31

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

ENVIRONMENTAL IMPACT APPRAISAL BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO.12 TO LICENSE NO. DPR-72

FLORIDA POWER CORPORATION, ET AL

CRYSTAL RIVER UNIT NO. 3 NUCLEAR GENERATING PLANT

DOCKET NO. 50-302

1. Description of Proposed Action

On November 8, 1977, Florida Power Corporation (FPC) proposed an amendment to Crystal River Unit No. 3 Environmental Technical Specification (ETS) 3.1.3, Impingement on Intake Screens. The change would add the following sentence: "This Specification shall not be applicable during the period of the intake canal modification." FPC contends that impingement monitoring data during the planned extensive dredging modifications of the intake canal would be of questionable value. We have evaluated the proposed change. This appraisal does not address the impact from the intake canal modification.

2. Environmental Impacts of Proposed Action

The intake canal serving Crystal River Units Nos. 1, 2, and 3 is being modified to accept large coal barges for the conversion of Units Nos. 1 and 2 from oil to coal fuel. The canal will be deepened to a minimum depth of 20 feet below mean sea level. In addition, the south dike of the intake canal is being lengthened by approximately 1.5 miles. The intake canal modification is scheduled to begin in March 1978 and run until August 1979 according to the licensee's November 8, 1977 submittal.

ETS 3.1.3 requires sampling of fish and shellfish from the intake screens of all three units once weekly for 24 consecutive hours and daily visual monitoring to determine any abnormal catches.

FPC indicates that impingement data would be of questionable use because of the unique circumstances of theintake canal work.

The objective of ETS 3.1.3 is "to determine the quantity of impinged fish and shellfish on the intake screens to compare with preoperational data." Impingement monitoring data collected during the period of intake dredging would not satisfy this objective as preoperational data were not collected under comparable conditions.

This deletion of the impingement monitoring program during the period of the intake canal modification has been discussed with Region IV of the U. S. Environmental Protection Agency. They have indicated that the temporary suspension of this monitoring program does not contradict their requirements on the Crystal River Station as stated in the National Pollutant Discharge Elimination System (NPDES) Permit or study plans related to 316(a) or (b) demonstrations.

It is our opinion that the number of impinged organisms during the dredging activity might rise initially as organisms residing in the canal are driven towards the intake screens. However, after this short initial rise, the number impinged should be less than that impinged during normal operation because the noise and turbidity associated with the dredging activity would serve as a physical deterrent to organisms in the site vicinity. We, therefore, conclude that weekly quantitative impingement monitoring need not be conducted during the period of the intake canal modifications.

We have determined that the daily qualitative visual monitoring of the intake screens should continue as a check against any unforeseen factors which might cause impingement to be excessive during the period of intake dredging. FPC has agreed to this modification and the wording of ETS 3.1.3 will retain the requirement for the visual monitoring during the period of the intake canal modification. The wording of ETS 3.1.3 will also indicate that the intake canal modification is that described in Permit No. 09-20-4006 issued by the State of Florida, Department of Environmental Regulation.

Currently the reporting requirements of ETS 3.1.3 state that any daily sample with fish and shellfish biomass greater than 50 kg shall be reported. This requirement refers to the 24-hour quantitative sampling conducted weekly and not the daily visual check of the intake screens. To clarify this requirement, "daily sample" will be changed to "weekly sample."

3. Conclusion and Basis for Negative Declaration

On the basis of the foregoing analysis, we conclude that there will be no environmental impact attributable to the suspension of the quantitative impingement monitoring program during the intake canal modification. Having made this determination, we have further concluded that no environmental impact statement for the proposed action need be prepared and that a negative declaration to this effect is appropriate.

Dated: January 23, 1978

ATTACHMENT TO LICENSE AMENDMENT NO. 12

FACILITY OPERATING LICENSE NO. DPR-72

DOCKET NO. 50-302

Replace page 3-4 of the Appendix "B" Technical Specifications with the enclosed page. This revised page is identified by Amendment number and contains vertical lines indicating the areas of change. The corresponding overleaf page is also provided to maintain document completeness.

number, frequency and location of samples to be taken shall be determined from a statistical analysis of the research presently being conducted in this area. Samples shall be stratified by macrophyte dominance. Productivity and respiration of the system shall be determined by the methods currently employed in the modeling work.

Reporting Requirement

Results of the data gathered in this program element shall be reported in accordance with Section 5.6.1. In the event that any parameter measured changes beyond two standard deviations of the value measured in the preoperational monitoring program, a report shall be submitted as specified in Section 5.6.2.

Bases

In the discharge area adjacent to the canal, the productivity, respiration and biomass should increase due to an increased temperature of the cooling water. If any of these parameters changes beyond 2σ (two standard deviation) of that measured during preoperational monitoring, the system should be investigated for catastrophic results.

3.1.2 Marsh Grass

Objective

To determine the ecological condition of the salt marsh adjacent to the discharge area.

Specification

The biomass, productivity, and respiration of the salt marsh shall be measured on a quarterly basis after plant operation begins until the system has approached stabilization. Quadrats shall be harvested to determine biomass and productivity.

Reporting Requirement

Results of the data gathered in this program element shall be reported in accordance with Section 5.6.1. In the event that any parameter measured changes beyond 2σ (two standard deviation) of the value measured in the preoperational monitoring program, a report shall be submitted as specified in Section 5.6.2.

Bases

The metabolism of the marsh grass is expected to increase with increasing temperature. Any decrease indicates a breakdown of structure. If any of these parameters changes beyond 2σ (two standard deviation) of that measured during preoperational monitoring, the system should be investigated for catastrophic results.

3.1.3 Impingement on Intake Screens

Objective

To determine the quantity of impinged fish and shellfish on the intake screens to compare with preoperational data.

Specification

The fish and shellfish collected in the trash racks adjacent to the intake screens of Units 1 and 2 and Unit 3 will be sampled for 24 consecutive hours once weekly. This program shall be conducted for one year after operation of Unit 3 begins. This program may be terminated after one year period with staff's approval. Samples shall be sorted according to species, length, and wet weight. This requirement shall not be applicable during the period of the intake canal modification addressed in State of Florida, Department of Environmental Regulation Permit No. 09-20-4006 issued September 30, 1977.

The screen-wash racks shall be monitored visually daily to determine any abnormal catches.

Reporting Requirement

Results of the data gathered in this program element shall be reported in accordance with Section 5.6.1. Any weekly sample with fish and shellfish biomass greater than 50 kg shall be reported as specified in Section 5.6.2.

Bases

Preoperational data indicate that the average normal expected catch is approximately 20 kg per day for Unit No. 3.

3.1.4 General Ecological Survey

Objective

To detect changes which might occur and would be used to indicate areas requiring more detailed investigation.

Specifications

A series of measurements shall be carried out during the operational life of the plant to indicate the general condition of the environment. The areas to be monitored are: