

Repro. 8/18

AUG 28 1976

Docket Nos. 50-250
and 50-251

Florida Power and Light Company
ATTN: Dr. Robert E. Uhrig
Vice President
P. O. Box 013100
Miami, Florida 33101

Distribution
Docket File
NRC PDR
Local PDR
ORB#3 File
KRGoller
TJCarter
OELD
OI&E (3)
GLear
DElliott
CParrish.

DEisenhut
TBAbernathy, DTIE
JRBuchanan
ACRS (16)
DRoss

Gentlemen:

By letters dated January 28, 1976 and April 30, 1976 you submitted proposed changes to the Technical Specifications which relate to your proposed modification of the spent fuel storage facility for each unit. Based on our continuing review of your submittals, we have determined that we need additional information.

Please provide the items of additional information listed in the enclosure. In many cases the enclosed request for information refers to questions which were included in our request for information dated April 6, 1976 and which were not adequately discussed in your submittal of April 30, 1976. In order for us to continue our review in a timely manner please submit the requested information as soon as possible. If you have any questions regarding our request, please contact us.

Sincerely,

Original signed by
George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosure:
Request for Additional
Information

cc: See next page

OFFICER	ORB #3	ORB #3				
SURNAME	DElliott:mj	f-Glear				
DATE	8/ /76	8/ /76				

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[Signature]

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Operating Reactors Branch #3
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OFFICE	ORB #3	ORB #3				
SURNAME	DElliott:mjf	GLear				
DATE	8/18/76	8/18/76				

REQUEST FOR ADDITIONAL INFORMATION
TURKEY POINT UNITS 3 AND 4
SPENT FUEL POOL - INCREASED STORAGE CAPACITY
DOCKET NOS. 50-250 & 251

1. The response to question 18* indicates that the faulted limits of the ASME Boiler and Pressure Vessel Code, Section III, Division I Subsection NF will be used for the load combination which includes the effects of the safe shutdown earthquake (SSE). This will permit stress limits approximately 20 percent greater than those permitted in paragraph II.5 of Standard Review Plan 3.8.4. It is the staff's position that the structural acceptance criteria be similar to those given in paragraph II.5 of the Standard Review Plan. The yield stress values recommended by Section III of the ASME Code should be used in conjunction with the AISC requirements.
2. Describe the design procedure and permissible stresses for the stainless steel welded joints.
3. The response to question 21 with regard to the design of the fuel storage racks is not acceptable. It is the staff's position that the design and analysis of the new rack system be performed using either the existing input parameters including the old damping values or new parameters in accordance with Regulatory Guides 1.60 and 1.61. The use of existing input with the damping values in Regulatory Guide 1.61 is not acceptable. Furthermore, seismic excitation along three orthogonal directions should be imposed simultaneously for the design of the new rack system.
4. Section 3.2* indicates that the time history method will be used in the design of the racks. Please provide a comparison of the response spectra derived from the time history and the design response spectra for the damping values that are used in the design.
5. With regard to question 22, only the mathematical model of the fuel pool has been provided. Please provide the information requested for the storage rack and fuel assembly system. The effects of gaps, sloshing water, and increase of effective mass and damping due to submergence in water should be quantified.
6. With regard to question 23, if the racks are laterally supported from the fuel pool walls, describe how these loads were included in the re-analysis of the pool structure.
7. It is not clear if the racks will be anchored to the base slab of the pool. If so, describe the design of the anchorage and the materials used.



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8. Section 3.2 indicates that the time history analysis is performed with the SHOCK computer code." Describe the procedure used to validate this program. Acceptable procedures for validation are delineated in paragraph II.4.e of Standard Review Plan 3.8.1.
9. The response to question 31(a) is inadequate. Please provide the radionuclides concentrations as specified in the question.
10. Section 4.4 states that the spent fuel pit area is a radiation zone 1 classification with a maximum dose rate of 0.5 mrem/hr. Section 5.6 states that "the measured dose rate to personnel from the radionuclides in the spent fuel pool water is only a few mrem/hr." Please clarify this anomaly. Also, provide the dose rates that have been measured in the areas specified in question 31(b), namely the center and edge of the pool.
11. Section 5.6 does not respond to questions 31(e) and (g) in an acceptable manner. Please address your estimate of the increase in the annual man-rem burden from all operations in the spent fuel pool as a result of the pool modification. Include those exposures from more frequent changing of the demineralizer resin and filter cartridges.
12. Section 5.6 states that "the radiation levels along the sides of the pool and over the center of the pool are essentially the same. Therefore there has been no special build-up of crud around the sides of the pool..." The conclusions drawn with respect to the measurements appear to be incorrect. The dose rate at the edge of the pool, if there were clean pool walls (i.e., no crud build-up), should be less than the dose rate at the pool center based on source-detector geometrical considerations (i.e., a cylindrical source at the center and half-cylinder at the edge). Please provide mathematical models and calculations to justify your conclusions with respect to crud build-up around the sides of the pool.
13. Please provide the maximum and average volume of water in the spent fuel pool as requested in question 27(a).
14. Using realistic initial conditions that will exist for the fuel pool and the fuel assemblies within the pool, please show that the calculated neutron multiplication in the pool will be less than 0.95 under all accident conditions (including the cask drop and tip in the fuel pool accident).

*Question and section numbers refer to FPL submittal of April 30, 1976, Spent Fuel Storage Facility Modification Safety Analysis Report-Rev. 1.