



April 4, 1978

L-78-110

Director of Nuclear Reactor Regulation
Attn: Mr. Victor Stello, Director
Division of Operating Reactors
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Stello:

Re: St. Lucie Unit 1
Docket No. 50-335
Proposed Amendment to
Facility Operating License DPR-67

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By letter dated August 31, 1977 (L-77-273), FPL submitted proposed technical specification changes for increased fuel storage capacity at St. Lucie Unit No. 1. These were subsequently approved by the NRC in Amendment No. 22 to the Operating License issued on March 29, 1978. In the course of our subsequent review of the proposed technical specifications, we have determined that it would be desirable to transfer certain provisions relating to the decay time for fuel assemblies stored in the modules nearest the fuel cask compartment from their present location in the Design Features section to the section on Limiting Conditions for Operation and Surveillance Requirements.. Therefore, in accordance with 10 CFR 50.30, Florida Power & Light Company (FPL) submits herewith three (3) signed originals and forty (40) copies of a request to amend Appendix A of Facility Operating License DPR-67.

The proposed technical specification changes are described below and are shown on the attached technical specification pages bearing the date of this letter in the lower right-hand corner.

Page 5-6

Specification 5.6.3 is revised to delete the specification on decay time for fuel assemblies stored in the modules nearest the fuel cask compartment.

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1. The first part of the document is a list of names and addresses. The names are: John Doe, Jane Smith, and Bob Johnson. The addresses are: 123 Main St, 456 Elm St, and 789 Oak St.

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Specification 3/4.9.3 is revised to add provisions relating to decay time for fuel assemblies stored in the modules nearest the fuel cask compartment prior to moving the spent fuel cask into the fuel cask compartment.

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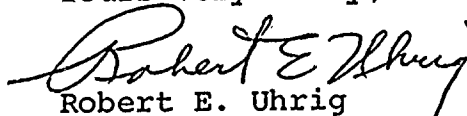
The Bases for Decay Time are modified to add a discussion of the basis for the added ICO and Surveillance Requirement on spent fuel cask movement into the fuel cask compartment.

As you know, St. Lucie Unit No. 1 is presently undergoing its first refueling, and FPL will be shortly conducting an inspection of the fuel assemblies to determine the degree of wear experienced by the Control Element Assembly (CEA) guide tubes during the previous cycle. In the event that this inspection shows wear requiring repairs, FPL plans to accomplish those repairs with the assemblies placed in those modules nearest the fuel cask compartment to facilitate the repair work. The existing Technical Specifications would preclude that, however, even though no spent fuel cask would be in the fuel cask compartment. Since these repairs, if necessary, should begin as quickly as possible after the inspection, it is requested that approval of this request be granted on an expedited basis. In the event that NRC approval would not be forthcoming in sufficient time to support the repair activities, FPL requests that an exemption from the requirements of Technical Specification 5.6.3, with respect to the specification on decay time for fuel assemblies stored in the modules nearest the fuel cask compartment, be granted in accordance with the provisions of 10 CFR 50.12. The bases for this exemption are contained in the safety evaluation attached to this letter.

This proposed amendment has been reviewed by the Facility Review Group and the Company Nuclear Review Board and they have concluded that it is essentially administrative in nature and does not constitute an unreviewed safety question. A written safety evaluation is attached.

FPL considers this to be a Class II Amendment in accordance with the criteria stated in 10 CFR 170.22. Accordingly, a license fee in the amount of \$1,200 is enclosed.

Yours very truly,


Robert E. Uhrig
Vice President

REU/LLL/lc
Attachments

cc: Mr. James P. O'Reilly Region II
Harold F. Reis, Esquire
Peter B. Erickson

DESIGN FEATURES

CRITICALITY (Continued)

less than 12.53 inches between fuel assemblies placed in the storage racks. These spacings ensure a K_{eff} equivalent to < 0.95 with the storage pool filled with unborated water. The K_{eff} of < 0.95 includes the conservative assumptions as described in Section 9.1 of the FSAR. In addition, fuel in the storage pool shall have a U-235 loading of ≤ 41.45 grams of U-235 per axial centimeter of fuel assembly.

