

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
UNITED STATES ATOMIC ENERGY COMMISSION  
WASHINGTON, D.C. 20545

October 17, 1974

Honorable Dixy Lee Ray  
Chairman  
U. S. Atomic Energy Commission  
Washington, D. C. 20545

Subject: REPORT ON CRYSTAL RIVER NUCLEAR GENERATING PLANT, UNIT 3

Dear Dr. Ray:

At its 174th meeting, October 10-12, 1974, the Advisory Committee on Reactor Safeguards completed its review of the application of the Florida Power Corporation for a license to operate the Crystal River Nuclear Generating Plant, Unit 3, at power levels up to 2452 Mw(t). This project was considered during a Subcommittee meeting in Washington, D. C., on July 29, 1974, and a site visit was made on July 9, 1974. In the course of the review, the Committee had the benefit of discussions with representatives and consultants of the Florida Power Corporation, the Babcock and Wilcox Company, Gilbert Associates, Inc., and the AEC Regulatory Staff. The Committee also had the benefit of the documents listed below.

The plant is located on the Gulf of Mexico in Citrus County, Florida, about 7-1/2 miles northwest of the town of Crystal River. The site comprises 4738 acres and includes Units 1 and 2 which are oil-fired. The minimum exclusion distance is 4400 feet, and the radius of the low population zone has been selected as 5 miles. The cooling water intake canal extends about 14 miles into the Gulf, and the discharge canal extends out about 10 miles.

The protection against flooding has been expanded to meet the estimated maximum hurricane-induced surge level with additional wave run-up heights, using parameters more conservative than those identified at the construction stage.

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A number of design modifications have been made during construction of the Crystal River plant in response to Regulatory Guides and changes in criteria. These changes have been reviewed and found acceptable by the Regulatory Staff and the Committee in connection with their reviews of the Crystal River plant or of other plants embodying similar changes (including Three Mile Island Nuclear Station, Unit 1, Arkansas Nuclear One, Unit 1, and Rancho Seco Nuclear Generating Station, Unit 1).

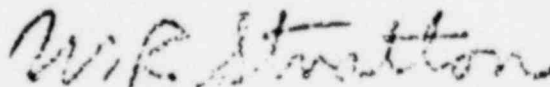
Among the items to be included in the Technical Specifications will be the operating limits and procedures for ensuring conformance with 10 CFR 50.46, covering ECCS evaluations. The Committee wishes to be kept informed on the progress of the Staff's review of the ECCS evaluation model employed, and the resulting changes in the manner of handling uncertainties and peaking factors in the Technical Specifications.

The evaluation of Anticipated Transients Without Scram (ATWS) is still pending. Reports on this generic matter were due by October 1, 1974, and review of the general evaluation by the Regulatory Staff or the Committee has not been completed. Following the generic review, specific case-by-case analyses are to be submitted, including a specific analysis on Crystal River Unit 3. This matter should be completed before operation of this unit and resolved in a manner satisfactory to the Regulatory Staff. The Committee wishes to be kept informed.

Other generic problems relating to large water reactors have been identified by the Regulatory Staff and the ACRS and discussed in the Committee's report dated February 13, 1974. These problems should be dealt with appropriately by the Regulatory Staff and the Applicant as suitable approaches are developed.

The Advisory Committee on Reactor Safeguards believes that, if due regard is given to the items mentioned above, and subject to satisfactory completion of construction and preoperational testing, there is reasonable assurance that the Crystal River Nuclear Generating Plant, Unit 3, can be operated at power levels up to 2452 MW(t) without undue risk to the health and safety of the public.

Sincerely yours,



W. R. Stratton  
Chairman

References: Listed on page 3

REFERENCES:

1. Florida Power Corporation letter dated January 25, 1971, submitting Application for Operating License for Crystal River Nuclear Generating Plant and Final Safety Analysis Report (FSAR) Volumes 1-7.
2. Amendments 12 through 42 to the Application of Florida Power Corporation (Amendments to the FSAR).
3. Florida Power Corporation letter dated April 19, 1973, regarding the inadvertent disabling of components by racking out of circuit breakers.
4. Directorate of Licensing letter dated July 5, 1974, transmitting: Outstanding Issues; and Safety Evaluation Report.