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Docket No.(s) 50-302

MAY 23 1973

Mr. Tony Stadeker
Office of Management and Budget
Executive Office Building
Washington, D. C. 20503

Dear Mr. Stadeker:

Enclosed for your information are two copies of the summary sheet for the Final Environmental Statement prepared by the Commission's Regulatory Staff relating to the facility identified in the enclosure to this letter.

The Final Environmental Statement was prepared in accordance with the statement of general policy and procedure on implementation of the National Environmental Policy Act of 1969, as set out in Appendix D of the Commission's regulations, 10 CFR Part 50. A notice of availability of the Final Environmental Statement is being sent to the Office of the Federal Register for filing and publication.

Sincerely,

Daniel R. Muller, Assistant Director
for Environmental Projects
Directorate of Licensing

Enclosure:
List of Documents Transmitted

CONCURRENCE:
L:EP-4 *ms*
SMSheppard
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LIST OF DOCUMENTS TRANSMITTED

Name of Facility: Crystal River Unit 3 Nuclear Generating Plant

Applicant: Florida Power Corporation

Docket Number: 50-302

Document Transmitted: Final Environmental Statement,
dated May 1973

SUMMARY AND CONCLUSIONS

This Final Environmental Statement was prepared by the U. S. Atomic Energy Commission, Directorate of Licensing (staff).

1. This action is administrative.
2. The proposed actions are the continuation of construction permit CPPR-51 and the issuance of an operating license to the Florida Power Corporation for the startup and operation of Crystal River Unit No. 3, a nuclear power reactor located on a site already occupied by two operating oil-fueled electrical generating plants (Units 1 and 2). The site is on the Gulf of Mexico in the State of Florida and near the town of Crystal River, Citrus County, (Docket No. 50-302).

Unit No. 3 will employ a pressurized water reactor to produce initially 2452 megawatts thermal (MWt) and a gross electrical output of 855 megawatts electric (MWe). A design power level of 2544 MWt (885 MWe) is anticipated at a future date and is considered in the assessments contained in this statement. The exhaust steam will be cooled by once-through flow of water obtained from and discharged to the Gulf of Mexico.

3. Summary of the cumulative environmental impact and adverse effects of Units 1, 2 and 3:
 - Land areas disturbed during construction of the station, but not to be occupied by buildings or facilities, are to be allowed to revert to a natural condition.
 - The annual loss of juvenile and small finfish and shellfish on the intake screens (now estimated at 36,000 lb for Units 1 and 2) will increase due to the increased volume flow and velocity.
 - Entrainment of passing drift organisms will increase and 100% mortality of these organisms during their passage through the condenser cooling system is assumed. Total plankton populations in the area are not expected to be appreciably affected.
 - At full power, condenser cooling water heated to 14.5°F (8.1°C) above inlet temperature will be discharged at the rate of 2940 cubic feet per second at the shoreline of the Gulf of Mexico.

- The heated water will be mixed with the Gulf water such that the zone within which temperatures may exceed 6°F above ambient, while of greater extent than that for Units 1 and 2 alone, is expected to be restricted to a volume having a surface extent of about 930 acres; the corresponding area within the 10°F isotherm would be about 325 acres.
- Studies of the environment with Units 1 and 2 operating at historical load factors, indicate a minor impact upon the benthic system due to thermal discharge. If Units 1 and 2 operated at full power, a major localized impact on the biota, including grasses and benthic organisms, could be expected in an area of about 280 acres due to the thermal plume. With Unit 3, also in operation at full power, and with the discharge system proposed by the applicant, the area of major localized impact would be expected to increase to about 930 acres. These estimates are based on zones in which temperatures could exceed 95°F in most years.
- At times of high exit temperature, fish will probably find the discharge area unacceptable and avoid it.
- The impact of small amounts of chemicals upon living forms in the ecosystem should be negligible, either alone or in synergistic combination with thermal increases.
- The risk associated with accidental radiation exposure is very low.
- No significant environmental impacts are anticipated from normal operational releases of radioactive materials within 50 miles. The estimated dose to the population within 50 miles from operation of the plant is 0.16 man-rem per year, less than normal fluctuations in the 25,000 man-rem/yr background dose this population would receive.

4. Principal alternatives considered:

- Abandonment of the facility, including consideration of the use of an alternative fuel as a power source rather than nuclear fuel.
- Extension of the discharge canal as a means for directing the plume away from the nearshore area.

- Dilution as an alternative heat dissipation scheme.
 - Supplementary cooling as a heat dissipation method.
 - Closed-cycle cooling systems as a heat dissipation method.
5. The following Federal, State and local agencies were asked to comment on the Draft Environmental Statement:

Advisory Council on Historic Preservation
Department of Agriculture
Department of the Army, Corps of Engineers
Department of Commerce
Department of Health, Education, and Welfare
Department of Housing and Urban Development
Department of the Interior
Department of Transportation
Environmental Protection Agency
Federal Power Commission
Florida Department of Pollution Control
Florida Department of Natural Resources
Florida Office of the Governor
Florida Public Service Commission
Board of County Commissioners, Citrus County, Florida
Mayor, Crystal River, Florida

Comments on the Draft Environmental Statement, issued in September 1972 were received from the following Federal, State and local agencies:

Advisory Council on Historic Preservation
Department of Agriculture
Department of the Army, Corps of Engineers
Department of Commerce
Department of Health, Education, and Welfare
Department of the Interior
Department of Transportation
Environmental Protection Agency
Federal Power Commission
Florida Department of Natural Resources
Florida Department of State
Florida State Agencies

In addition, comments on the Draft Statement were received from Mr. Chauncey C. Hale.

The text of these comments are appended to this Final Environmental Statement.

6. This Final Environmental Statement was made available to the public, to the Council on Environmental Quality, and to the other specified agencies in May 1973.
7. On the basis of the analysis and evaluation set forth in this statement, after weighing the environmental, economic, technical, and other benefits of Crystal River Unit 3 against environmental and other costs and considering available alternatives, it is concluded that the actions called for under the National Environmental Policy Act of 1969 and Appendix D to 10 CFR Part 50 are:
 - a. The continuation of construction permit CPPR-51, and
 - b. The issuance of an operating license for the facility subject to the following conditions for protection of the environment:
 - (1) Initiate action to carry out the necessary environmental assessment of alternatives to establish the most acceptable alternative or alternatives to eliminate or reduce the environmental impact associated with entrainment and discharge of heated water to the Gulf of Mexico. This effort should be carried out concurrently with the study program specified in Condition (2) below. The applicant should be prepared to immediately proceed with detailed engineering and implementation of the alternative system should the need for such a modification be indicated by the results of studies in Condition (2). (Section 12.2.4.2)
 - (2) Institute the study program, developed in conjunction with the Atomic Energy Commission, the Department of Interior and the Environmental Protection Agency to collect the necessary data by November 1974 to determine the need for an alternative cooling system. (Sections 3.4.1, 5.3.2, 5.3.3, 12.2.4.2 and 12.2.5.2)
 - (3) Define environmental monitoring programs required for inclusion in the Technical Specifications (for the plant operation), which are acceptable to the staff for determining environmental effects which may occur as a result of the operation of the plant.
 - (4) If other harmful effects or evidence of irreversible damage are detected, the applicant will provide an analysis of the problem and a proposed course of action to alleviate the problem.