DRAINAGE

5.6.2 The fuel pool is designed and shall be maintained to prevent inadvertent draining of the pool below elevation 56 feet.

CAPACITY

5.6.3 The spent fuel pool is designed and shall be maintained with a storage capacity limited to no more than 728 fuel assemblies.

5.7 SEISMIC CLASSIFICATION

5.7.1 Those structures, systems and components identified as seismic Class I in Section 3.2.1 of the FSAR shall be designed and maintained to the original design provisions contained in Section 3.7 of the FSAR with allowance for normal degradation pursuant to the applicable Surveillance Requirements.

5.8 METEOROLOGICAL TOWER LOCATION

5.8.1 The meteorological tower location shall be as shown on Figure 5.1-1.

5.9 COMPONENT CYCLE OR TRANSIENT LIMITS

5.9.1 The components identified in Table 5.9-1 are designed and shall be maintained within the cyclic or transient limits of Table 5.9-1.

REFUELING OPERATIONS

3/4.9.3 DECAY TIME

LIMITING CONDITION FOR OPERATION

3.9.3.1 The reactor shall be subcritical for a minimum of 72 hours.

APPLICABILITY: During movement of irradiated fuel in the reactor pressure vessel.

ACTION:

With the reactor subcritical for less than 72 hours suspend all operations involving movement of irradiated fuel in the reactor pressure vessel. The provisions of Specification 3.0.3 are not applicable.

3.9.3.2 The 217 fuel assemblies in the three 7X7 modules and the one 7X10 module nearest the fuel cask compartment shall have decayed for at least 1553 hours.

APPLICABILITY: Prior to movement of the spent fuel cask into the fuel cask compartment.

ACTION:

With irradiated fuel assemblies having a decay time of less than 1553 hours in the three 7X7 modules and the one 7X10 module nearest the fuel cask compartment, suspend all activities involving movement of the spent fuel cask into the fuel cask compartment. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.3.1 The reactor shall have been determined to have been subcritical for at least 72 hours by verification of the date and time of subcriticality prior to movement of irradiated fuel in the reactor pressure vessel.

4.9.3.2 The 217 fuel assemblies in the three 7X7 modules and the one 7X10 module nearest the fuel cask compartment shall have been determined to have decayed for at least 1553 hours by verification of the date and time of discharge from the reactor prior to movement of the spent fuel cask into the fuel cask compartment.

3/4.9 REFUELING OPERATIONS

BASES

3/4.9.1 BORON CONCENTRATION

The limitations on minimum boron concentration (1720 ppm) ensure that: 1) the reactor will remain subcritical during CORE ALTERATIONS, and 2) a uniform boron concentration is maintained for reactivity control in the water volumes having direct access to the reactor vessel. The limitation on K_{eff} of no greater than 0.95 is sufficient to prevent reactor criticality with all full length rods (shutdown and regulating) fully withdrawn.

3/4.9.2 INSTRUMENTATION

The OPERABILITY of the wide range logarithmic range neutron flux monitors ensures that redundant monitoring capability is available to detect changes in the reactivity condition of the core.

3/4.9.3 DECAY TIME

The minimum requirement for reactor subcriticality prior to movement of irradiated fuel assemblies in the reactor pressure vessel ensures that sufficient time has elapsed to allow the radioactive decay of the short lived fission products. This decay time is consistent with the assumptions used in the accident analyses.

The minimum requirement for decay of the irradiated fuel assemblies in the three 7X7 modules and the one 7X10 module nearest the fuel cask compartment prior to movement of the spent fuel cask into the fuel cask compartment ensures that sufficient time has elapsed to allow radioactive decay of the fission products. This decay time is consistent with the assumptions used in the cask drop accident analysis.

3/4.9.4 CONTAINMENT PENETRATIONS

The requirements on containment penetration closure and OPERABILITY ensure that a release of radioactive material within containment will be restricted from leakage to the environment. The OPERABILITY and closure restrictions are sufficient to restrict radioactive material release from a fuel element rupture based upon the lack of containment pressurization potential while in the REFUELING MODE.

