

NOV 6 1978

Docket Nos. 50-250  
and 50-251

Florida Power and Light Company  
Advanced Systems and Technology  
ATTN: Dr. Robert E. Uhrig  
Vice President  
P. O. Box 529100  
Miami, Florida 33152

Gentlemen:

The Commission has issued the enclosed Amendment Nos. 41 and 33 to Facility Operating License Nos. DPR-31 and DPR-41 for the Turkey Point Plant, Units 3 and 4. The amendments, which consist of changes to the Environmental Technical Specifications, common to Appendix B of both licenses, are in response to your application dated September 7, 1976 as supplemented by letters dated October 5, 1976 and February 28, 1978.

These amendments reduce the requirements of the environmental monitoring program based on data collected during five years of plant operation, remove reference to seven generic or one-time studies that have already been completed, and make several administrative changes. In addition, we have made changes to your proposal which would delete the monitoring programs and limiting conditions for open-cycle operation. These changes have been discussed with and agreed to by your staff.

Copies of the Environmental Impact Appraisal and Notice of Issuance/Negative Declaration are also enclosed.

Sincerely,

Original Signed By

A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

CP-1

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Enclosures:

1. Amendment No. 41 to DPR-31
2. Amendment No. 33 to DPR-41
3. Environmental Impact Appraisal
4. Notice of Issuance/Negative Declaration

OFFICE	See next page	DOR:ORB1	DOR:ORB1	DOR:AG/S&P	OELD	DOR:ORB1
SURNAME		MGrotenhuis	CSParrish	DGEisenhut		ASchwencer
DATE		1/17/78	1/17/78	1/17/78	1/17/78	1/16/78

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A. Schwencer, Chief  
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OFFICE	DOR:ORB1	DOR:ORB1	DOR:AD:SH	OELD	DOR:ORB1
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DATE	X 10/26/78:jd	10/26/78	1/1/78	1/1/78	1/1/78

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Docket Files 50-250  
and 50-251

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

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-250

TURKEY POINT NUCLEAR GENERATING STATION UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.41  
License No. DPR-31

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Florida Power and Light Company (the licensee) dated September 7, 1976, as supplemented by letters dated October 5, 1976 and February 28, 1978 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 3.B of the Facility License No. DPR-31 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 41, are hereby incorporated in the license. The licensee 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



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 6, 1978



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

FLORIDA POWER AND LIGHT COMPANY

DOCKET NO. 50-251

TURKEY POINT NUCLEAR GENERATING STATION UNIT NO. 4

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 33  
License No. DPR-41

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Florida Power and Light Company (the licensee) dated September 7, 1976, as supplemented by letters dated October 5, 1976 and February 28, 1978 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.

7811210 051 P

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of the Facility License No. DPR-41 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 33, are hereby incorporated in the license. The licensee 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



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 6, 1978

ATTACHMENT TO LICENSE AMENDMENT NOS. 41 & 33  
TO THE TECHNICAL SPECIFICATIONS  
FACILITY OPERATING LICENSE NOS. DPR-31 AND DPR-41  
DOCKET NOS. 50-250 AND 50-251

Remove the old Appendix B in its entirety and replace with the enclosed pages. The enclosed pages are identified by amendment numbers in the lower left corner. Since these Technical Specifications are common to both units, the amendment number applicable to each unit is listed on each page. Vertical lines in the right margin indicate the area of change associated with this amendment.

ENVIRONMENTAL TECHNICAL SPECIFICATIONS

APPENDIX B

TO

OPERATING LICENSE NOS. DPR-31 AND DPR-41

FOR THE

TURKEY POINT PLANT, UNIT NOS. 3 AND 4

FLORIDA POWER AND LIGHT COMPANY

DOCKET NOS. 50-250 AND 50-251

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## 1.0 DEFINITIONS

The definitions for terms used in these environmental technical specifications are listed below.

