

March 27, 2001

Mr. T. F. Plunkett
President - Nuclear Division
Florida Power and Light Company
P. O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: ST. LUCIE UNIT 1 - REQUESTED CORRECTION/CLARIFICATION TO NRC
SAFETY EVALUATION (TAC NO. MA9531)

By letter dated January 25, 2001, the U.S. Nuclear Regulatory Commission issued Amendment No. 171 to Facility Operating License No. DPR-67 for the Florida Power and Light Company (FPL) St. Lucie Plant, Unit No. 1. The amendment addressed several revisions associated with the Cycle 17 Reload, including approval of a request for relief from fuel assembly reconstitution restrictions for peripheral low power fuel assemblies.

The FPL staff has informed us of a need for clarification in the Safety Evaluation (SE) supporting the amendment. Section 2.4, Fuel Assembly Reconstitution, and Section 2.5, Summary, did not adequately distinguish between restrictions on peripheral fuel assemblies and other fuel assemblies. Enclosed with this letter are revised pages 3 and 4 to the SE. Sections 2.4 and 2.5 have been revised to provide the necessary clarifications. This revised pages should be inserted into the SE attached to the Amendment. This revision does not change the conclusion in the original SE.

The thoroughness of your staff in identifying this inaccuracy is appreciated, and is an important contribution in ensuring the accuracy of the SEs, which form the basis for approval of licensing amendments. If you or your staff have any questions concerning the resolution of this matter, please call me at (301)415-1496.

Sincerely,

/RA by B. Moroney Acting for/

Kahtan N. Jabbour, Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-335

Enclosure: Revised SE pages

cc w/encls: See next page

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2.3 TS 6.9.1.11 Update: Core Operating Limits Report (COLR)

The shutdown margin specifications (TS 3.1.1.1 and 3.1.1.2) proposed for relocation to the COLR would be added to the list of COLR specification limits listed in TS 6.9.1.11.b. In addition, the list of NRC-approved analytical methods that can be used to determine the COLR parameters would be expanded to include reports recently approved by the NRC, including EMF-1961(P)(A), Revision 0, "Statistical Setpoint/Transient Methodology for Combustion Engineering Type Reactors," which was approved by the NRC on July 12, 2000. The proposed changes are acceptable.

2.4 Fuel Assembly Reconstitution

St. Lucie Unit 1 has in the past, experienced limited fuel failures of fuel assemblies located on the periphery of the core and adjacent to the guide tubes. Peripheral assemblies are typically low powered assemblies and thus not limiting from a safety point of view. When these peripheral fuel rods fail, they may be replaced by inert Zircaloy clad rods. The Zircaloy cladding houses stainless steel pellets. In this submittal (July 19, 2000), SL1 is proposing to replace failed fuel rods in the future with a limited number (eight (8) per assembly), of solid stainless rods instead of Zircaloy clad stainless steel pellets rods (Ref. 2). The licensee proposed method of the fuel assembly reconstitution is consistent with the staff restrictions that will allow replacement of the fuel rods with inert solid steel rods near the guide tube locations which were found to be most susceptible to fretting failures. Furthermore, with the proposed fuel assembly reconstitution in the core peripheral locations, the subchannel limitation would not apply to the peripheral fuel assemblies and would allow replacement of all failed fuel rods with inert rods near the guide tube locations because there were no thermohydraulic concerns in the peripheral assemblies. Based on the SPC evaluation, the staff agrees with the proposed changes from the fuel assembly reconstitution restriction, i.e., no limitation on the number of inert rods and/or guide tubes per subchannel for the peripheral fuel assemblies.

The solid stainless steel rods will be manufactured from common materials already used in SPC fuel assemblies. SPC performed an evaluation for FPL and concluded that these solid steel rods are equivalent to the inert rods described in the topical report and are therefore acceptable for replacement of failed fuel rods. This evaluation included the assembly-specific safety, mechanical, and neutronic evaluations described in the NRC approved reference report, (ANF-90-082(P)(A) methodology. The staff agrees with the proposed replacement of the eight (8) inert stainless steel rods with solid stainless steel rods as substitutes for failed fuel rods.

2.5 Summary

The staff has reviewed the licensee's safety analyses to support the proposed TS changes for operation of Fuel Cycle 17 and future cycles at the SL1 plant. Based on this review, as described above, the staff concludes that the proposed TS changes and supporting safety analyses are acceptable, subject to the condition that FPL will restrict the number of solid stainless steel replacement rods to a maximum of eight (8) per assembly as substitutes for failed rods, except, with no limitation on the number of inert rods/guide tubes per subchannel for the peripheral assemblies. The limit of 26 percent on the total number of inert replacement rods per assembly (including a maximum of eight solid stainless steel rods) will remain unchanged, consistent with the SPC NRC approved fuel reconstitution methodology.

3.0 STATE CONSULTATION

Based upon a letter dated March 8, 1991, from Mary E. Clark of the State of Florida, Department of Health and Rehabilitative Services, to Deborah A. Miller, Licensing Assistant, U.S. Nuclear Regulatory Commission (NRC), the State of Florida does not desire notification of issuance of license amendments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the 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 the amendments involve no significant hazards consideration, and there has been no public comment on such finding (65 FR 81921). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 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 the amendments.

5.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

6.0 REFERENCES

1. Letter from Rajiv S. Kundalkar, Vice President, to NRC, Proposed License Amendment Cycle 17 for St. Lucie Unit 1, dated July 19, 2000.
2. Letter from Rajiv S. Kundalkar, Vice President, to NRC, Proposed License Amendment Cycle 17, Reload Supplement for St. Lucie Unit 1, dated November 6, 2000.

Principal Contributor: A. Attard, NRR

Date: March 27, 2001

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