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 FACIL: 30-335 St. Lucie Plant, Unit 1, Florida Power & Light Co. 05000335
 50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co. 05000389
 AUTH. NAME AUTHOR AFFILIATION
 STALL, J.A. Florida Power & Light Co.
 RECIPIENT NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Forwards response to 970606 RAI re application for exemption from requirements of 10CFR70.24, "Criticality Accident Requirements," for areas designated for new fuel handling & storage at St Lucie Units 1 & 2.

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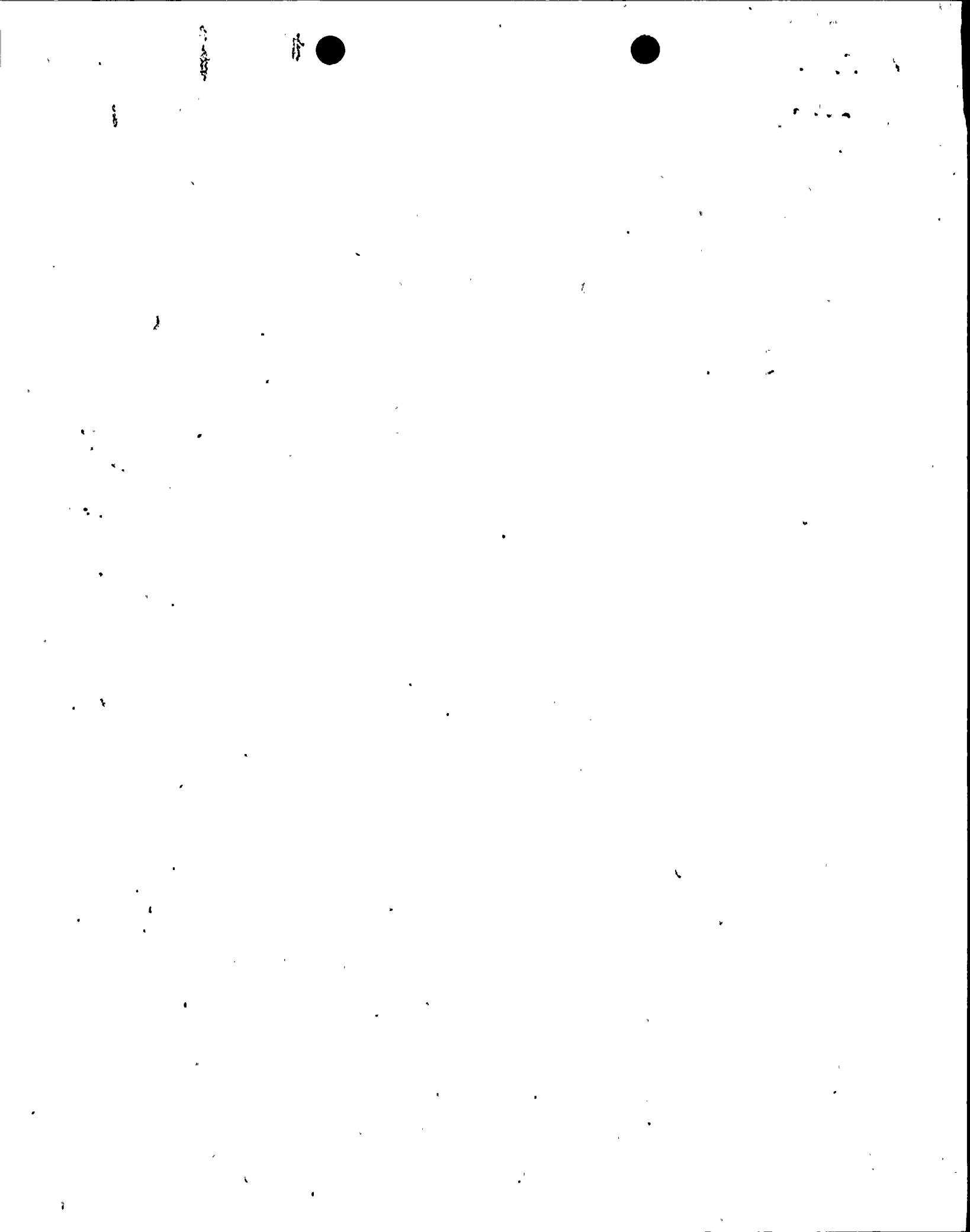
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July 10, 1997

L-97-171
10 CFR 50.4
10 CFR 70.14
10 CFR 70.24

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

Re: St. Lucie Unit 1 and Unit 2
Docket Nos. 50-335 and 50-389
Application for Exemption from 10 CFR 70.24 (TAC Nos.
M97997 and M97998): Request for Additional Information

Ref: (1) FPL Letter L-97-040, J. A. Stall to NRC (DCD), Request for Exemption from 10 CFR 70.24;
February 19, 1997.
(2) NRC Letter, L. A. Wiens to Thomas F. Plunkett (FPL), REQUEST FOR ADDITIONAL
INFORMATION REGARDING EXEMPTION FROM THE REQUIREMENTS OF 10 CFR 70.24 -
ST. LUCIE UNITS 1 AND 2 (TAC NOS. M97997 AND M97998); June 6, 1997.