- 1.1 "National power emergency" shall mean any event causing authorized Federal officials to require or request that Florida Power & Light supply electricity to points within or without the State of Florida.
- 1.2 "A regional emergency" shall mean any of the following occurrences within the State of Florida: (1) a catastrophic natural disaster including hurricanes, floods, and tidal waves; or (2) other emergencies declared by State, county, municipal, or Federal authorities during which an uninterrupted supply of electric power is vital to public health and safety.
- 1.3 "Reactor emergency" shall mean an unanticipated equipment malfunction necessitating prompt remedial action to avoid endangering the public health or safety.
- 1.4 "Cooling system" and "condenser cooling water system" shall include any and all waterways, lakes, ponds, canals, dikes, levees, dams, barriers, or other structures, devices, or appurtenant facilities which shall be constructed and employed to reduce the temperature of water discharged from Florida Power & Light's generating facilities at Turkey Point.
- 1.5 "Licensed facilities" shall mean Turkey Point Units No. 3 and 4.
- 1.6 Frequency Definitions:
  - Daily - once each 24 hours  $\pm$  12 hours (not less than 360 times per annum).
  - Weekly - once each 7 days  $\pm$  3 days (not less than 48 times per annum).
  - Monthly - once each 30 days  $\pm$  10 days (not less than 12 times per annum).
  - Quarterly - once each 182 days  $\pm$  30 days (not less than 4 times per annum).
  - Semi-Annually - once each 182 days  $\pm$  60 days (not less than 2 times per annum).
  - Refueling - at refueling intervals, but not less than once every 24 months, whichever occurs first.

- 1.7 "Closed Mode of Operations" shall mean recirculation of cooling water through the cooling canals with no intake from or discharge to Card Sound or Biscayne Bay.
- 1.8 "Open Mode of Operations" shall mean operation of the cooling water system open to Card Sound.

2.0

ENVIRONMENTAL PROTECTION LIMITS

Objective

To define operating limits for the condenser cooling water system for the licensed facilities to ensure that the environment is adequately protected.

Specifications

2.1 GENERAL

- 2.1.1 The condenser cooling water system shall be operated so as to avoid adverse effects on the environment to the fullest extent practicable, in a manner consistent with the limits and conditions of the consent Final Judgment and orders subsequently entered in United States of America v. Florida Power & Light Company, Civil Action No. 70-328-CA, in the United States District Court for the Southern District of Florida. Flexibility of operation is permitted, consistent with considerations of health and safety, to ensure that the public is provided a dependable source of power even under unusual operating conditions which may temporarily result in operations which exceed the limits set forth in this specification, as provided below in 2.1.2 and 2.1.3.
- 2.1.2 During a national power emergency, regional emergency, reactor emergency, or at any time when the health or safety of the public may be endangered by the inability of Florida Power & Light to supply electricity from any other sources available to it, the operating limits shall not be exceeded except as is necessitated by the emergency.
- 2.1.3 Whenever, in accordance with subparagraphs 1. and 2. above, Florida Power & Light exceeds the operating limits otherwise imposed, notification shall be made within 24 hours by telephone or telegraph to the Director of the Region II Office of Inspection and Enforcement according to paragraph 5.4.2.1 of these specifications.

2.2 CLOSED MODE

2.2.1 CHEMICAL CONCENTRATIONS

The total residual chlorine level (including chloramines) in effluent water from the licensed facilities shall be controlled such that residual chlorine in discharge water leaving Lake Warren shall not exceed 0.1 mg/l.

2.2.2

ADDITIONAL OR REVISED LIMITATIONS

Additional or revised limits of operation will be set forth as revisions occur in the mode of operation of the cooling system or as monitoring results indicate to be appropriate.

Bases

The Final Judgment consent decree (Civil Action No. 70-328-CA in the United States District Court for the Southern District of Florida) and the NRC's Final Environmental Statement for Turkey Point Units 3 and 4 (July 1972) set forth needs for protection of the environment related to operation of this plant. The limits set forth above are in response to the discussions in those documents for chlorine concentrations in the cooling system. The limits set forth are expected to provide reasonable assurance that there will be no unacceptable adverse impacts on the environment from normal operation of the licensed facilities. It is recognized that these limits may be appropriately modified as the mode of operation of the cooling system is changed.

3.0 MONITORING REQUIREMENTS

Objective

To verify the operating conditions of the cooling system and define monitoring and surveillance related to the cooling system and effluents discharged from the licensed facilities.

3.1 CLOSED MODE

Specification

3.1.1 TEMPERATURE OF COOLING WATER

Temperatures of cooling water used in the licensed facilities shall be measured at the point of intake, and at the outlet and of Lake Warren, not less often than at hourly intervals. The sensors should represent the mean canal temperatures to  $\pm 0.5^{\circ}\text{F}$ .

