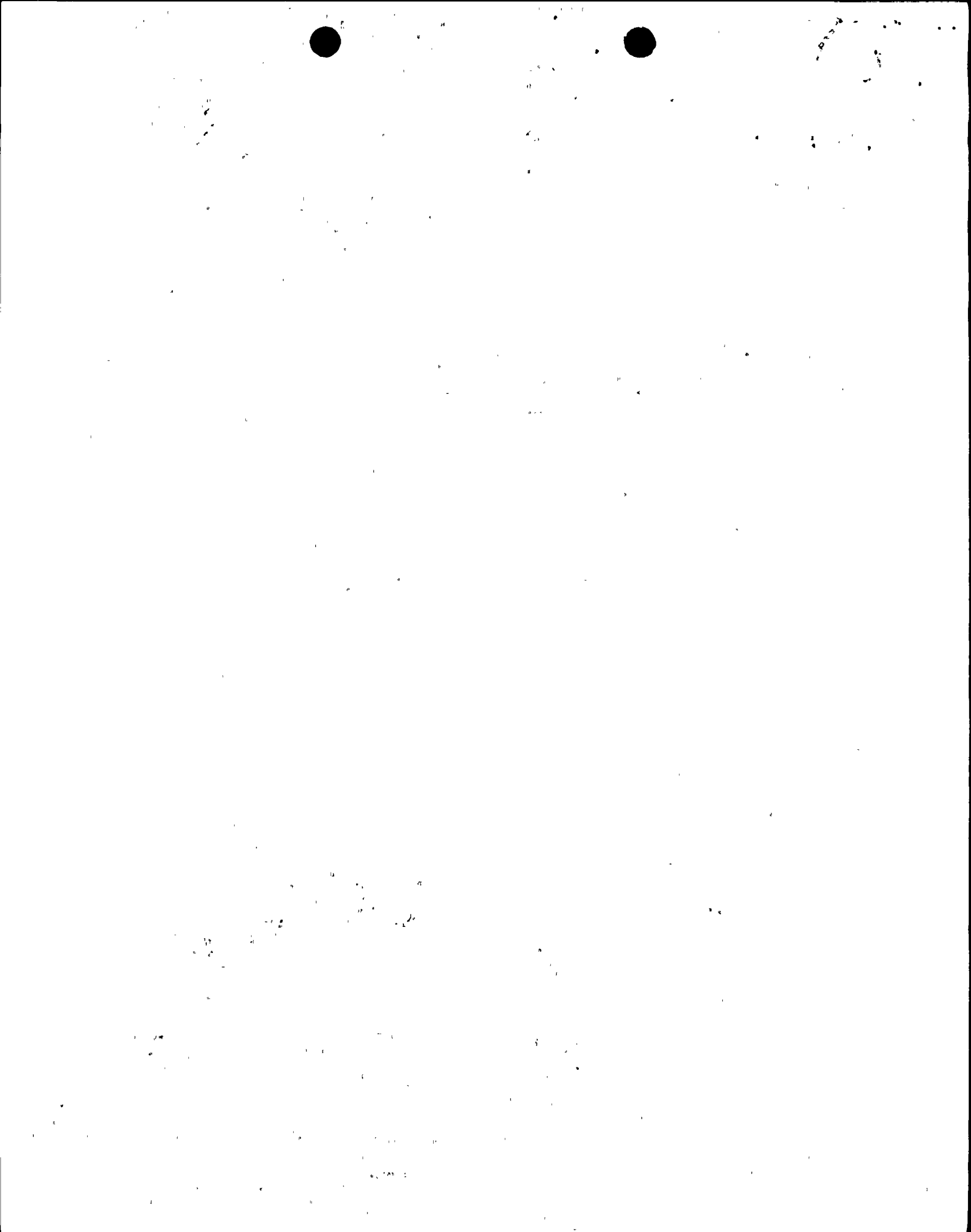
(3) FPL Letter L-98-221, J.A. Stall to NRC (DCD): Proposed License Amendment: SFP Storage Capacity; Soluble Boron Credit (TAC No. MA0666); Summary of June 18 and July 24, 1998 Teleconferences; September 15, 1998.

