



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

FLORIDA POWER CORPORATION
CITY OF ALACHUA
CITY OF BUSHNELL
CITY OF GAINESVILLE
CITY OF KISSIMMEE
CITY OF LEESBURG
CITY OF NEW SMYRNA BEACH AND UTILITIES COMMISSION, CITY OF NEW SMYRNA BEACH
CITY OF OCALA
ORLANDO UTILITIES COMMISSION AND CITY OF ORLANDO
SEBRING UTILITIES COMMISSION
SEMINOLE ELECTRIC COOPERATIVE, INC.
CITY OF TALLAHASSEE

DOCKET NO. 50-302

CRYSTAL RIVER UNIT 3 NUCLEAR GENERATING PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 37
License No. DPR-72

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Florida Power Corporation, et al (the licensees) dated April 23, 1980, as supplemented December 31, 1980, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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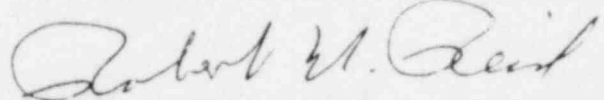
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-72 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 37, are hereby incorporated in the license. Florida Power Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 25, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 37

FACILITY OPERATING LICENSE NO. DPR-72

DOCKET NO. 50-302

Replace the following pages of Appendix "B" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

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3.0 ENVIRONMENTAL SURVEILLANCE

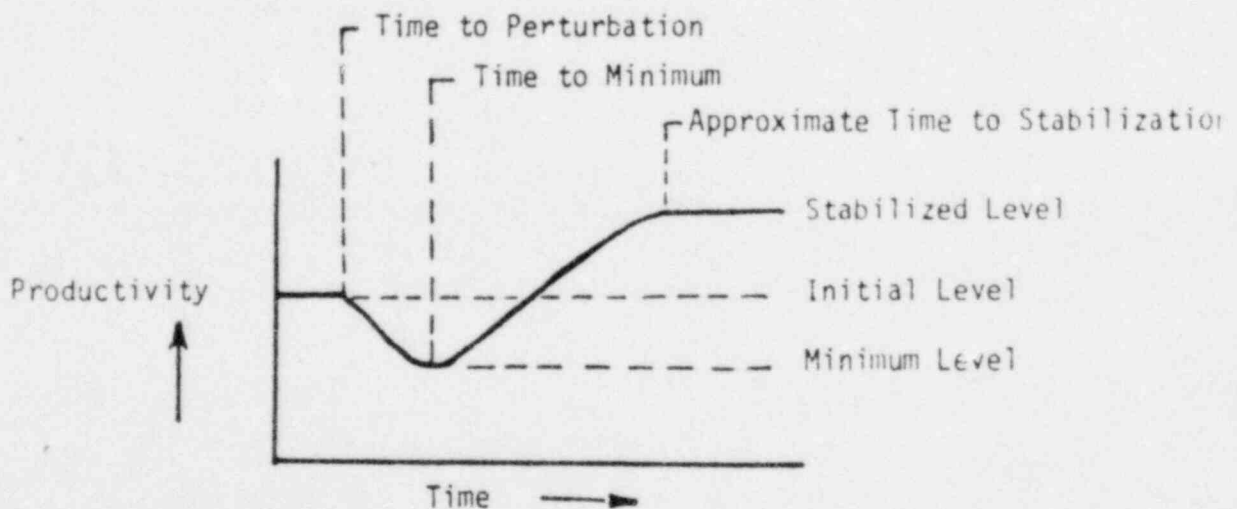
3.1 NONRADIOLOGICAL SURVEILLANCEStudy Plan

The estuary has been exposed to the influence of the operation of Units 1 and 2 for approximately seven (7) years. During this time, the systems in the area have adapted to this influence. A preoperational surveillance program was designed to determine the exact nature of the new stabilized conditions relative to control areas adjacent to the plant site. This surveillance consisted of system modeling with measurements of biomass, productivity, respiration and diversity in all major compartments. The information derived will serve as a baseline for comparison with the data taken after Unit 3 becomes operational.

The operational surveillance program is designed to determine any significant environmental effects of the operation of the power plant, particularly unpredicted and catastrophic changes. The program consists of 3 short-term intensive surveillance program elements and 2 long-term program elements.

A period of adjustment of the ecosystem is expected concurrent with Crystal River Unit 3's initial operation. This will be a localized perturbation limited to a portion of the inner bay associated with the higher water velocity as well as the temperature increase resulting from the condenser discharge.

Any ecosystem which experiences a change in its environment will undergo a period of adaptation unless catastrophic conditions occur. With the small changes anticipated with the addition of Unit 3, no catastrophic effects are expected. However, any changes in the environmental conditions of a system will normally cause it to oscillate. An example of the oscillation of a hypothetical system's productivity is shown below.



In this particular system the final stabilized level is higher than the initial level and is only obtained after a period of stabilization and after going through a suppressed level following the initial perturbation. The recognition of this type of potential response is obviously important in considering any surveillance program.

The models of the systems involved at Crystal River along with the data available indicate that the approximate time to stabilization should not exceed one year. Therefore, the time frame for the intensive surveillance program elements allows one year of monitoring to determine the transient response that the systems are experiencing. An additional year of monitoring is required to indicate the new stabilized level. If the second year's data indicate that the systems have not approached stabilization, the monitoring will be extended for an additional year. It is anticipated that the intensive surveillance program elements should not be necessary beyond three years.