3.1.2 CHEMICAL CONCENTRATIONS IN COOLING WATER

3.1.2.1 Prior to leaving Lake Warren measurement on cooling water from the licensed facilities shall be made

1. Not less often than at weekly intervals for:

(a) pH  $\pm 0.1$

(b) dissolved oxygen (D.O.)  $\pm 0.2$  ppm

(c) salinity  $\pm 1$  ppt

(d) total residual chlorine (free and combined forms) at time of maximum concentration, i.e., during a chlorination period. If no chlorination is being conducted, this requirement does not apply.

2. Monthly for:

(a) Chemical Oxygen Demand (COD)

(b) Copper, Zinc

3.1.2.2 Records shall be maintained of additions of chlorine and all other chemicals from the licensed facilities to the water pumped through the licensed facilities.

3.1.3

MONITORING UNIT OPERABILITY

Monitoring units for temperature and chemistry shall be calibrated and maintained operable in a practicable manner. When equipment malfunctions occur, immediate action shall be taken to return the units to operation.

Bases

The monitoring program as set forth will provide information to allow for a reasonable determination of the quality of water within the cooling system and of compliance with the limits set forth. It is recognized that these limits may be appropriately modified as the mode of operation of the cooling system is changed.

4.0 SURVEILANCE AND SPECIAL STUDY PROGRAMS

Objective

To provide information to assess the impact of operation of the facilities on the environment.

4.1 AQUATIC ENVIRONMENT

4.1.1 Closed Mode

The following programs shall be conducted to monitor the chemical and physical impact of the discharges from the facilities on biological communities. The influence of these abiotic variables on the aquatic biota of the cooling canal system and the characteristics this system develops shall be compared to an adjacent lagoonal ecosystem for which three years of baseline data are available.

4.1.1.1 Aquatic Biota Program

Objective

The objectives of this program are: (1) to compare the chemical and physical parameters of the water in the system with those in the adjacent lagoon and to determine the ability of the cooling canal system to support biological life; (2) to compare the chemical parameters of sediments in the canal system with those of the adjacent lagoon and determine the ability of these sediments to support biological life; and (3) to follow the biological succession that occurs in the cooling canal system.

Specifications

4.1.1.1.1 Plankton: Phytoplankton and zooplankton samples shall be collected quarterly at each of eight stations.

Phytoplankton: Samples shall be analyzed qualitatively and quantitatively for dominant genera of the community. Biomass, chlorophyll "a" and primary productivity shall also be determined. Results shall be reported on a unit/volume basis.

Zooplankton: Samples shall be analyzed qualitatively and quantitatively to taxonomic groups. Biomass and life history stages shall also be determined. Results shall be reported on a unit/volume basis.

- 4.1.1.1.2 Fish: Samples shall be collected monthly by fish traps at the eight stations used for plankton collections. In addition, gill nets shall be fished at stations where there are water depths of 2 meters or more. All samples shall be analyzed for species present, their relative abundance, their life history stage, biomass and size distribution.

In the event of large fish kills in the cooling canal system, notification shall be made within 24 hours as specified in Section 5.4.2.

- 4.1.1.1.3 Benthos and Substratum: Samples shall be collected at the same eight locations as plankton and analyzed as follows:

Characteristics of the Sediments: Samples shall be analyzed monthly for salinity and the presence of selected nutrients. These data shall be compared with three control stations.

Benthic Organisms: Samples shall be taken on a semi-annual basis to determine qualitative and quantitative abundance of benthic organisms.

- 4.1.1.1.4 Recovery in Discharge Area: Changes in grasses and macroalgae density shall be determined semiannually by sampling established quadrat stations in the mouth of Grand Canal.

Reporting Requirements:

The data obtained from the above programs (paragraphs 4.1.1.1.1 through 4.1.1.1.4) shall be analyzed and compared with pre-operational data collected in Biscayne Bay/Card Sound to identify any biological changes that may result from operating the licensed facilities.

The data shall be further compared with the three years of baseline data on the biological characteristics of the adjacent Biscayne Bay/Card Sound ecosystem. This evaluation shall be included in the Annual Environmental Monitoring Report (Section 5.4.1).

## Bases

Since the cooling canal system is operating in a closed mode, with attendant stresses to marine organisms (heat, pressure changes, turbulence, etc.) and no means of external biological recruitment, monitoring the system will determine its biological stability. The successional stage of this system can be compared to the control areas.