Florida Power and Light Company (FPL) requested an amendment to the St. Lucie Unit 2 operating license that would allow an increase in the capacity of the spent fuel pool, in part, by taking credit for a certain soluble boron concentration in the pool coolant (Reference 1). In References 2 and 3, FPL provided additional information to the NRC staff in connection with that amendment request. In telephone conferences held between the NRC staff (Hebdon, et al.) and FPL (Weinkam, et al.) on November 12 and 13, 1998, the staff informed FPL that the Technical Specifications (TS) proposed in Reference 1 should be revised to: (a) relocate the fuel storage pool minimum boron concentration requirements from Section 5.6.1, Design Features-Fuel Storage-Criticality, to a Limiting Conditions for Operation (LCO) section, (b) include required actions in the event that the boron concentration requirement is not met, and (c) include a surveillance requirement to verify the spent fuel storage pool boron concentration is within its limit once per 7 days consistent with the Standard TS for Combustion Engineering Plants (NUREG-1432).

Accordingly, the proposed TS 5.6.1 previously represented as Insert-A in Attachment 3 to L-97-325 (Reference 1) is withdrawn. As a supplement to the original submittal, the proposed Specifications in the Attachment to this letter replace "Insert-A to L-97-325, Attachment 3," and revise LCO 3/4.9.11 and its associated Bases. These changes do not alter the existing TS requirement for minimum boron concentration in the spent fuel storage pool nor do they change the minimum boron concentration previously proposed in Reference 1. The new proposed Surveillance Requirement 4.9.11.1 provides the additional assurance requested by the staff that the required boron concentration will be maintained when irradiated fuel is in the pool. Minor editorial changes to proposed TS 5.6.1 are discussed in Reference 3 and are also included in this supplement.

The changes to the original submittal and contained herein do not alter the statements or conclusions of the No Significant Hazards Consideration evaluation contained in Attachment 2 to Reference 1, and subsequently published in the Federal Register (63 FR 9602, February 25, 1998). The proposed TS changes in the Attachment to this letter have been reviewed by the St. Lucie Facility Review Group and

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the Florida Power & Light Company Nuclear Review Board. In accordance with 10 CFR 50.91 (b)(1), a copy of the proposed amendment is being forwarded to the State Designee for the State of Florida.

Finally, in a teleconference on November 16, 1998, the NRC staff requested that FPL document by this letter FPL's intentions relative to the amended 10 CFR 70.24 and 10 CFR 50 which will become effective on December 14, 1998 (63 FR 63127, November 12, 1998). Issuance of an amendment approving the Reference 1 request, as revised herein, will impact the existing exemption from the current 10 CFR 70.24 "Criticality Accident Requirements" for St. Lucie Unit 2 in that the exemption does not address the criteria for a case where credit is taken for soluble boron in the spent fuel storage pool criticality analysis. The new 10 CFR 50.68 will provide for this case. Please be advised that it is FPL's intention to comply with the provisions of 10 CFR 50.68(b).

Please contact us if there are any questions about this submittal.

Very truly yours,



J. A. Stall
Vice President
St. Lucie Plant

JAS/RLD

Attachment

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant
Mr. W.A. Passetti, Florida Department of Health and Rehabilitative Services

St. Lucie Unit 2
Docket No. 50-389
Proposed License Amendment: SFP Storage Capacity;
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Page 3

STATE OF FLORIDA)
) ss.
COUNTY OF ST. LUCIE)

J. A. Stall being first duly sworn, deposes and says:

That he is Vice President, St. Lucie Plant, for the Nuclear Division of Florida Power & Light Company, the Licensee herein;

That he has executed the foregoing document; that the statements made in this 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.



J. A. Stall

STATE OF FLORIDA
COUNTY OF St. Lucie

Sworn to and subscribed before me
this 25 day of November, 19 98

by J. A. Stall, who is personally known to me.



Signature of Notary Public-State of Florida
Leslie J. Whitwell



MY COMMISSION # CC646183 EXPIRES
May 12, 2001
BONDED THRU TROY FARM INSURANCE, INC.

Name of Notary Public (Print, Type, or Stamp)

St. Lucie Unit 2
Docket 50-389
Proposed License Amendment: SFP Storage Capacity;
Soluble Boron Credit (TAC No. MA0666); Supplement

ATTACHMENT to FPL Letter L-98-294

CONTENTS

Description and Bases for Proposed TS Changes (2 pages)

INSERT-A to L-97-325, Attachment 3 (REVISED)

Page IX

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Page B 3/4 9-3

This Attachment provides the description of and bases for a supplement to FPL's request for license amendment (Reference 1), and includes the following pages marked-up to show the proposed changes:

(1) INSERT-A to L-97-325, Attachment 3 (REVISED): The changes to this page include the addition of the phrase "as described in Section 9.1 of the Updated Final Safety Analysis Report" to proposed Specifications 5.6.1.a.1 and 5.6.1.a.2; deletion of proposed Specification 5.6.1.a.3 and renumbering proposed Specification 5.6.1.a.4; and correction of a typographic error in the last line of proposed Specification 5.6.1.d by replacing the word "restrictive" with "reactive."