3/4.9.5 COMMUNICATIONS

The requirement for communications capability ensures that refueling station personnel can be promptly informed of significant changes in the facility status or core reactivity condition during CORE ALTERATIONS.

SAFETY EVALUATION

Re: St. Lucie Unit 1
Docket No. 50-335
Refueling Operations - Decay Time

1. Introduction

This evaluation supports a proposed change to Technical Specifications 5.6.3 and 3/4.9.3 concerning the storage of fuel assemblies in the four modules closest to the fuel cask compartment of the augmented spent fuel storage pool at St. Lucie Unit No. 1. FPL proposes to transfer the associated words regarding such storage from Technical Specification 5.6.3 to Technical Specification 3/4.9.3.

2. Discussion

Both the current technical specification on spent fuel pool design features, Technical Specification 5.6.3, and that proposed by FPL in its letter dated August 31, 1977 (L-77-273), and approved by the NRC on March 29, 1978, contain a provision that the spent fuel stored in the racks nearest the fuel cask compartment have a certain minimum decay time. This decay time is necessary to assure that the radiological consequences of a postulated cask drop accident do not exceed a specified fraction of 10 CFR Part 100 dose limits.

Based upon the information contained in the safety analysis report accompanying its submittal of August 31, 1977 (See Section 5.4 and Figure 5.4-1.), FPL proposed, in Technical Specification 5.6.3, that the fuel assemblies in the modules nearest the fuel cask compartment shall have decayed for at least 1533 hours. The specification was proposed in this manner in order to be consistent with the issued technical specification.

The purpose of this portion of Technical Specification 5.6.3 is to assure that the accident doses will remain within their limits. As such, however, it is more properly a Limiting Condition for Operation (LCO) rather than a Design Feature. Additionally, until the spent fuel cask is moved into the fuel cask compartment, an accident in which a dropped cask possibly impacts the modules nearest the compartment does not become a concern. Accordingly, FPL has proposed that Technical Specification 5.6.3 be modified to address only the spent fuel pool capacity and that the specification of minimum decay time for the fuel assemblies nearest the fuel cask compartment be transferred to Technical Specification 3.9.3. In this manner, it becomes a Limiting Condition for Operation on movement of the spent fuel cask into the fuel cask compartment. This will assure that fuel cask movement receives proper attention as an LCO and that the proper surveillances are performed during refueling operations.

2. Discussion (cont.)

The proposed change is essentially administrative in nature in that it transfers existing provisions from one section of the Technical Specifications to another. In this case, however, the movement is "in the conservative direction", since the material is being transferred from the section on Design Features to that on Limiting Conditions for Operation and Surveillance Requirements.

3. Conclusion


Based on the considerations described above, (1) the proposed change does not increase the probability or consequences of accidents or malfunctions of equipment important to safety and does not reduce the margin of safety as defined in the basis for any technical specification, therefore, the change 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.

STATE OF FLORIDA)
)
COUNTY OF DADE) ss.

Robert E. Uhrig, being first duly sworn, deposes and says:

That he is a Vice President of Florida Power & Light Company,
the Licensee herein;

That he has executed the foregoing document; that the state-
ments made in this said document are true and correct to the
best of his knowledge, information, and belief, and that he
is authorized to execute the document on behalf of said
Licensee.


Robert E. Uhrig

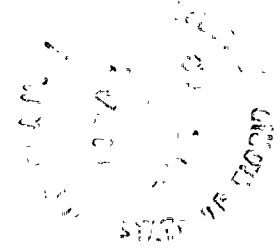
Subscribed and sworn to before me this

4 day of April, 19 78


NOTARY PUBLIC, in and for the County of Dade,
State of Florida

My commission expires: _____

NOTARY PUBLIC STATE OF FLORIDA at LARGE
MY COMMISSION EXPIRES MAY 5, 1981
BONDED THRU MAYNARD BONDING AGENCY



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