Reference (1) is an application from Florida Power and Light Company (FPL) for exemption from the requirements of 10 CFR 70.24, "Criticality Accident Requirements," for areas designated for new (unirradiated) fuel handling and storage at St. Lucie Units 1 and 2. Reference (2) forwarded a request for additional information (RAI) to accelerate processing of the application. The RAI requested that FPL supplement Reference (1) with a letter under oath or affirmation verifying that St. Lucie Units 1 and 2 meet seven criteria, specified in the RAI, for granting exemptions from the rule.

The attachment to this letter contains FPL's responses to the subject RAI. Please contact us if there are any questions.

Very truly yours,

J.A. Stall
Vice President
St. Lucie Plant

JAS/RLD

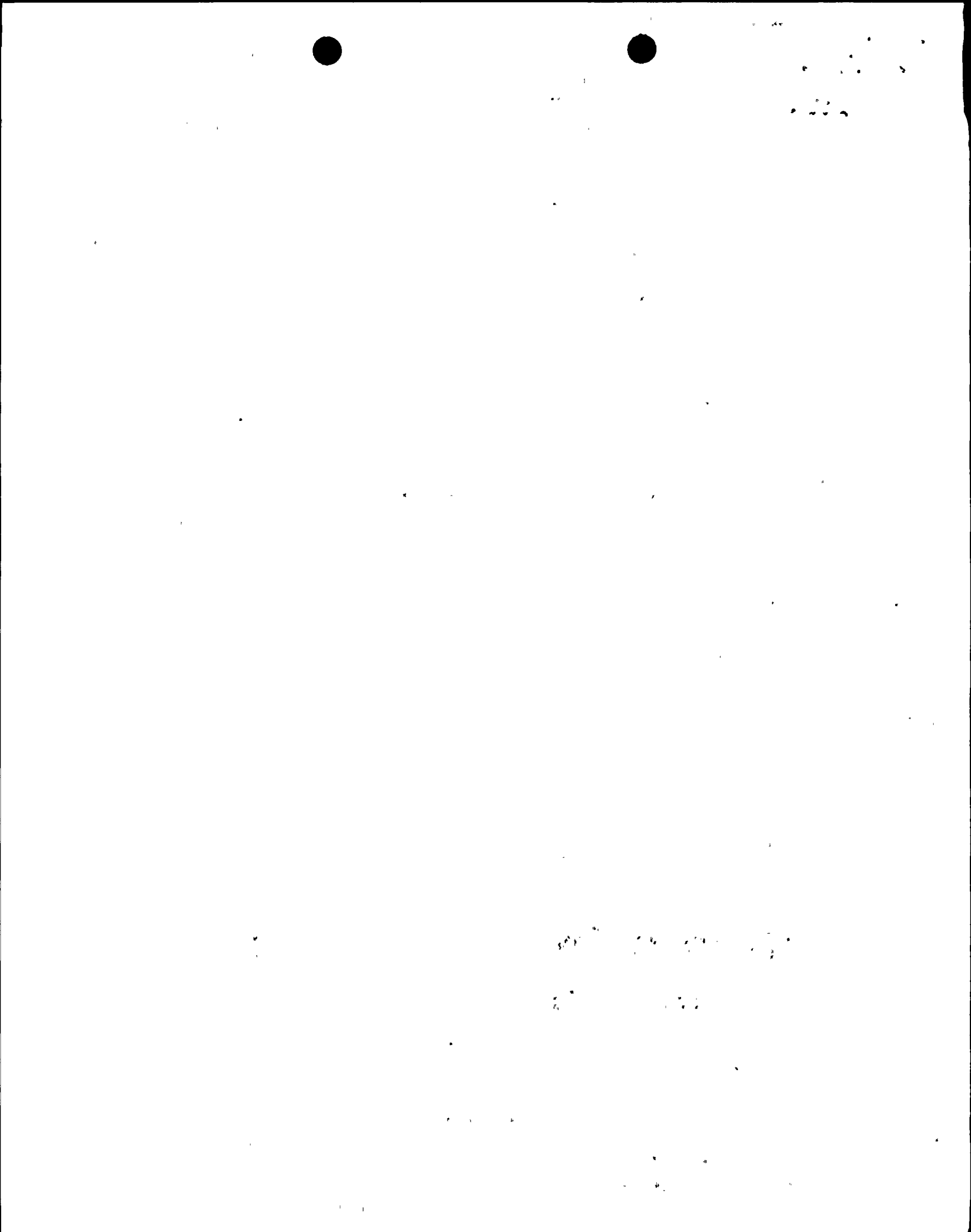
Attachment

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



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St. Lucie Unit 1 and Unit 2
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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;