Basis: The changes to proposed Specifications 5.6.1.a.1, 5.6.1.a.2, and 5.6.1.d are editorial changes mutually agreed upon by FPL and the NRC staff, and are discussed in FPL Letter L-98-221, September 15, 1998 (Reference 3). The allowance for biases and uncertainties applied to the calculated values of k_{eff} are presently documented in the criticality safety analysis for the St. Lucie Unit 2 spent fuel storage rack using soluble boron credit (Reference 1). The Updated Final Safety Analysis Report (UFSAR) section that is referenced by proposed TS 5.6.1.a.1 and 5.6.1.a.2 will be revised to describe the applicable biases and uncertainties during the next regular UFSAR update pursuant to 10 CFR 50.71(e) following approval of the proposed license amendment.

Deleting the original proposed Specification 5.6.1.a.3 from INSERT-A (Reference 1) prevents duplication of the same requirement for minimum boron concentration in the spent fuel storage pool water which will now appear in the revised TS 3/4.9.11 that is proposed herein.

(2) Page IX, TS INDEX: The title of Section 3/4.9.11 is revised consistent with the proposed change to this LCO that is described below.

(3) Page 3/4 9-12, TS 3/4.9.11, WATER LEVEL-SPENT FUEL STORAGE POOL: This LCO is rewritten to include the required fuel storage pool minimum boron concentration of greater than or equal to 1720 ppm, as well as the existing LCO requirement for minimum water level; provide an ACTION statement for the condition where the boron concentration requirement is not satisfied; and add SURVEILLANCE REQUIREMENT 4.9.11.1 to require verification that the fuel storage pool boron concentration is within its limit at least once per 7 days. In addition, editorial changes are made to the existing ACTION addressing fuel storage pool water level, and in the title of the LCO for the purpose of clarification. An exclusion from LCO 3.0.3 is added per NUREG-1432. The existing APPLICABILITY is retained, i.e., "Whenever irradiated fuel assemblies are in the spent fuel storage pool."

Basis: The fuel storage pool minimum boron concentration is currently specified in St. Lucie Unit 2 Specification 5.6.1.a.3. The same specification was retained in the proposed TS 5.6.1.a.3 of Reference 1. In telephone conferences held between the NRC staff (Hebdon, et al.) and FPL (Weinkam, et al.) on November 12 and 13, 1998, the staff informed FPL that the TS proposed in Reference 1 should be revised to: (a) relocate the fuel storage pool minimum boron concentration requirements from Section 5.6.1, Design Features-Fuel Storage-Criticality, to a Limiting Conditions for Operation (LCO) section, (b) include required actions in the event that the boron concentration requirement is not met, and (c) include a surveillance requirement to verify the fuel storage pool boron concentration is within its limit once per 7 days consistent with the Standard TS for Combustion Engineering Plants (NUREG-1432).

This supplement relocates the proposed fuel storage pool minimum boron concentration to LCO 3.9.11, and identifies the requirement as TS 3.9.11.b. The limit on soluble boron concentration is consistent with the minimum boron concentration specified for the Refueling Water Tank (RWT), and assures an additional subcritical margin to the value of k_{eff} which is calculated in the spent fuel storage pool criticality safety analysis to satisfy the acceptance criteria of Specification 5.6.1. Other than being relocated from the Design Features section to an LCO in the TS, the requirement has not been altered, and the revision is simply an administrative change.

The proposed LCO 3.9.11 "ACTION b" addresses the condition where the fuel storage pool boron concentration is not within limit, and is the same action required by NUREG-1432, LCO 3.7.17, i.e., the action requires all movement of fuel assemblies in the fuel storage pool to be immediately suspended and action initiated to restore the boron concentration to within the required limit. To preclude an accident from happening or to mitigate the consequences of an accident in progress, use of the word "immediate" in the required actions is appropriate. Immediately suspending the movement of fuel assemblies, however, does not preclude the movement of fuel assemblies to a safe position.

