

August 29, 1984

*See Correction letter
of 1-2/13/84*

Docket Nos. 50-250
and 50-251

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

The Commission has issued the enclosed Amendment No.108 to Facility Operating License No. DPR-31 and Amendment No.102 to Facility Operating License No. DPR-41 for the Turkey Point Plant Units Nos. 3 and 4, respectively. The amendments consist of changes to the Technical Specifications in response to your application transmitted by letter dated April 27, 1984.

These amendments prohibit the travel of heavy loads over irradiated fuel assemblies in the spent fuel pools with the exception of a temporary crane for use during the proposed reracking of the spent fuel pools.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular monthly Federal Register notice.

Sincerely,

/s/D.G.McDonald

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

Enclosures:

1. Amendment No.108 to DPR-31
2. Amendment No.102 to DPR-41
3. Safety Evaluation

cc: w/enclosures
See next page

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Turkey Point Plants
Units 3 and 4

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

August 29, 1984

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-250

TURKEY POINT PLANT UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 108
License No. DPR-31

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power and Light Company (the licensee) dated April 27, 1984, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-31 is hereby amended to read as follows:

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August 29, 1984

(B) Technical Specifications

The Technical Specifications contained in Appendix A and B, as revised through Amendment No.108, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 29, 1984



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
August 29, 1984

FLORIDA POWER AND LIGHT COMPANY
DOCKET NO. 50-251
TURKEY POINT PLANT UNIT NO. 4
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 102
License No. DPR-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power and Light Company (the licensee) dated April 27, 1984, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-41 is hereby amended to read as follows:

August 29, 1984

(B) Technical Specifications

The Technical Specifications contained in Appendix A and B, as revised through Amendment No. 102, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective immediately and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 29, 1984

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 108 FACILITY OPERATING LICENSE NO. DPR-31

AMENDMENT NO. 102 FACILITY OPERATING LICENSE NO. DPR-41

DOCKET NO. 50-250 AND 50-251

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
i	i
1-7	1-7
3.10-2	3.10-2
3.12-1	3.12-1
B3.10-1	B3.10-1
B3.12-1	B3.12-1

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1.24 **\bar{E} - AVERAGE DISINTEGRATION ENERGY**

\bar{E} shall be the average (weighted in proportion to the concentration of each radionuclide in the reactor coolant at the time of sampling) of the sum of the average beta and gamma energies per disintegration (in MeV) for isotopes, other than iodines, with half lives greater than 30 minutes, making up at least 95% of the total noniodine activity in the coolant.

1.25 **HEAVY LOADS**

Any load in excess of the nominal weight of a fuel and control rod assembly and associated handling tool. For the purpose of this specification, HEAVY LOADS will be defined as loads in excess of 2000 pounds.

5. At least ONE residual heat removal pump shall be in operation, unless T_{avg} is less than 160 F.
6. When the reactor vessel head is removed and fuel is in the vessel, the minimum boron concentration of 1950 ppm or higher, sufficient to maintain the reactor subcritical by 10% $\Delta k/k$ in the cold condition with all rods inserted shall be maintained in the reactor coolant system and the concentration shall be verified daily.
7. Direct communication between the control room and the refueling cavity manipulator crane shall be available during refueling operation.
8. The spent fuel cask shall not be moved over spent fuel, and only one spent fuel assembly will be handled at one time over the reactor or the spent fuel pit.
9. Fuel which has been discharged from a reactor will not be moved outside the containment in fewer than 100 hours after shutdown.

If any one of the above specified limiting conditions for refueling is not met, refueling shall cease until specified limits are met, and there shall be no operations which may increase reactivity.

10. HEAVY LOADS shall be prohibited from travel over irradiated fuel assemblies in the spent fuel pool*. With the requirements of this specification not satisfied, place the crane load in a safe condition.

* The temporary construction crane to be used for the rerack operation may be carried over irradiated fuel to facilitate installation of the crane. Lift rigs which meet the design and operational requirements of NUREG 0612 "Control of Heavy Loads at Nuclear Power Plants" will be used while performing this installation.

3.12 CASK HANDLING

Applicability: Applies to limitations during cask handling.

Objective: To minimize the possibility of an accident during cask handling operations that would affect the health and safety of the public.

Specifications: During cask handling operations:

- (1) The spent fuel cask shall not be moved into the spent fuel pit until all the spent fuel in the pit has decayed for a minimum of one thousand (1,000) hours.
- (2) Only a single element cask may be moved into the spent fuel pit.
- (3) A fuel assembly shall not be removed from the spent fuel pit in a shipping cask until it has decayed for a minimum of one hundred and twenty (120) days.*
- (4) HEAVY LOADS shall be prohibited from travel over irradiated fuel assemblies in the spent fuel pool. (Refer to T.S. 3.10.10)

* The Region 10 fuel which was in the Unit 3 reactor during the period of April 19, 1981 through April 24, 1981 may be removed from the Unit 3 spent fuel pit in a shipping cask after a minimum decay period of ninety-five (95) days.

B3.10 BASES FOR LIMITING CONDITIONS FOR OPERATION, REFUELING

Detailed instructions, safety precautions and the design of the fuel handling equipment, incorporating built-in interlocks and safety features, provide assurance that no incident could occur during the refueling operations that would result in a hazard to public health and safety.⁽¹⁾ Whenever changes are not being made in core geometry one flux monitor is sufficient. This permits maintenance of the instrumentation. Continuous monitoring of radiation levels and neutron flux provides immediate indication of an unsafe condition. The residual heat pump is used to maintain a uniform boron concentration.