### 4.1.1.2 Groundwater Program

#### Objective

The purpose of this program is to evaluate the extent of salt water intrusion between the cooling canal system and the groundwater west of the canal system.

#### Specification

This program shall involve monitoring of wells and surface points for temperature, water level and conductivity (salinity). The South Florida Water Management District (SFWMD) and the U.S.G.S. shall determine the adequacy of the schedule and the continued need for this monitoring program.

#### Reporting Requirements

Copies of the reports prepared above shall be submitted as part of the Annual Environmental Monitoring Report (Section 5.4.1).

## Bases

The long-term effects of operating a salt water cooling system on the adjacent groundwater is useful. Monitoring the extent of salt water intrusion will provide data on this interaction.

## 4.2 Terrestrial Environment

### 4.2.1 Revegetation of the Cooling Canal Banks

#### Objectives

The purpose of this study is to assess the floristic species that colonize the mud spoil banks and their growth rates, created by constructing the cooling canals.

#### Specification

- 4.2.1.1 This program shall analyze soils of the berms for pH, chloride content and selected nutrients. Soil samples shall be taken at points (1) just above the canal water level, (2) half-way-between the water and the top of the soil bank, and (3) from

the top of the banks. Tests to determine erosion rates in both the wet and dry season shall also be performed. Simultaneously, a biological study shall be conducted to identify the number and species of fauna, as practicable, associated with these banks, as compared to baseline data. The survey shall include both species that are permanent residents (e.g., amphibians, reptiles) and transient users (e.g., birds) of the habitat.

4.2.1.2 An experimental program shall be conducted to revegetate the canal berms using native and/or commercially useful species that will colonize the spoil banks. The rate of this revegetation effort shall be compared with the natural rate of revegetation that occurs on other berms of the system.

4.2.1.3 Reporting Requirements

Results of the studies in paragraph 4.2.1.1 shall be included in the Annual Environmental Monitoring Report. The requirements under 4.2.1.2 shall be fulfilled and summarized in a summary report to be submitted to the NRC when the study has been completed.

Bases

The soil analyses, faunistic survey, and floristic studies are needed to determine the rate and extent of recovery after construction terminates. These data can also be used to assess the total impact of the cooling canal system on the terrestrial ecosystem.

4.2.2 Long-Term Monitoring

Objective

To obtain information which will help to evaluate the long-term impact of the cooling canals.

Specifications

In conjunction with the work described in paragraph 4.2.1, long-term monitoring shall include:

4.2.2.1 Annual color infrared aerial photographs of the site at a scale of 1:24,000.

4.2.2.2 Surveillance of canal banks to document changes in edaphic and floristic conditions, especially reinvasion by native flora such as red mangrove.

4.2.2.3 Annual sampling of selected soil and flora west and south of the cooling canals to determine the impact of the cooling canal system on the surrounding vegetation.

4.2.4

Reporting Requirements

Results of the monitoring required by 4.2.2.1, 4.2.2.2, and 4.2.2.3 above shall be included in the Annual Environmental Monitoring Report.

Bases

Since some of the effects of construction and operation of the cooling canal system will not stabilize for many years, continued monitoring and assessment will be necessary to determine the extent and duration of the impact.

5.0

ADMINISTRATIVE CONTROL

Objective

To describe the administrative controls and procedures necessary to implement the Environmental Technical Specifications for the facilities.

Specification

5.1

REVIEW AND AUDIT

The licensee shall be responsible for the establishment, execution and review of the necessary programs to administer the Environmental Technical Specifications (ETS). The licensee may delegate to other organizations the work of establishing and executing portions of the ETS, but shall retain responsibility therefor.

Administrative measures shall provide that the individual or group assigned the responsibility for auditing or otherwise verifying that an activity has been performed is independent of the individual or group directly responsible for performing the specific activity. The review function shall be performed by the Company Environmental Review Group (CERG), as described in the Topical Quality Assurance Report. An audit shall be conducted at least once per year. The audit shall include contractor operations.

The licensee shall establish organizational and administrative procedures that provide for management review of items 5.1.1 through 5.1.7 and independent audit functions for 5.1.1 and 5.1.7 below.

