

UNITED STATES NUCLEAR REGULATORY COMMISSION

FLORIDA POWER CORPORATION

DOCKET NO. 50-302

NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO
FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS
CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. DPR-72 issued to Florida Power Corporation (the licensee) for operation of Crystal River Unit 3 (CR-3) located in Citrus County, Florida.

The proposed amendment would increase the licensed capacity for spent fuel assembly storage in the CR-3 Spent Fuel Pool (SFP) and revise the configuration for storage of fresh fuel.

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. 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. Involve a significant increase in the probability or consequences of an accident previously evaluated.

The LAR [license amendment request] proposes to increase the onsite storage capacity of spent fuel and to revise the fresh fuel-loading configuration. The licensee is replacing the existing spent fuel storage racks with new storage racks with a different neutron absorbing material. The licensee has reanalyzed the criticality of the revised storage configuration for fresh fuel. The replacement storage racks and the revised fuel storage configuration do not affect any structure, system or component, nor process related to the operation of CR-3. As a result, the proposed LAR will not change the probability or consequences of any accidents related to operation previously evaluated. Thus, only those accidents that are related to movement and storage of fuel assemblies could be potentially affected by the proposed LAR. Fuel handling accidents (FHA) are analyzed in Section 14.2.2.3 of the CR-3 Final Safety Analysis Report (FSAR). These include a FHA inside the Reactor Building (RB) and a FHA outside the RB. The LAR involves storage of fuel assemblies, which is an activity conducted outside the RB only. Therefore, only the FHA outside the RB is potentially affected. The FHA outside the RB is postulated as the dropping of a fuel assembly into the spent fuel storage pool that results in damage to a fuel assembly and the release of the gaseous fission products. The current FHA assumes all 208 fuel pins in the dropped assembly are damaged. The results of that analysis demonstrate that the applicable 10 CFR 100.11 dose acceptance criteria are satisfied. Thus, the consequences of a FHA are not increased by the installation of the high-density racks. The high-density racks only increase the storage capacity and do not change the frequency or method for handling fuel assemblies. Thus, the probability of a FHA is not increased.

The increased spent fuel storage capacity will result in a negligible increase in the heat input to the spent fuel pool and its cooling system. The limiting heat load is from the combined impact of stored fuel and a full core off-load. The full core off-load accounts for approximately 90% of that heat load. The increase in stored fuel capacity, numerically less than 10%, is comprised of fuel that has been stored the longest resulting in less decay heat. Thus, the impact of the increased spent fuel storage capacity on the total heat load is less than 1%.

The increased fuel pool capacity and the revised fuel loading configuration do not increase the probability of a full core off-load.

The FSAR specifies the normal upper limit of the fuel pool cooling system as 160°F. Administrative controls regarding when fuel movements from the reactor to the fuel pool can be completed are implemented to assure this upper limit is not exceeded.

Because neither the probability nor the consequences of a FHA are increased, and because there is not any significant additional heat input to the spent fuel

pools, it is concluded that the LAR does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Create the possibility of a new or different kind of accident from any accident previously evaluated?

Onsite storage of spent fuel assemblies in the spent fuel pools is a normal activity that CR-3 has been designed and licensed for. As part of assuring that this normal activity can be performed without endangering public health and safety, the ability of CR-3 to safely accommodate different possible accidents in the spent fuel pools such as dropping a fuel assembly or the misloading of a fuel assembly have been analyzed. The increased spent fuel pool storage capacity proposed by the LAR does not change the methods of fuel movement or fuel storage. Thus, the proposed LAR does not create any new or different kind of accident from those previously evaluated.

The process of replacing the storage racks will involve removing the existing racks from the pool and installing new racks. These movements of the storage racks will be performed with the racks empty of all fuel. Even empty, these racks are of such weight as to be considered heavy loads. Movement of these empty racks create the potential for a heavy load drop. Movement of these empty racks will be restricted such that they will not be moved over any spent fuel stored in the spent fuel pools without the missile shields installed over the spent fuel pools. This will eliminate the potential for a rack to impact stored fuel if it were dropped.

Because only activities currently performed at CR-3 are affected, i.e., the same types of activities will be performed with the increased onsite fuel assembly storage capacity and revised configuration for fresh fuel storage, the LAR does not create the possibility of any new or different kind of accident from any previously evaluated.

3. Involve a significant reduction in a margin of safety?

The CR-3 Improved Technical Specifications (ITS) specifies required margin to criticality (subcriticality margins) for the spent fuel storage racks when fully loaded with spent fuel. This margin is having the effective neutron multiplication factor, K_{eff} , of the spent fuel storage racks maintained less than or equal to 0.95 when flooded with unborated water. The LAR proposes no change to this margin. The new racks have been analyzed to demonstrate that this required margin is satisfied when fully loaded with fuel enriched to the maximum enrichment allowed by the CR-3 license. Maintaining this margin is assured by remaining within the limits on initial enrichment and fuel burnup that are specified in the ITS. These limits must be complied with before the fuel can be stored in the spent fuel pool. The LAR proposes revised limits on fuel burnup (no change to fuel enrichment is proposed) to ensure that the existing subcriticality margins are not reduced.

