



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

RELATED CORRESPONDENCE

February 28, 1985

DOCKETED
NRC

Dr. Robert M. Lazo, Chairman
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dr. Richard F. Cole
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC--20555

17-4 All 30

Dr. Emmeth A. Luebke
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, DC 20555

In the Matter of
FLORIDA POWER AND LIGHT COMPANY
(Turkey Point Plant, Unit Nos. 3 and 4)
Docket Nos. 50-250, 50-251 OLA-2

Dear Administrative Judges:

Enclosed for your information is a copy of a February 26, 1985 letter from the NRC Staff to Florida Power and Light Company (Licensee) which relates to the amendment allowing expansion of the spent fuel pool storage capacity. The Staff's letter is in response to a Licensee letter dated February 1, 1985, which is also enclosed, indicating that administrative controls were initiated to prevent any fuel rack lift-off during a seismic event and to retain the validity of the technical analysis supporting the amendment. As stated in the Staff's letter, the institution of the controls leaves the conclusions in the Staff's Safety Evaluation unaffected. Copies of this letter and its enclosures are also being distributed to the parties. The Staff will keep the Board informed of any further developments in this matter.

Sincerely,

Mitzi A. Young
Mitzi A. Young
Counsel for NRC Staff

Enclosures: As stated

cc w/ encls: Joette Lorion
Martin H. Hodder
Harold F. Reis

cc w/o encls: Remainder of service list

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

February 26, 1985

Docket Nos. 50-250
and 50-251

Mr. J. W. Williams, Jr., Vice President
Nuclear Energy Department
Florida Power and Light Company
Post Office Box 14000
Juno Beach, Florida 33408

Dear Mr. Williams:

Reference: TAC Nos. 56805 and 56808

SUBJECT: SPENT FUEL STORAGE FACILITY EXPANSION

By letter dated November 21, 1984, the Commission issued Amendment No. 111 to Facility Operating License No. DPR-31 and Amendment No. 105 to Facility Operating License No. DPR-41 for the Turkey Point Plant Units 3 and 4, respectively, which allowed expansion of the spent fuel storage facilities. Copies of the supporting Safety Evaluation and Notice of Issuance and Final Determination of No Significant Hazards Consideration were also enclosed. The Safety Evaluation (SE) and the appended Technical Evaluation Report (TER) provided the basis for our issuance of the requested amendments. Sections 2.3.4 and 2.3.5 of the SE and the appended TER indicated that postulated loads from a seismic event will not result in failures to the racks or pool structures, thus their integrity will be maintained. As indicated in Section 3.3.4 of the TER, there would be no lift-off of the rack modules from the pool liner during a seismic event. This conclusion was based on your September 28, 1984, letter which provided the results of the Westinghouse analysis.

By letter dated February 1, 1985, you indicate that Westinghouse informed you, subsequent to your September 28, 1984 letter, that administrative controls on fuel loading are required for racks whose outer rows overhang the support pads in order to be consistent with an assumption by Westinghouse during its analysis. That is, the outer (overhanging) rows would not be fully loaded while the remaining portion of the rack module is empty.

The NRC staff's SE and the supporting TER conclusions have remained valid due to the administrative controls initiated when you became aware of the potential need for the controls. These controls, which were prior to any fuel loading in the affected racks, preclude the possibility of any lift-off.

Your February 1, 1985, letter requested that we review the information provided as the result of a reanalysis of fuel racks with only overhanging rows loaded with fuel which indicates the worse case lift-off is less than 0.2 inches during a seismic event and this minimal lift-off will not result in failures to the racks or pool structures and their integrity will be maintained regardless of the loading pattern.

February 26, 1985

This request for our review of the reanalysis represents a change in a basis supporting the above referenced amendments as documented in the supporting Safety Evaluation. 10 CFR 50.59, "Changes tests and experiments," indicates that licensee's may make changes, conduct tests or experiments not described in the Safety Analysis Report without prior Commission approval unless the proposed change, test or experiment involves a change in the technical specifications incorporated in the license or an unreviewed safety question.

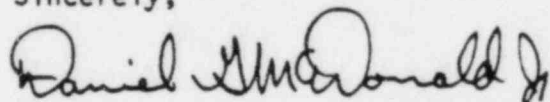
It is not clear from your submittal whether you have performed a 50.59 review and documented the results in accordance with the provisions of 50.59(a) and (b) or; that you have determined that the reanalysis requires a change in the technical specifications incorporated in the licenses or that the change represents an unreviewed safety question.

If you have performed a 50.59 review in accordance with the provisions of 50.59(a) and (b) and determined that neither an explicit technical specification change nor an unreviewed safety question is involved, you do not need our prior approval and your request may be withdrawn. However, if you have determined a change in the technical specifications incorporated in the license or an unreviewed safety question exists, we request that your submittal be modified in accordance with 50.59(c) including a proposed Notice for public comment using the standards in 10 CFR 50.92 concerning the issue of no significant hazards consideration.

We will take no further action on this request until we receive clarification.