A boron concentration of 1950 ppm was sufficient to maintain the reactor subcritical by at least 10% $\Delta k/k$ in the cold condition with all rods inserted, and also maintained the core subcritical with no control rods inserted, for the first core design.⁽²⁾ The required boron concentration may increase depending on the subsequent core design.

The control room operator will be able to inform the manipulator operator of any impending unsafe condition detected from the control board indicators during fuel movement.

The cask crane interlocks prevent cask handling above spent fuel. An excess weight interlock is provided on the spent fuel bridge crane hoist to prevent movement of more than one fuel assembly at a time. The spent fuel transfer mechanism can accommodate only one fuel assembly at a time.

The restriction on movement of HEAVY LOADS over irradiated fuel assemblies in the spent fuel pool* ensures that in the event this load is dropped (1) the activity release will be limited to that contained in a single fuel assembly, and (2) any possible distortion of fuel in the storage racks will not result in a critical array. This assumption is consistent with the activity release assumed in the FSAR. For the purpose of this specification, HEAVY LOADS are defined as loads greater than 2000 pounds.⁽³⁾ (Refer to T.S. 1.25.)

References:

- (1) FSAR - Section 9.5
- (2) FSAR Table 3.2.1-1
- (3) FSAR Table 3.2.3-1

* The temporary construction crane to be used for the rerack operation may be carried over irradiated fuel to facilitate installation of the crane. Lift rigs which meet the design and operational requirements of NUREG 0612 "Control of Heavy Loads at Nuclear Power Plants" will be used while performing this installation.

B3.12 BASES FOR LIMITING CONDITIONS FOR OPERATION, CAS. HANDLING

Limiting spent fuel decay time to a minimum of 1,000 hours prior to moving a spent fuel cask into the spent fuel pit will ensure that potential offsite doses are a fraction of 10 CFR Part 100 limits should a dropped cask strike the stored fuel assemblies.

The restriction to allow only a single element cask to be moved into the spent fuel pit will ensure the maintenance of water inventory in the unlikely event of an uncontrolled cask descent. Use of a single element cask which nominally weighs about twenty-five tons will also increase crane safety margins by about a factor of four.

Requiring the spent fuel decay time be at least 120 days prior to moving a fuel assembly outside the fuel storage pit in a shipping cask will ensure that potential offsite doses are a fraction of 10 CFR 100 limits should a dropped cask and ruptured fuel assembly release activity directly to the atmosphere.

The restriction on movement of HEAVY LOADS over irradiated fuel assemblies in the spent fuel pool ensures that in the event this load is dropped (1) the activity release will be limited to that contained in a single fuel assembly, and (2) any possible distortion of fuel in the storage racks will not result in a critical array. This assumption is consistent with the activity release assumed in the FSAR. For the purpose of this specification, HEAVY LOADS are defined as loads greater than 2000 pounds.⁽¹⁾ (Refer to T.S. 1.25 and T.S. B3.10)

References:

(1) FSAR Table 3.2.3-1



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

August 29, 1984

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 108 TO FACILITY OPERATING LICENSE NO. DPR-31
AND AMENDMENT NO. 102 TO FACILITY OPERATING LICENSE NO. DPR-41

FLORIDA POWER AND LIGHT COMPANY

TURKEY POINT UNIT NOS. 3 AND 4

DOCKET NOS. 50-250 AND 50-251

Background

By letter dated April 27, 1984, the licensee proposed changes to the plant technical specifications to prohibit the travel of heavy loads over irradiated fuel assemblies in the spent fuel pool. An exception to this requirement was also proposed to facilitate the installation of a temporary crane for use during reracking modifications for an upcoming spent fuel pool expansion.

Evaluation

The proposed changes include a definition of heavy loads in Section 1.0 of the specifications which defines a heavy load as any load in excess of 2000 pounds. Specifications 3.10 (Refueling) and 3.12 (Cask Handling) and their bases B3.10 and B3.12 have been revised to prohibit heavy loads from traveling over irradiated fuel assemblies in the spent fuel pool. An exception to the refueling specification is proposed that reads, "The temporary construction crane to be used for the rerack operation may be carried over irradiated fuel to facilitate installation of the crane. Lift rigs which meet the design and operational requirements of NUREG-0612, "Control of Heavy Loads at Nuclear Power Plants" will be used while performing this installation."

The 2000 pound definition of heavy loads covers the nominal weight of a fuel and control rod assembly and associated handling tool and is consistent with the definition for a heavy load at other Westinghouse plants. We, therefore, conclude that the definition for a heavy load is acceptable.

The proposed specification changes to Specifications 3.10 and 3.12 and their bases to prohibit travel of heavy loads over irradiated fuel assemblies in the spent fuel pool are in accordance with the licensee's commitment to provide such changes as identified in our safety evaluation report (SER) dated August 1, 1983, concerning compliance with the criteria of Phase I of NUREG-0612, "Control of Heavy Loads."

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August 29, 1984

The proposed exceptions to Specification 3.10 and its bases to allow the installation of a temporary crane is also acceptable, since the consequences of a load drop while handling the temporary crane are less than the consequences of a cask drop accident which was previously evaluated and accepted as reported in the SERs supporting Amendments 23 and 22 to Licenses DPR-31 and DPR-41, respectively. Additionally, the handling rigs and crane for handling the temporary crane will meet the criteria of NUREG-0612.

Based on the above, we conclude that the proposed technical specification changes are acceptable.

Environmental Consideration

These amendments involve changes in the installation or use of the facilities components located within the restricted areas as defined in 10 CFR Part 20.. The staff has determined that these amendments involve no significant increase in the amounts and no significant change in the types of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: August 29, 1984

Principal Contributors:

W. LeFave