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WOODY, C. O. Florida Power & Light Co.
RECIP. NAME RECIPIENT AFFILIATION
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SUBJECT: Responds to NRC 870329 request for addl info re util 860702 proposed amend to License NPF-16, establishing option of storing Unit 1 spent fuel in Unit 2 spent fuel pool.

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FLORIDA POWER & LIGHT COMPANY

APRIL 28 1987

L-87-179

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

Gentlemen:

Re: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Spent Fuel Transfer - Occupational Exposure

By letter L-86-250, dated July 2, 1986, Florida Power & Light Company (FPL) proposed to amend the St. Lucie Unit 2 operating license, NPF-16, to establish the option of storing spent fuel from St. Lucie Unit 1 in the St. Lucie Unit 2 spent fuel pool. The Unit 1 spent fuel pool lost full core reserve capacity as a result of the 1987 refueling outage, and the planned Unit 1 spent fuel pool rerack cannot be accomplished prior to 1988. If, in the interim, full core off-load of Unit 1 should be necessary, Unit 1 spent fuel could be stored in the Unit 2 spent fuel pool.

Additional information was requested by the staff concerning occupational exposures and plant specific procedures in a letter dated March 29, 1987 (E. G. Tourigny to C. O. Woody). Attached is FPL's response to this information request.

If additional information is required on this topic, please contact us.

Very truly yours,

C. O. Woody
Group Vice President
Nuclear Energy

COW/EJW/gp

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant

Ltr Encl

Add: R.F. Burnett
NMSS

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REQUEST FOR ADDITIONAL INFORMATION

FLORIDA POWER & LIGHT COMPANY
ST. LUCIE UNITS 1 AND 2
DOCKET NOS. 50-335 AND 50-389

SPENT FUEL TRANSFER BETWEEN UNITS

1. Provide a table showing the occupational doses to site and contractor support personnel resulting from (1) removing Unit No. 1 spent fuel from the Unit No. 1 spent fuel pool storage racks; (2) placing the spent fuel in a fuel shipping cask that meets the packaging and transportation requirements of 10 CFR 71; (3) removing the fuel shipping cask from the Unit No. 1 fuel handling building; (4) moving the fuel shipping cask on a transporter vehicle from fuel handling building No. 1 to fuel handling building No. 2 (a distance of approximately 300 feet); (5) moving the fuel shipment cask into the Unit No. 2 fuel handling building; (6) removing the spent fuel from the fuel shipping cask; and (7) placing the spent fuel in the Unit No. 2 spent fuel pool storage racks. The table should include a breakdown of each task by estimated dose rates, person-hours and person-rems.

Response 1

Attached is a Projected Occupational Exposure Table.

2. Confirm that Florida Power & Light Company will prepare and implement a plant-specific procedure to be used for the transfer of Unit No. 1 spent fuel between the units.

Response 2

Prior to any trans-shipment of Unit 1 fuel between units at St. Lucie Plant, plant-specific procedures for the trans-shipment will be prepared, reviewed and implemented.

SPENT FUEL TRANSFER - PROJECTED

Task	mR/Hr* (Estimated Dose Rate)	Person-Hrs (Estimated Task Duration)	Person-Rem*
1) Remove PSL-1 SFA from SFP Storage Rack	1 to 5	0.5	0.0015
2) Place SFA in Shipping Cask			
a) Unload Cask from Transporter Vehicle	1	20	0.020
b) Place Cask in SFP	1 to 5	3	0.009
c) Prepare Cask to Receive SFA	1 to 5	4	0.012
d) Place SFA in Cask	1 to 5	1	0.003
3) Remove Cask from FHB			
a) Prepare Cask for Removal from SFP	1 to 5	2	0.006
b) Remove Cask from SFP, Decontaminate	1 to 10	10	0.050
c) Place Cask on Transporter Vehicle	1	20	0.020
4) Transport Cask with SFA to PSL-2 FHB (300 ft)	1	0.2	0.0002
5) Move Cask with SFA into PSL-2 FHB			
a) Unload Cask from Transporter Vehicle	1 to 10	10	0.050
b) Place Cask in SFP	1 to 5	3	0.009
6) Remove SFA from Cask	1 to 5	4	0.012

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Spent Fuel Transfer - Projected
Occupational Exposure Table (con't)

Task	mR/Hr* (Estimated Dose Rate)	Person-Hrs (Estimated Task Duration)	Person-Rem*
7) Place SFA in SFP Storage Rack			
a) Remove SFA from Cask	1 to 5	1	0.003
b) Prepare Cask for Removal from SFP	1 to 5	2	0.006
c) Remove Cask from SFP, Decontaminate	1 to 5	10	0.030
d) Place Cask on Transporter Vehicle	1	20	0.020
e) Return Transporter Vehicle to PSL-1 FHB	1	0.2	0.0002
TOTAL		110.9	0.2519

Approximate Person-Rem per SFA Transferred - 252 mRem

Abbreviations

FHB - Fuel Handling Building
PSL-1 - St. Lucie Unit 1
PSL-2 - St. Lucie Unit 2
SFA - Spent Fuel Assembly
SFP - Spent Fuel Pool

*For variable estimated dose rates, the Person-Rem Exposure is calculated by using the average of the Estimated Dose Rate.

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