The current CR-3 licensing basis, as reflected by the Final Safety Analysis Report (FSAR), allows the use of administrative controls, e.g., curves of initial fuel assembly enrichment versus burnup, as a means of preventing criticality in the spent fuel pools. The use of these curves would be continued under this proposed amendment. The changes to these curves proposed by this LAR consist of revising the values of burnup and adding notes to restrict loading of certain fuel assemblies to specific configurations. These curves have been included in the CR-3 operating license and their use implemented by site procedures since initial issue of the license. From this previous use CR-3 personnel are familiar with the practice of using administrative controls as curves of fuel assembly enrichment versus burnup for placing fuel assemblies in the spent fuel pool in order to prevent criticality. A mis-loaded fuel assembly was analyzed. The analysis demonstrated that misloading of one assembly does not result in exceeding the criticality margin regulatory limit of $K_{eff} = 0.95$. This analysis assumed no neutron poison, i.e., soluble boron, in the spent fuel pool water. This is a conservatism since the license requires a minimum of 1925 ppm boron. (Typically the fuel pool water contains approximately 2000 ppm boron.)

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination.

Normally, the Commission will not issue the amendment until the expiration of the 30-day notice period. However, should circumstances change during the notice period such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 30-day notice period, provided that its final determination is that the amendment involves no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish in the FEDERAL REGISTER

a notice of issuance and provide for opportunity for a hearing after issuance. The Commission expects that the need to take this action will occur very infrequently.

Written comments may be submitted by mail to the Chief, Rules and Directives Branch, Division of Administrative Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and should cite the publication date and page number of this FEDERAL REGISTER notice. Written comments may also be delivered to Room 6D59, Two White Flint North, 11545 Rockville Pike, Rockville, Maryland, from 7:30 a.m. to 4:15 p.m. Federal workdays. Copies of written comments received may be examined at the NRC Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC.

The filing of requests for hearing and petitions for leave to intervene is discussed below.

By **January 7, 2000**, the licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license and any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written request for a hearing and a petition for leave to intervene. Requests for a hearing and a petition for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. Interested persons should consult a current copy of 10 CFR 2.714 which is available at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC. If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or an Atomic Safety and Licensing Board, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition; and the Secretary or the designated Atomic Safety and Licensing Board will issue a notice of hearing or an appropriate order.

As required by 10 CFR 2.714, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) the nature of the petitioner's right under the Act to be made party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest. The petition should also identify the specific aspect(s) of the subject matter of the proceeding as to which petitioner wishes to intervene. Any person who has filed a petition for leave to intervene or who has been admitted as a party may amend the petition without requesting leave of the Board up to 15 days prior to the first prehearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than 15 days prior to the first prehearing conference scheduled in the proceeding, a petitioner shall file a supplement to the petition to intervene which must include a list of the contentions which are sought to be litigated in the matter. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide a brief explanation of the bases of the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion. Petitioner must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the

scope of the amendment under consideration. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party. Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing, including the opportunity to present evidence and cross-examine witnesses.

If a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held.

If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment.

If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

A request for a hearing or a petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, by the above date. A copy of the petition should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to R. Alexander Glenn, General Counsel, Florida Power Corporation, MAC - A5A, P. O. Box 14042, St. Petersburg, Florida 33733-4042, attorney for the licensee.

Nontimely filings of petitions for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be entertained absent a determination by the Commission, the presiding officer or the presiding Atomic Safety and Licensing Board that the petition and/or request should be granted based upon a balancing of the factors specified in 10 CFR 2.714(a)(1)(i)-(v) and 2.714(d).

The Commission hereby provides notice that this is a proceeding on an application for a license amendment falling within the scope of section 134 of the Nuclear Waste Policy Act of 1982 (NWPA), 42 U.S.C. 10154. Under section 134 of the NWPA, the Commission, at the request of any party to the proceeding, must use hybrid hearing procedures with respect to "any matter which the Commission determines to be in controversy among the parties."

The hybrid procedures in section 134 provide for oral argument on matters in controversy, preceded by discovery under the Commission's rules and the designation, following argument of only those factual issues that involve a genuine and substantial dispute, together with any remaining questions of law, to be resolved in an adjudicatory hearing. Actual adjudicatory hearings are to be held on only those issues found to meet the criteria of section 134 and set for hearing after oral argument.

The Commission's rules implementing section 134 of the NWPA are found in 10 CFR Part 2, Subpart K, "Hybrid Hearing Procedures for Expansion of Spent Fuel Storage Capacity at Civilian Nuclear Power Reactors" (published at 50 FR 41662 dated October 15, 1985). Under those rules, any party to the proceeding may invoke the hybrid hearing procedures by filing with the presiding officer a written request for oral argument under 10 CFR 2.1109. To be timely, the request must be filed within ten (10) days of an order granting a request for hearing or petition to intervene. The presiding officer must grant a timely request for oral argument. The presiding officer may grant an untimely request for oral argument only upon a

showing of good cause by the requesting party for the failure to file on time and after providing the other parties an opportunity to respond to the untimely request. If the presiding officer grants a request for oral argument, any hearing held on the application must be conducted in accordance with the hybrid hearing procedures. In essence, those procedures limit the time available for discovery and require that an oral argument be held to determine whether any contentions must be resolved in an adjudicatory hearing. If no party to the proceeding timely requests oral argument, and if all untimely requests for oral argument are denied, then the general procedures in 10 CFR Part 2, Subpart G apply.

For further details with respect to this action, see the application for amendment dated September 16, 1999, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC. Publically available records will be accessible electronically from the ADAMS Public Library component on the NRC Web Site, <http://www.nrc.gov> (the Electronic Reading Room).

Dated at Rockville, Maryland, this 1st day of ~~December~~ 1999.

FOR THE NUCLEAR REGULATORY COMMISSION



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