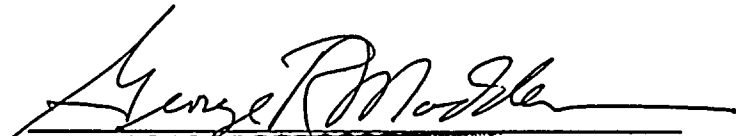
That he has executed the foregoing document; that the statements made in this document are true and correct to the best of his knowledge, information and belief, and that he is authorized to execute the document on behalf of said Licensee.



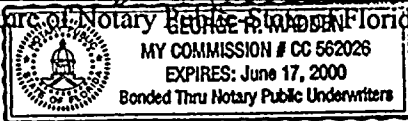
J. A. Stall

STATE OF FLORIDA
COUNTY OF St. Lucie

Sworn to and subscribed before me
this 10 day of July, 1997
by J. A. Stall, who is personally known to me.



Signature of Notary George P. Moller Florida



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



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To accelerate the processing of FPL's application for an exemption from 10 CFR 70.24, *Criticality Accident Requirements*, for areas designated for new (unirradiated) fuel handling and storage, Reference (2) requested FPL to verify that St. Lucie Units 1 and 2 meet seven criteria for granting exemptions from this rule.

Criterion 1: Plant procedures do not permit more than 1 PWR fuel assembly to be in storage or in transit between its associated shipping cask and dry storage rack at one time.

Response 1: FPL verified that St. Lucie plant procedures do not permit more than one PWR fuel assembly to be in storage or transit between its associated shipping cask and dry storage rack at one time.

Criterion 2: The k-effective of the fresh fuel storage racks filled with fuel of the maximum permissible U-235 enrichment and flooded with pure water does not exceed 0.95, at a 95% probability, 95% confidence level.

Response 2: FPL verified that the k-effective values of the fresh fuel (dry) storage racks filled with fuel of the maximum permissible U-235 enrichment (4.5 weight-percent) and flooded with unborated water do not exceed 0.95 at a 95% probability, 95% confidence level for St. Lucie Units 1 and 2.

Criterion 3: If optimum moderation of fuel in the fresh fuel storage racks occurs when the fresh fuel storage racks are not flooded, the k-effective corresponding to this optimum moderation does not exceed 0.98, at a 95% probability, 95% confidence level.

Response 3: FPL verified that the k-effective corresponding to the most reactive condition in the St. Lucie Unit 1 and Unit 2 fresh fuel (dry) storage racks with 4.5 weight-percent enriched fuel assemblies does not exceed 0.98 at a 95% probability, 95% confidence level. Since the most reactive condition is equivalent to the optimum moderation condition, the dry fuel storage racks meet this criterion.

Criterion 4: The k-effective of spent fuel storage racks filled with fuel of the maximum permissible U-235 enrichment and flooded with pure water does not exceed 0.95, at a 95% probability, 95% confidence level.

Response 4: FPL verified that the k-effective of St. Lucie Unit 1 and Unit 2 spent fuel storage racks filled with fuel of the maximum permissible U-235 enrichment (4.5 weight-percent) and flooded with unborated water does not exceed 0.95 at a 95% probability, 95% confidence level.

Criterion 5: The quantity of forms of special nuclear material, other than nuclear fuel, that are stored on site in any given area is less than the quantity necessary for a critical mass.

Response 5: Forms of Special Nuclear Material (SNM), other than nuclear fuel, are not stored in the dry fuel storage areas of either St. Lucie Unit 1 or Unit 2. FPL verified St. Lucie plant compliance with regulations governing SNM accountability and control, and determined that the quantity of forms of SNM, other than nuclear fuel, that are stored on site in any given area is less than the quantity necessary for a critical mass.

St. Lucie Unit 1 and Unit 2
Docket Nos. 50-335 and 50-389
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ATTACHMENT
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Criterion 6: Radiation monitors, as required by GDC 63, are provided in fuel storage and handling areas to detect excessive radiation levels and to initiate appropriate safety actions.

Response 6: FPL verified that radiation monitors, as required by GDC 63, are provided in the fuel storage and handling areas of St. Lucie Unit 1 and Unit 2 to detect excessive radiation levels and to initiate appropriate safety actions.

Criterion 7: The maximum nominal U-235 enrichment is 5%.

Response 7: FPL verified that the maximum nominal U-235 enrichment for St. Lucie Units 1 and 2 is 4.5% weight-percent.