In addition to the short-term intensive surveillance program elements designed to determine how the systems have responded to the perturbations, an on-going program element designed to obtain a diagnostic view of the condition of the environment will be continued during the operational life of the plant. This indicator program element consists of a number of simple measurements which will detect any major changes in the system. A second long-term program element involves chemical-industrial waste water monitoring.

3.1.1

Benthos in Discharge Area

Objective

To determine the ecological condition of the benthic system in the area directly affected by the thermal plume.

Specification

Operational monitoring of diversity and biomass of the benthic system in the area adjacent to and north of the discharge canal shall be measured on a quarterly basis until the system has approached stabilization. Samples shall be taken by methods employed in the preoperational studies including harvesting quadrats, by sediment cores, and by venturi pumps. The number, frequency and location of

samples to be taken shall be determined from a critical review of the results of the preoperational research conducted in this area. Samples shall be stratified by macrophyte dominance.

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 biomass should increase due to an increased temperature of the cooling water. If this parameter changes beyond 2σ (two standard deviation) of that measured during preoperational monitoring, the system should be investigated for catastrophic results.

3.1.2 Deleted

3.1.3 Deleted

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:

a. Outer bay (plankton-dominated area). The percent of saturation of oxygen will be measured at dusk and dawn of consecutive days, twice monthly.

b. Canals. The percent of saturation of oxygen shall be measured at dusk and dawn twice monthly at the Point of Discharge.

c. Marsh grasses. Stem counts of grass within a quadrat will be made quarterly. This measurement shall be correlated with biomass. In addition, the number of crab holes within a quadrant shall be observed as a biomass indicator.

Reporting Requirement

Results of the data gathered in this program element will be reported in accordance with Section 5.6.1.

Bases

The parameters to be measured were chosen to indicate general trends in the conditions of the environment and will be used to indicate areas where further investigations may be warranted if significant changes are detected.

3.1.5 Deleted

3.2 RADIOLOGICAL ENVIRONMENTAL MONITORING

Objective

The radiological environmental monitoring program will provide information which can be used to assist in assessing the type and quantity of radiation exposure in unrestricted areas resulting from plant operation.

Background

Preoperational radiological environmental monitoring programs, to establish baseline environmental concentration values, were initiated in mid-1970. One program was operated by the State of Florida Department of Health and Rehabilitative Services; another program was operated by the University of Florida.

A summary of the preoperational surveillance results is shown in Table 3.2-1. This summary includes median values of the observed environmental concentrations and 95 percentile values (i.e., values which exceed 95 percent of all the comparable measured values). These values will be taken as the preoperational baseline concentrations. In some cases the values listed are smaller than the Lower Limit of Detection (LLD).

The 95 percentile values indicate the random frequency of high measured values during the operation of the plant contributes negligibly to the environmental radioactivity. These 95 percentile values will be used during operation to assess the probability that any observed high concentration value is due to random fluctuations in measurements rather than to a true increase in environmental concentrations.

Specification (Program)

Environmental media which are sampled and analyzed for radioactivity are shown by the two diagrams on Figure 3.2.-1. Each box in the diagrams contains the name of an environmental media which is sampled. The upper diagram shows the critical pathways; the lower diagram shows the other monitored pathways.

Figure 3.1-1 Deleted

The operational radiological monitoring program shall consist of a continuation of the preoperational program of measurements of radioactivity in environmental media which is outlined in Table 3.2-2.

The critical pathway monitoring program which is included in Table 3.2-2 is also shown in Table 3.2-3. Sample station locations are described on Table 3.2-4 and shown on maps on Figures 3.2-2 and 3.2-3. Lower Limit of Detection (LLD) values are given on Table 3.2-5.

Deviations are permitted from the required sampling schedule if specimens are unobtainable due to hazardous conditions, vandalism, seasonal unavailability or to malfunction of automatic sampling equipment. If the latter, every effort shall be made to complete corrective action prior to the end of the next sampling period. All deviations from the sampling schedule shall be described in the annual report.

5.6.3 Changes

- A. A report shall be made to the Director of Office of Nuclear Reactor Regulation prior to implementation of a change in plant design, in plant operation, or in procedures described in Section 5.5 if the change would have, in the judgement of the applicant, a significant adverse effect on the environment or involves an environmental matter or question not previously reviewed and evaluated by the USNRC. The report shall include a description and evaluation of the change and a supporting benefit-cost analysis.
- B. Request for changes in environmental technical specifications shall be submitted to the Director of Office of Nuclear Reactor Regulation for review and authorization. The request shall include an evaluation of the impact on the change and a supporting benefit-cost analysis.

5.7 RECORDS RETENTION

5.7.1 Records and logs relative to the following areas shall be retained for the life of the plant:

- a. Records and drawing changes reflecting plant design modifications made to systems and equipment as described in Section 5.6.3.
- b. Records of environmental surveillance data.
- c. Records to demonstrate compliance with the limiting conditions for operation in Section 2.0.

5.7.2 All other records and logs relating to the environmental technical specifications shall be retained for five years.

5.8 Deleted

Figure 5.8-1 Deleted