



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 33 TO FACILITY OPERATING LICENSE NO. DPR-72

FLORIDA POWER CORPORATION, ET AL

CRYSTAL RIVER UNIT NO. 3 NUCLEAR GENERATING PLANT

DOCKET NO. 50-302

Introduction

By letter dated February 15, 1980, the Florida Power Corporation (the licensee) requested an amendment to Facility Operating License No. DPR-72 for Crystal River Unit No. 3 Nuclear Generating Plant.

The amendment would revise the Technical Specification requirements for inspection of steam generator tubes in areas which are distinguished by unique operating conditions and/or physical construction.

Discussion

Operating experience to date with Babcock and Wilcox (B&W) designed steam generators indicates that tube degradation is most likely to occur in localized areas adjacent to the tube inspection lane. It is believed that degradation preferentially occurs in this area because of the local combination of flow conditions and fluid properties. The current Technical Specifications for steam generator tubes require that 50% of the first sample of tubes selected for inspection (3% of the total number of tubes in all steam generators) be from these areas. The licensee's proposed modification is to define one or more areas in the steam generators where operating experience has indicated that degradation is most likely, and to optionally perform an inspection of all the tubes in these areas. If the first sample inspection were to consist of 100% of the tubes in defined areas in only one steam generator and the results fell into either the C-2 or C-3 Category, then the second sample inspection would consist of 100% of the corresponding area in the other steam generator. If both steam generators are inspected, 100% of defined areas from both steam generators would be included in the first sample inspection. In any case, defective tubes will be plugged. The criteria for the second and third sample inspections for the general steam generator group would be based on the results of the general tube group inspection, independent of the defined group inspection results when the defined group would be 100% inspected. According to the licensee's proposal, the number of tubes inspected in the defined potential problem area(s) would not reduce the number of tubes examined in the associated general inspection; but at the same time, degraded or defective tubes identified in defined potential problem areas would not be used in determining the results category for the general inspection and vice versa, so long as the mode of degradation is unique to that area of the steam generator and not random in nature.

Evaluation

The licensee is proposing that the tubes in the steam generators be classified into two groups: (1) a group of tubes in well-defined areas where operating exper-

ience has indicated that tube degradation is most likely (the defined group) and (2) the remaining tubes in the steam generators. The licensee is also proposing that, at their option, these groups may be subject to different inspection requirements. Specifically, the licensee may or may not elect to perform an inspection of every tube in the defined group in both steam generators. If they elect to perform such an inspection, the balance of the steam generator tubes will be subject to the normal inspection requirements with no reduction of sample size. At the same time, degraded or defective tubes identified within the defined area will only be used to establish the results category for that area, not for the overall population of tubes, as long as the mode of degradation is unique to that area and not random in nature. We have added a statement in the Technical Specifications to clarify the above requirements with respect to mode of degradation and randomness. The licensee has agreed to this revision.

If the licensee elects, however, not to inspect every tube in the defined group in both steam generators, the specifications would require that the normal inspection be performed. In this case, the specifications would require that at least 50% of the tubes inspected be in areas where experience has indicated potential problems. Accordingly, with either option, inspection of tubes in potential problem areas is emphasized. Under the provisions of the licensee's proposed revision, however, all of the tubes in these areas may be inspected. Therefore, we conclude that with the proposed revision the extent of the inspection of tubes in potential problem areas is not diminished and may be increased. In addition, we conclude that the extent of the inspection of the balance of the steam generator tubes is not reduced.

Based upon the foregoing evaluation, we conclude that the inclusion in the Technical Specifications of provisions for electively inspecting all tubes in defined areas does not reduce the effectiveness of the overall steam generator tube inspection program and is therefore acceptable.

#### Environmental Considerations

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 this 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 decrease in a safety margin, the amendment 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.

Dated: September 17, 1980