SURVEILLANCE REQUIREMENT 4.9.11.1 is added to this LCO and requires that the fuel storage pool boron concentration be verified within limit at least once per 7 days. This requirement, as well as more stringent requirements applied during refueling operations, has been established for years in the plant's operating procedures as discussed in Reference 2. Operating experience has shown the verification frequency to be adequate. In addition, Reference 1 describes the basis for concluding that an inadvertent dilution of the spent fuel storage pool by the quantity of unborated water necessary to reduce the specified minimum boron concentration to a value that would invalidate the criticality safety analysis is not a credible event. The proposed surveillance frequency specified for verifying the boron concentration is consistent with NUREG-1432, SR 3.7.17.1, and satisfies, in part, acceptance criteria established by the NRC staff for approval of criticality safety analysis methods crediting soluble boron in the fuel pool water.

To accommodate the proposed soluble boron concentration requirements in LCO 3/4.9.11, the existing Specification 3.9.11 addressing the minimum water level over the top of irradiated fuel assemblies seated in the storage racks is re-stated as Specification 3.9.11.a. The required minimum water level has not been altered from existing requirements and the change is simply one involving format. The format is consistent with other St. Lucie TS that contain multiple requirements.

The existing ACTION for the condition of minimum water level requirement not satisfied is re-stated as LCO 3.9.11 "ACTION a" to accommodate the addition of the new "ACTION b" for boron concentration. Editorial changes to the syntax are included for clarification and the word "immediately" is added, consistent with NUREG-1432, LCO 3.7.16, ACTION A.1, to ensure that a fuel handling accident would be effectively prevented from occurring. This, however, does not preclude moving a fuel assembly to a safe position.

"ACTION c" is added to make clear that LCO 3.0.3 does not apply. If moving irradiated fuel assemblies while in MODE 5 or 6, LCO 3.0.3 would not specify any action. If moving irradiated fuel assemblies while in MODES 1, 2, 3, or 4, the fuel movement is independent of reactor operation. Therefore, in either case, inability to suspend movement of fuel assemblies is not sufficient reason to require a reactor shutdown (Ref: NUREG-1432, LCO 3.7.16 and 3.7.17 Bases).

(4) Page B 3/4 9-3, BASES 3/4.9.10 and 3/4.9.11, WATER LEVEL-REACTOR VESSEL and STORAGE POOL: This Bases page is updated to include summary statements of the bases or reasons for the specifications involving minimum boron concentration in the fuel storage pool that are being added to LCO 3/4.9.11. The revision is pursuant to 10 CFR 50.36(a).

INSERT - A to L-97-325, Attachment 3 (REVISED)

- 5.6.1 a. The spent fuel pool and spent fuel storage racks shall be maintained with:
1. A k_{eff} equivalent to less than 1.0 when flooded with unborated water, including a conservative allowance for biases and uncertainties as described in Section 9.1 of the Updated Final Safety Analysis Report.
 2. A k_{eff} equivalent to less than or equal to 0.95 when flooded with water containing 520 ppm boron, including a conservative allowance for biases and uncertainties as described in Section 9.1 of the Updated Final Safety Analysis Report.
 - ~~3. A boron concentration greater than or equal to 1720 ppm.~~
 - ~~4-3~~ A nominal 8.96 inch center-to-center distance between fuel assemblies placed in the storage racks.
- 5.6.1 b. Fuel placed in Region I of the spent fuel storage racks shall be stored in a configuration that will assure compliance with 5.6.1 a.1 and 5.6.1 a.2, above, with the following considerations:
1. Fresh fuel shall have a nominal average U-235 enrichment of less than or equal to 4.5 weight percent.
 2. The reactivity effect of CEAs placed in fuel assemblies may be considered.
 3. The reactivity equivalencing effects of burnable absorbers may be considered.
 4. The reactivity effects of fuel assembly burnup and decay time may be considered as specified in Figures 5.6-1c through 5.6-1e.
- 5.6.1 c. Fuel placed in Region II of the spent fuel storage racks shall be placed in a configuration that will assure compliance with 5.6.1 a.1 and 5.6.1 a.2, above, with the following considerations:
1. Fuel placed in Region II shall meet the burnup and decay time requirements specified in Figure 5.6-1a or 5.6-1b.
 2. The reactivity effect of CEAs placed in fuel assemblies may be considered.
 3. The reactivity equivalencing effects of burnable absorbers may be considered.
- 5.6.1 d. The new fuel storage racks are designed for dry storage of unirradiated fuel assemblies having a U-235 enrichment less than or equal to 4.5 weight percent, while maintaining a k_{eff} of less than or equal to 0.98 under the most restrictive reactive condition.

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