- 5.1.1 Environmental Technical Specifications for the facilities.
- 5.1.2 Results of the environmental monitoring programs prior to their submittal in each Annual Environmental Monitoring Report.
- 5.1.3 Proposed changes to the Environmental Technical Specifications in effect for the facilities and the evaluate impact of the change.
- 5.1.4 Proposed changes or modifications to plant systems or equipment and the evaluated impact which would require a change in the procedures described in 5.1.7 below, or which would affect the evaluation of the environmental impact of the facilities.
- 5.1.5 Coordination of Environmental Technical Specification (Appendix B to the licenses of the facilities) development with the Safety Technical Specifications (license Appendix A) to avoid conflicts and for consistency.

5.1.6 Proposed sampling analyses, calibration and alarm check procedures, as specified in 5.3.1 and any other proposed procedures or changes thereto as determined by the responsible company official to affect the licensed facilities environmental impact.

5.1.7 Investigation of all reported instances of ETS violations including appropriate recommendations to prevent recurrence.

5.2 ACTION TO BE TAKEN IF A PROTECTION LIMIT IS EXCEEDED

5.2.1 Exceeding a protection limit shall be promptly reviewed as specified in Section 5.1.

5.2.2 The circumstances of each occurrence shall be documented separately and reported to the NRC as specified in Section 5.4.2.

5.3 OPERATING PROCEDURES

5.3.1 Detailed written procedures, including applicable checkoff lists and instructions, shall be prepared, approved as specified in Section 5.3.2 and adhered to for operation of all systems and components involved in carrying out the environmental monitoring program. Procedures shall include sampling, instrument calibration, analysis, and actions to be taken when limits are approached or exceeded.

Calibration frequencies for instruments used in performing the measurements required by the environmental technical specifications shall be included.

Testing frequency of any alarms shall be included. These frequencies shall be determined from experience with similar environments and from manufacturer's technical manuals.

5.3.2 All procedures described in 5.3.1 above, and changes thereto, shall be reviewed and approved, as specified in Section 5.1, prior to implementation. Temporary handwritten changes to procedures which do not change the intent of the original procedure may be made, provided such written changes have been reviewed and orally approved by two members of the company management staff. Such temporary written changes shall subsequently be typed in final format and approved in writing on a timely basis.

5.4 REPORTING REQUIREMENTS

5.4.1 Routine Reports

An Annual Non-Radiological Environmental Monitoring Report covering the previous twelve months operations shall be submitted to the NRC within 90 days after January 1 of each year.

In the event that some results are not available within the 90 day period, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplemental report.

These reports shall include the following:

1. Records of monitoring requirement surveys and samples.
2. Analysis of environmental data.
3. Records of changes in survey procedures.
4. List of any special environmental studies related to the licensed facilities not required by the environmental technical specifications.
5. Records of any violations of the environmental technical specifications.
6. Records of changes as described in Section 5.4.2.

#### 5.4.2 Non-Routine Reports

A report shall be submitted to the NRC in the event that a protection limit is exceeded, or the occurrence of an unusual or important event associated with operation of the licensed facilities involves a potentially significant environmental impact. Reports shall be submitted under one of the report schedules described below.

Reports concerning unusual or important events (events that could reasonably be in potential conflict with the NRC's Final Environmental Statement considerations or inconsistent with the Final Judgment consent decree cited in Section 2.11) shall be reported on the prompt schedule. All other events shall be reported on the 30-day schedule.

##### 5.4.2.1 Prompt Reports

Those events requiring prompt reports shall be reported within 24 hours by telephone, telegraph, or facsimile transmission to the Director of the Regional Office of Inspection and Enforcement and within 14 days by a written report to the Director of the Office of Inspection and Enforcement.

##### 5.4.2.2 30-Day Reports

Those events not requiring prompt reports shall be reported within 30 days by a written report to the Director of the Regional Office of Inspection and Enforcement with a copy to the Director of the Office of Inspection and Enforcement.

Written 14-day and 30-day reports and to the extent possible, the preliminary telephone, telegraph, or facsimile reports shall: (a) describe, analyze, and evaluate the occurrence, including extent and magnitude of the impact, (b) describe the cause of the occurrence, and (c) indicate the corrective action (including any significant changes made in procedures) taken to preclude repetition of the occurrence and to prevent similar occurrences involving similar components or systems.

The significance of an unusual or apparently important event with regard to environmental impact may not be obvious or fully appreciated at the time of occurrence. In such cases the NRC shall be informed promptly of changes in the licensee's assessment of the significance of the event and a corrected report shall be submitted as expeditiously as possible.

