

increase in the probability or consequences of an accident previously evaluated.

(2) [Does not] [c]reate the possibility of a new or different kind of accident from any accident previously evaluated.

*M5 advanced alloy:* Topical report BAW-10227P-A demonstrated that the material properties of the M5 alloy are not significantly different from those of Zircaloy-4. Therefore, M5 fuel rod cladding and fuel assembly structural components will perform similarly to those fabricated from Zircaloy-4, thus precluding the possibility of the fuel becoming an accident initiator and causing a new or different type of accident.

*Removal of design parameters of maximum fuel enrichment, active fuel length, rod weight and Control Rod content:* This change moves design features from ITS to the FSAR and other design documents and analyses or adds consistency with the standard ITS. The location of this information does not create the possibility of a new or different kind of accident from any accident previously evaluated. The approved FRA-ANP topical report, BAW-10179P-A will continue to be used to ensure that the required safety limits are satisfied. Therefore, these changes do not involve the possibility of a new or different kind of accident from any accident previously evaluated.

*Addition of a limited number of lead test assemblies:* This change is administrative in nature and it is proposed for consistency with the ITS standard. Crystal River Unit 3 does not intend to load lead test assemblies in the upcoming fuel cycle. When lead test assemblies are to be loaded, they will be designed and manufactured to ensure compatibility with the co-resident fuel assemblies, core internal structures, and fuel handling and storage equipment. The approved Framatome ANP topical report BAW-10179P-A will be used to ensure that the lead test assemblies meet all applicable limits of the safety analysis and that the lead test assemblies are placed in non-limiting core locations. Applicable mixed core penalties and core operating limits will be developed and applied. Therefore, use of lead test assemblies will not involve the possibility of a new or different kind of accident from any previously evaluated.

(3) [Does not] [i]nvolve a significant reduction in a margin of safety.

*M5 advanced alloy:* The proposed changes will not involve a significant reduction in the margin of safety because it has been demonstrated that the material properties of the M5 alloy are not significantly different from those of Zircaloy-4. The M5 alloy is expected to perform similarly or better [than] Zircaloy-4 for all normal operating and accident scenarios, including both non-LOCA [loss-of-coolant accident] and LOCA scenarios. For LOCA scenarios, where the slight differences in M5 material properties relative to Zircaloy-4 could have some impact on the overall accident scenario, plant-specific LOCA analyses will be performed prior to the use of fuel assemblies with fuel rods or fuel assembly components containing M5. These LOCA analyses, required by ITS 5.6.2.18, "Core Operating Limits Report (COLR)," will demonstrate that all applicable margins of safety will be maintained by the use of the M5 alloy.

*Removal of design parameters of maximum fuel enrichment, active fuel length, rod weight and Control Rod content:* Approved methodologies will be used in the cycle-specific safety analysis to evaluate the use of the M5 advanced alloy, and account for various assembly differences (various rod weights and active fuel lengths). The location of the design information does not affect the margin of safety.

*Addition of a limited number of lead test assemblies:* This change is administrative in nature and is proposed for consistency with the ITS standard. Crystal River Unit 3 does not intend to load lead test assemblies in the upcoming fuel cycle. When lead test assemblies are to be loaded, the approved Framatome ANP topical report BAW-10179P-A will be used to ensure that all applicable limits of the safety analysis are met and that the lead test assemblies are placed in nonlimiting core locations. Applicable mixed core penalties and core operating limits will be developed and applied. There will be no significant reduction in the margin of safety when a limited number of lead test assemblies are utilized.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

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*Florida Power and Light Company, Docket No. 50-335, St. Lucie Plant, Unit No. 1, St. Lucie County, Florida*

*Date of amendment request:* November 25, 2002.

*Description of amendment request:* The proposed license amendment would modify plant Technical Specifications (TSs) and the associated spent fuel pool (SFP) criticality analyses to eliminate credit for the Boraflex™ neutron absorber in SFP fuel storage racks and credit specific rules to control fuel assembly positioning in the SFP racks. TS 3.9.11 is revised to add a Limiting Condition for Operation for the SFP soluble boron concentration and require periodic surveillance of this parameter. This submittal provides justification for removing the description of the poison material in the spent fuel racks from Section 5 of the Unit 1 TSs, that was requested to be added by the licensee's cask pit spent fuel storage rack submittal dated October 23, 2002. In addition, a new SFP dilution analysis was performed that supports the criticality analysis

requirement for a minimum soluble boron concentration.

*Basis for proposed no significant hazards consideration determination:* As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

(1) Would operation of the facility in accordance with the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

No. The proposed amendment to eliminate reliance on Boraflex™ and to credit SFP soluble boron for reactivity control in the spent fuel pool storage racks was evaluated for impact on the following previously evaluated events:

- A fuel handling accident (FHA)
- A fuel mispositioning event
- A cask drop accident
- A loss of spent fuel pool cooling

The proposed amendment does not modify the facility. A new criticality analysis credits existing soluble boron in the SFP water and specific fuel positioning rules for reactivity control, without requiring any physical changes to the fuel storage racks. The amendment does not change any rack module location or any module's designation as Region 1 or Region 2 storage. There is no significant increase in the probability of a fuel handling accident in the SFP that is caused by crediting soluble boron and new fuel positioning rules, rather than Boraflex™, for reactivity control. The probability of a fuel handling accident is a function of the equipment design and procedures used when handling irradiated fuel. Neither of these features is affected when soluble boron, instead of Boraflex™, is credited for reactivity control in the SFP.

There is no increase in the probability of an accidental fuel assembly mispositioning when crediting the presence of soluble boron in fuel pool water for reactivity control. Fuel assembly selection and manipulation will continue to be controlled by approved fuel handling procedures; these procedures require the identification of a verified target location prior to grappling the assembly. Fuel placement will be in accordance with the revised TS.

There is no increase in the consequences of either an FHA or an accidental mispositioning of a fuel assembly into the SFP racks. Consequences of a FHA are not increased because the proposed amendment does not change the fuel fission product inventory, local meteorological conditions, or the fission product partition factor provided by fuel pool water. The consequences of an accidental misload are not increased because the criticality analysis demonstrates that the fuel array will remain sub-critical, even if the pool contains a boron concentration below the minimum level required by Technical Specifications. The TS will ensure that an adequate SFP soluble boron concentration is maintained for all conditions.

The proposed fuel positioning rules do not cause the total radionuclide inventory present in the spent fuel pool to increase, or