



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

GPU NUCLEAR CORPORATION

AND

JERSEY CENTRAL POWER AND LIGHT COMPANY

OYSTER CREEK NUCLEAR GENERATING STATION

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 77  
License No. DPR-16

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by GPU Nuclear Corporation and Jersey Central Power and Light Company (the licensees) dated August 28, 1984 and supplemented September 7, 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.

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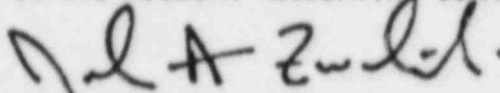
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 2.C(2) of Provisional Operating License No. DPR-16 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 77, are hereby incorporated in the license. GPU Nuclear Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John A. Zwolinski, Chief  
Operating Reactors Branch #5  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: October 29, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 77

PROVISIONAL OPERATING LICENSE NO. DPR-16

DOCKET NO. 50-219

Replace the following page of the Appendix A Technical Specifications with the enclosed page. The revised page is identified by the captioned amendment number and contains vertical lines indicating the area of change.

Remove Page

5.3-1

Replace Page

5.3-1

## E.3.1 Fuel Storage

- A. Normal storage for unirradiated fuel assemblies is in critically-safe new fuel storage racks in the reactor building storage vault; otherwise, fuel shall be stored in arrays which have a  $K_{eff}$  less than 0.95 under optimum conditions of moderation or in NRC-approved shipping containers.
- B. The spent fuel shall be stored in the spent fuel storage facility which shall be designed to maintain fuel in a geometry providing a  $K_{00}$  less than or equal to 0.95.
- C. The maximum U-235 loading in grams of U-235 per axial centimeter of fuel shall not exceed 15.6 gms U-235/cm.
- D. Loads greater than the weight of one fuel assembly shall not be moved over stored irradiated fuel in the spent fuel storage facility.
- E. The spent fuel shipping cask shall not be lifted more than six inches above the top plate of the cask drop protection system. Vertical limit switches shall be operable to assure the six inch vertical limit is met when the cask is above the top plate of the cask drop protection system.
- F. The temperature of the water in the spent fuel storage pool, measured at or near the surface, shall not exceed 125°F.

BASIS

The specification of  $K_{00} \leq 0.95$  and the maximum U-235 loading of  $\leq 15.6$  gm U-235/cm per axial centimeter for fuel in the spent fuel storage facility assures an ample margin from criticality. Conservative assumptions and allowance for tolerances, void effects, calculational uncertainties, pool temperature effects, etc. have been considered in the derivation of these limits (1,2). Note that the 15.6 gm U-235/cm is equivalent to a 3 w/o enrichment. (7)

The 15.6 gm U-235/cm is the limit of U-235 at any plane through the assembly perpendicular to the length of the assembly. It is to assure that possible non-uniform enrichments along the length of fuel rods cannot lead to a critical condition.

The effects of a dropped fuel bundle onto stored fuel in the spent fuel storage facility has been analyzed. This analysis shows that the fuel bundle drop would not cause doses resulting from ruptured fuel pins that exceed 10 CFR 100 limits (3, 4, 5) and that dropped waste cans will not damage the pool liner.

The elevation limitation of the spent fuel shipping cask to no more than 6 inches above the top plate of the cask drop protection system prevents loss of the pool integrity resulting from postulated drop accidents. An analysis of the effects of a 100 ton cask drop from 6 inches has been done (6) which showed that the pool structure is capable of sustaining the loads imposed during such a drop. Limit switches on the crane restrict the elevation of the cask to  $\leq 6$  inches when it is above the top plate.