## 5.5 CHANGES

- 5.5.1 When a change to the facilities (that would affect the environmental impact evaluation contained in the licensee's Environmental Report or the NRC's Final Environmental Statement) or to the environmental monitoring procedures or equipment is planned, a timely report of the proposed change shall be submitted to the NRC for information prior to implementation of the change. This is not intended to preclude making non ETS changes on short notice that are significant in terms of decreasing an adverse environmental impact. However, such changes shall be promptly reported. Each report shall include an evaluation of the impact of the change for both environmental and safety considerations.
- 5.5.2 All documentation concerning changes (deletions, revisions, or additions) to permits and certificates required by Federal, State, local and regional authorities for the protection of the environment shall be submitted to the Director of Nuclear Reactor Regulation for information. The submittals shall include an evaluation of the environmental impact of such changes.
- 5.5.3 If the operating mode of the cooling system is changed to involve the intake of discharge of water on Card Sound or Biscayne Bay, the licensee shall propose suitable environmental protection limits and surveillance programs for approval by the NRC staff within one month after the change in cooling system operation.
- 5.5.4 Requests for changes in Environmental Technical Specifications of the facilities shall be submitted as applications for

license amendments to the Director of Nuclear Reactor Regulation prior to implementation. Each such request shall include an evaluation of the impact of the change for environmental considerations.

5.6 RECORDS RETENTION

- 5.6.1 Records and logs relative to specifications contained in Section 5.0 of the Environmental Technical Specifications shall be retained for five years except as described in 5.6.2 below.
- 5.6.2 All records and logs relative to the following areas shall be retained for the life of the licensed facilities.
1. Records and drawing changes reflecting facility design modifications made to systems and equipment in connection with actions described in 5.5.1 above.
  2. Records of environmental monitoring data and analyses.

ENVIRONMENTAL IMPACT APPRAISAL BY THE  
OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NOS. 41 AND 33 TO  
FACILITY LICENSE NOS. DPR-31 AND DPR-41  
FLORIDA POWER AND LIGHT COMPANY  
TURKEY POINT PLANT, UNITS 3 AND 4  
DOCKET NOS. 50-250 AND 50-251

Introduction

By letters dated September 7, 1976, October 5, 1976, and February 28, 1978, Florida Power and Light Co. (the licensee) proposed changes to the common Non-Radiological Environmental Technical Specifications (ETS) appended as Appendix B to each of the operating licenses issued for the Turkey Point Plant, Units 3 and 4 (the facilities). The licensee proposes reductions in the environmental monitoring program based on data collected during five years of plant operation. The licensee has also requested deletion of seven generic completed one-time type special studies. We have reviewed the licensee's submittals, the operating data and the current ETS and have found additional changes to be appropriate. In particular, we find it necessary to delete all reference to monitoring programs and limiting conditions related to open-cycle operation. Such operation is prohibited after September 1976, by the Consent Final Judgment<sup>1</sup> and the Final Environmental Statement (FES).

Discussion and Evaluation

The Consent Final Judgment issued on September 10, 1971 by the United States District Court for the Southern District of Florida prohibits discharge of condenser cooling water to Card Sound or Biscayne Bay with two exceptions: "During a national power emergency, regional emergency or at any time when the health, safety, or welfare of the public may be endangered by the inability of Florida Power and Light to supply electricity from any other sources available to it, the operating limits provided in this Final Judgment shall be inapplicable. However, during such emergencies, the defendant (FP&L)<sup>2</sup> shall not exceed the operating limits except as is necessitated by the emergency." These

<sup>1</sup>United States of America vs. Florida Power and Light Co., Civil Action No. 70-328-CA. (S.D. Fla. 1971)

<sup>2</sup>Staff's parenthesis.

