



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 40 TO FACILITY OPERATING LICENSE NO. DPR-67
FLORIDA POWER & LIGHT COMPANY
ST. LUCIE PLANT, UNIT NO. 1

DOCKET NO. 50-335

Introduction

In early 1980, the staff became aware that there was some misunderstanding regarding the use of the term "OPERABLE" as it applies to single failure criterion for safety systems in power reactors technical specifications. In an effort to remove this misunderstanding and to clarify NRC requirements, the staff sent a letter (dated April 10, 1980) to All Power Reactor Licensees informing them of our requirements and requesting that they specify and clarify these requirements in their Technical Specifications (TS). Florida Power & Light Company (FPL or the licensee) responded to this request by letter dated June 20, 1980 for St. Lucie Unit 1.

In a separate action FPL, by letter dated October 6, 1980, proposed a change to the TS regarding spent fuel decay time. This change was proposed to correct an error resulting from incorrect assumptions in the previous cask drop analysis.

Evaluation

I. Clarification of Operable

The TS proposed by FPL satisfy the intent of the staff model specifications. Implementation of these specifications will accomplish the following:

1. Clarify the definition of Operable to include both the normal and emergency electric power supplies.
2. Clarify the action necessary when circumstances exceed those addressed in the specifications by noting, as acceptable, placing the reactor in a MODE in which the specification is not applicable.
3. Adding specification 3.0.5 which provides that actions, associated with equipment determined to be inoperable solely because either its normal or emergency power source is inoperable, are set by the specification regarding the power source.

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Changes to FPL's proposed specifications were made to bring them more closely in conformance with the model specifications. These changes have been discussed with and agreed to by the FPL staff.

Based on our review of FPL's proposed specifications we find them acceptable.

II. Spent Fuel Decay Time

FPL has submitted a proposed amendment to correct Technical Specification 3/4.9.14 and its bases due to an error in the original spent fuel pool cask drop analysis. In calculating the radius of fall of a spent fuel cask into the spent fuel pool, the licensee assumed a single pendulum drop radius of 133 inches instead of a drop radius of 248 inches that should have been assumed for the double pendulum methodology specified in the licensee's final safety analysis report (FSAR). As a result, specification 3/4.9.14 only imposes decay time requirements on a fraction of the total amount of spent fuel capable of being stored. The licensee has proposed that when the most recent spent fuel discharge does not exceed one-third of the core all irradiated fuel assemblies in the spent fuel pool would be decayed for at least 1180 hours prior to movement of the spent fuel cask into the spent fuel pool. The decay time would be increased to 1490 hours if more than one-third of the core is discharged.

The licensee has performed an analysis of the radiological consequences for both the specified spent fuel discharge cases and finds that the resultant offsite exposures are a small fraction of the regulatory guideline limits of 10 CFR Part 100. The licensee states that the analysis is based on Regulatory Guide 1.25 in all aspects except that the radial peaking factor (RPF) of 1.0 used in the analysis differs from the R.G. 1.25 specification of RPF of 1.65.

We have reviewed the applicant's use of the RPF of 1.0 and find it to be acceptable. We have also performed an independent assessment of the offsite radiological exposures. Our estimated offsite radiological dose (NUREG-0612) of about 30 rem to the thyroid at the exclusion radius is a small fraction of 10 CFR Part 100 dose guidelines.

Based on our evaluation of the licensee's submittal and on our independent assessment we find the licensee's proposed change to the Technical Specifications acceptable.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of the amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: May 28, 1981