The reporting and/or recordkeeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,



Daniel G. McDonald, Project Manager
Operating Reactors Branch #1
Division of Licensing

J. W. Williams, Jr.
Florida Power and Light Company

Turkey Point Plants
Units 3 and 4

cc: Harold F. Reis, Esquire
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L-85-30

Office of Nuclear Reactor Regulation
Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20055

Dear Mr. Varga:

Re: Turkey Point Units 3 & 4
Docket Nos. 50-250 & 50-251
Spent Fuel Storage Facility Expansion

In support of the FPL request to amend the facility operating licenses to permit expansion of the spent fuel storage facilities at Turkey Point Units 3 and 4, the rack vendor (Westinghouse) analyzed the spent fuel storage racks for overturning and sliding displacements due to earthquake loading for the cases of full, partially filled and empty fuel racks. The analysis results met and exceeded the stability criteria of the NRC "OT Position for Review and Acceptance of Spent Fuel Storage and Handling Applications." The results showed that the racks did not lift off the spent fuel pit embedment plates under seismic event conditions. This information was provided to you in FPL letter L-84-263, dated September 28, 1984.

Thereafter, in a letter dated October 19, 1984, Westinghouse informed FPL that administrative controls on fuel loading would be needed for those spent fuel racks whose outer rows overhang the support pads. Westinghouse stated that lifting of a rack could occur during a seismic event if the outer rows are fully loaded while the rest of the rack remains empty. Six (6) Region II racks with a one row overhang, one (1) Region I rack with a one row overhang and one (1) Region I rack with a two row overhang are affected.

Although not indicated in their October 19th letter, these controls were required to be consistent with an assumption made by Westinghouse in its analysis (i.e., that the overhanging rows would not be loaded while the rest of the rack was empty). Neither the preliminary seismic/structural analysis report nor the basis provided by Westinghouse for FPL's September 28th letter specified this assumption or identified the need for administrative controls. Consequently, at an October 24, 1984 meeting, FPL requested that Westinghouse provide clarification regarding the basis for its recommendations for controls. Westinghouse responded in a letter dated November 16, 1984 and received by FPL on November 27, 1984.

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Office Of Nuclear Reactor Regulation
Mr. Steven A. Varga

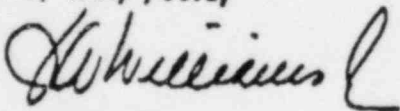
After review of the November 16th letter, and additional discussions with Westinghouse, FPL directed Westinghouse to reanalyze the affected rack modules with the assumption that overhanging rows are loaded while the remaining rows of the racks remain empty. Preliminary results of the reanalysis, which showed liftoff could occur during a seismic event, were discussed with Mr. D. G. McDonald on December 19, 1984. By letter dated January 10, 1985, Westinghouse provided FPL with the final verified results of the reanalysis.

The reanalysis shows that the applicable requirements of the OT position paper are met without any controls. The worst case loadings are 3 outboard rows (2 overhang rows plus the row above support pads) for a Region I module and 2 outboard rows (1 overhang row plus the row above support pads) for a Region II module while the rest of the module remains empty. For these loadings a more than adequate factor of safety against overturn is maintained. The following summarizes the results of the analysis:

- The factor of safety against overturn is 8 for Region I and 220 for Region II, with support pad liftoff of 0.18 inch and 0.01 inch, respectively, during a seismic event.
- The rack support pads will not slip off the embedment plate under any condition.
- The racks will not at any point contact other racks or the pool wall. A revised tabulation of displacements is shown in Table I.
- Resulting pool floor loads and structural stresses are enveloped by the condition of a fully loaded rack.

It is requested that the NRC review the above information and concur that the reanalysis is acceptable. Until NRC concurrence is obtained, FPL will provide administrative controls on fuel placement in order to preclude the possibility of any liftoff, maintaining the validity of the analysis and results submitted in our September 28th letter. If you have any questions, please contact us.

Very truly yours,



J. W. Williams, Jr.
Group Vice President
Nuclear Energy

JWW/TCG/cab

TABLE 1*
RACK DISPLACEMENTS
FOR AFFECTED FUEL RACKS
WORST CASE LOADINGS

REGION I REGION II

<u>SSE Seismic + Maximum Normal Thermal</u>	<u>SSE Seismic + Normal Thermal</u>			
Max. Sliding Distance, $\mu = .2$ (N-Linear Results)	Δs	in	.0001	0.007
Max. Structural Defl., $\mu = .8$ (N-Linear Results)	δ	in	.450	0.086
Total Displacement One Rack $\Delta = \Delta s + \delta$	Δ	in	.4501	0.093
SRSS Combined Displacement 2 Racks with only 1 sliding $\Delta_{max} = \sqrt{\Delta^2 + \delta^2}$	Δ_{max}	in	.636	0.127
Max. Normal Thermal Displacement	δ_T	in	.088	0.087
Max. Combined Thermal & Seismic Displacements $\bar{\Delta} = \delta_T + \Delta_{max}$	$\bar{\Delta}$	in	.724	0.214
Rack to Rack Gap (RI-RII)		in	1.11	1.11
Rack to Rack Gap (RI)		in	2.55	
Rack to Rack Gap (RII)		in		2.90

*See response to Question 4a of FPL Letter L-84-263 dated September 28, 1984.