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requirements must be maintained in the ETS. The second exception allows discharge of condenser cooling water only if "required to prevent the excessive concentration of salt in the waters of the cooling system..." The Consent Final Judgment contains specific limitations on waters discharged from the cooling system. Because the cooling canal system required by the Consent Final Judgment and the FES was not completed at the time the operating licenses were issued in order to control and monitor impacts due to operation of the facilities before the cooling system could be built, and in order to provide for the exception allowed by the Consent Final Judgment (which permits discharges if required for salinity control) the current ETS were written with provisions for monitoring and controlling three operating modes: open, closed, or tidal flushing. The cooling canal system was completed after only a few months of operation of the facilities, and although it was thought that evaporation of the heated condenser cooling water would result in a salinity buildup that would necessitate the opening of the canal system, this has not been the case. In September 1974, after more than one year of closed-cycle operation, a rock coffer dam was built across the discharge canal to prevent any discharge from the cooling canal system. Therefore, at present, it is not possible to discharge water from this system. During the more than five years that the cooling canal system has been operating in the close-cycle mode, the salinity levels inside the cooling canal system have consistently remained within 2 or 3 parts per thousand of the salinity in Biscayne Bay. Because of the consistent lack of problems with excess salinity, we conclude that the ETS sections dealing with open-cycle operation are no longer necessary, and may be deleted. If it becomes necessary to open the cooling canal system in the future, the licensee must notify the NRC, and all of the original monitoring programs and limits will be reinstated or alternative surveillance programs and limits shall be submitted for our approval within one month after the operating mode of the cooling system is revised to involve intake or discharge on either Card Sound or Biscayne Bay.

We have renumbered the sections and pages of the ETS to be consistent with the format of the Safety Technical Specifications (license Appendix A for the facilities) and with current NRC practice. Several definitions have been added to Section 1. These format changes, which are administrative in nature, will result in a complete reissuance of the ETS in addition to accommodating the technical changes discussed herein.

Section 2 will contain the Environmental Protection Limits applicable to the present operating mode utilizing the canal cooling system with no Card Sound intake or discharge. This section will contain all the limits which

the Office of Inspection and Enforcement currently uses for the purpose of inspection and enforcement. The limits which now apply only to open-cycle operation will be deleted because such operation is prohibited by the Consent Final Judgment and the FES. Those limits applying to closed-cycle operation will be left essentially unchanged.

Section 3 will contain the Monitoring Requirements for physical-chemical parameters when the plant is operating closed-cycle. With the exception of biochemical oxygen demand (BOD), ammonia ( $\text{NH}_3$ ), cobalt (Co), arsenic (As), and mercury (hg), the parameters to be monitored will be the same as those monitored in the current ETS. Co, As, and Hg have no direct causal link to the facilities. For the past three years the concentrations of these metals have been undetectable (less than 0.02 mg/l, 0.001 mg/l and 0.002 mg/l, respectively). This indicates that since there has been no detectable accumulation of these metals in the cooling canal system, we find that their deletion from the monitoring program is acceptable. BOD and  $\text{NH}_3$  also have no causal link with the plant. Ammonia levels in the cooling canal system water have never exceeded 0.8 mg/l, and for the most part have been at or below the threshold of detection limit (0.2 mg/l). This indicates that since there has been no buildup of organically bound nitrogen in the cooling canals, we conclude that further monitoring of  $\text{NH}_3$  is unnecessary. Similarly, BOD levels in the cooling canal system, since early 1974, have never exceeded 4 mg/l and generally have averaged near or below the limits of detectability (1 mg/l). Since this indicates that there are minimal amounts of organic matter in the cooling water, we conclude that further BOD monitoring is not needed. Monitoring frequency will be reduced from daily to weekly for pH, dissolved oxygen, and salinity and from weekly to monthly for COD (chemical oxygen demand). These reductions in frequency have been evaluated and are deemed adequate to assess the impacts of plant operation. Chlorine will still be monitored weekly, but monitoring will no longer be required if there is no chlorine usage. As noted above, monitoring requirements for open-cycle operation will be deleted, because such operation is no longer allowed by the Consent Final Judgment or the FES.

There are seven one-time special studies presently listed in Section 4 of the ETS. These special studies, which were required by the FES to verify that the cooling canal system presently in use is, indeed, the best alternative available included: Specification 4.B.1, Baseline Program; Specification 4.B.2, Impact at Turkey Point Site; Specification 4.C.1, Design and Operation of Discharge Control Structure; Specification 4.C.2, Water Circulation in Card Sound and Biscayne Bay; Specification 4.C.3,

Storm Damage; Specification 4.C.4, Alternate Water Sources; and Specification 4.C.5, Mechanical Cooling Devices. These studies have been completed and the final summary reports have been submitted to NRC. We find that these completed studies have served the intended purposes and may, therefore, be deleted.

We find that phytoplankton and zooplankton sampling should be reduced from monthly to quarterly, as requested by the licensee. Since the plant is located in a semi-tropical climate, there are no large seasonal variations in temperature or light intensity to cause rapid changes. This has been borne out by previous sampling. Therefore, we conclude that quarterly monitoring has been and will continue to be adequate to assess impacts on these segments of the biota of the cooling canal system.

The licensee has proposed to conduct fish sampling with trap nets and gill nets rather than with trawls and seines. We find this acceptable since these passive sampling methods are more amenable to sampling fish in an exposed system, such as the cooling canals, than more active samplers where avoidance is often observed.

The deletion of pH and conductivity analysis in soil samples is also acceptable. Based on our review of available data, there have been no systematic large-scale shifts in soil pH resulting from operation of the cooling canal system. Because soil salinity will continue to be monitored, changes in soil properties that would cause changes in conductivity will still be recorded by the modified programs.

The program requiring monthly analysis for microbial activity in soil samples has been deleted. The program has no basis in the FES and has failed to yield information useful for interpreting the impact of revegetation on the cooling system. The remaining monitoring programs in this section will still be necessary because complete revegetation of the spoil banks and berms has not occurred and plant life succession is not complete either in the cooling canals or on the berm.

The biological monitoring programs required for open-cycle operation will be deleted because such operation is now prohibited by the Consent Final Judgment and the FES. However, all of the original surveillance programs shall be re-instituted, or an alternative surveillance program will be submitted for approval by the NRC staff, within one month if the operating mode of the cooling system were to be revised to involve intake or discharge on either Card Sound or Biscayne Bay.

The licensee has requested that the long-term terrestrial monitoring program be modified. The existing ETS require annual aerial photographs of the cooling canal system using both color and color infrared photography

on a scale of 1 to 25,000. It is proposed that an annual aerial photograph be required, but it need only be color infrared at a scale of 1 to 24,000. We find that the color infrared photographs alone can provide adequate information to assess physical changes as well as changes in the vegetative community. The change in scale will bring the scale of the aerial photographs in line with the scale used for U. S. Coast and Geodetic maps. We find no disadvantages to counteract this obvious advantage and therefore consider this scale change to be acceptable.

A section has been proposed for Specification 5.1, Review and Audit, which would require a yearly audit, to include an audit of contractor operations. This change is administrative in nature and is acceptable.

The proposed changes to the non-radiological environmental technical specifications involve a complete reevaluation of environmental monitoring requirements and some administrative changes for the plant. Based on our review, we have concluded that these amendments do not involve significant new safety information of a type not considered by a previous Commission safety review.

### Conclusion

#### Environmental

On the basis of the foregoing analysis, it is concluded that there would be no significant environmental impact attributable to the proposed action. Having made this conclusion, the Commission has further concluded that no environmental impact statement for the proposed action need be prepared and that a negative declaration to this effect is appropriate.

#### Safety

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

UNITED STATES NUCLEAR REGULATORY COMMISSION  
DOCKET NOS. 50-250 AND 50-251  
FLORIDA POWER AND LIGHT COMPANY  
NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE  
AND NEGATIVE DECLARATION

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment Nos. 41 and 33 to Facility Operating License Nos. DPR-31 and DPR-41, issued to the Florida Power and Light Company, which revise the Appendix B Environmental Technical Specifications for operation of the Turkey Point Plant, Units 3 and 4 (the facilities) located in Dade County, Florida. These amendments are effective as of the date of issuance.

The amendments permit reductions in the environmental monitoring program based on data collected during five years of plant operation, deletion of seven generic or one-time special studies that have been completed, deletion of monitoring programs and limiting conditions for open-cycle operation, and several administrative changes.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

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The Commission has prepared an environmental impact appraisal for the revised Environmental Technical Specifications and has concluded that an environmental impact statement for this particular action is not warranted because there will be no environmental impact attributable to the action other than that which has already been predicted and described in the Commission's Final Environmental Statement for the facility dated July 1972.

For further details with respect to this action, see (1) the application for amendment dated September 7, 1976 as supplemented by letters dated October 5, 1976 and February 28, 1978, (2) Amendment Nos. 41 and 33 to DPR-31 and DPR-41, and (3) the Commission's environmental impact appraisal. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D. C. and at the Environmental and Urban Affairs Library, Florida International University, Miami, Florida 33199. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland this 6th day of November, 1978.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors