

DCS MS-016

MAY 21 1982

DISTRIBUTION:

- ✓ Docket File
- NRC PDR
- L PDR
- ORB#3 Rdg
- DEisenhut
- PMKreutzer-3
- CNelson
- RAClark
- SECY
- Gray File +4
- I&E(2)
- TBarnhart (4)
- LSchneider
- ACRS (10)
- OPA
- RDiggs
- NSIC
- OELD
- ASAB

Docket No. 50-335

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



Dear Dr. Uhrig:

The Commission has issued the enclosed Amendment No. 50 to Facility Operating License No. DPR-67 for St. Lucie Unit No. 1. The amendment consists of changes to the Technical Specifications in response to your applications dated October 27, 1980 and March 12, 1981.

The amendment pertains to the Environmental Technical Specifications (Appendix B to the Facility Operating License). The amendment (1) deletes all water quality requirements, (2) allows termination and deletion of endangered sea turtle programs, (3) changes and deletes organization titles in the section on administrative controls, and (4) makes minor revisions to locations of sample collection sites for the radiological monitoring program. The amendment also divides Appendix B Technical Specifications into two parts: Part I- Radiological Environmental Technical Specifications, and Part II - Environmental Protection Plan (Non-radiological) Technical Specifications.

Your basis for the requested deletion of water quality limits and monitoring programs is that these aquatic requirements are now under the jurisdiction of the U. S. Environmental Protection Agency as established by the Atomic Safety and Licensing Appeal Board's ruling on December 27, 1978 (Yellow Creek), ALAB-515). The NRC has taken the position that water quality conditions in existing reactor operating licenses should be removed as a matter of law where the licensee holds, as you do, an effective National Pollutant Discharge Elimination System (NPDES) permit. In place of such requirements, an Environmental Protection Plan (EPP) has been adopted in a standard format for all new plants, and existing plants on a case-by-case basis. The EPP is designed to keep the NRC aware of environmental effects of plant operation, while recognizing that the regulation of non-radiological aspects of aquatic matters lies with the appropriate NPDES permitting agency.

cp  
1

We concur in the deletion of the aquatic requirements and will rely on the NPDES permit system which is administered by the U. S. Environmental Protection Agency (EPA) for regulation and protection of the aquatic environment. We have informed the EPA of our action and it has voiced no objections to the deletion of these water quality requirements.

OFFICE	License Condition 2.F.2 which, in conjunction with your Appendix B Technical Specifications, specified these aquatic requirements can also be deleted.					
SURNAME						
DATE						

We have determined that the deletion of these water quality requirements is a ministerial action required as a matter of law and that therefore no environmental impact statement or environmental impact appraisal and negative declaration need be prepared in connection with this action.

The acceptability of the termination and deletion of the endangered sea turtle programs is addressed in the enclosed Environmental Impact Appraisal (EIA). Special Condition 6.1 of your Appendix B Technical Specifications before this amendment, which required maintenance of a light screen, is now included as Section 4.2 of the EPP.

We have also reviewed your proposed changes to administrative controls, organizational titles and locations of sample collection sites for the radiological monitoring program and find them acceptable as presented. We have determined that these changes do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that these changes involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the approval of these changes.

The implementation of the Environmental Protection Plan and the division of your Appendix B Technical Specifications into two parts, have been discussed with and agreed to by your staff.

Since the amendment applies only to aquatic, terrestrial and radiological monitoring programs and administrative controls, it does not involve significant new safety information of a type not considered by a previous Commission safety review of the facility. It does not involve a significant increase in the probability or consequences of an accident, does not involve a significant decrease in a safety margin, and therefore does not involve a significant hazards consideration. We have also concluded that there is a reasonable assurance that the health and safety of the public will not be endangered by this action.

A copy of the Notice of Issuance and Negative Declaration is also enclosed.

Sincerely,

Original signed by

Christian C. Nelson, Project Manager  
Operating Reactors Branch #3  
Division of Licensing

Enclosures:

- 1. Amendment No. 50 to DPR-67
- 2. EIA
- 3. Notice of Issuance and Negative Declaration

cc: w/enclosures

\*See previous page for concurrence + distribution

See next page

OFFICE ▶	.....	.....	.....	.....	.....	.....	.....
SURNAME ▶	.....	.....	.....	.....	.....	.....	.....
DATE ▶	.....	.....	.....	.....	.....	.....	.....

We have determined that the deletion of these water quality requirements is a ministerial action required as a matter of law and that therefore no environmental impact statement or environmental impact appraisal and negative declaration need be prepared in connection with this action.

The acceptability of the termination and deletion of the endangered sea turtle programs is addressed in the enclosed Environmental Impact Appraisal (EIA).

We have also reviewed your proposed changes to administrative controls, organizational titles and locations of sample collection sites for the radiological monitoring program and find them acceptable as presented. We have determined that these changes do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that these changes involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR s51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the approval of these changes.

The implementation of the Environmental Protection Plan, the division of your Appendix B Technical Specifications into two parts, and the deletion of Special Condition 6.1, light screens, have been discussed with and agreed to by your staff.

Since the amendment applies only to aquatic, terrestrial and radiological monitoring programs and administrative controls, it does not involve significant new safety information of a type not considered by a previous Commission safety review of the facility. It does not involve a significant increase in the probability or consequences of an accident, does not involve a significant decrease in a safety margin, and therefore does not involve a significant hazards consideration. We have also concluded that there is a reasonable assurance that the health and safety of the public will not be endangered by this action.

A copy of the Notice of Issuance and Negative Declaration is also enclosed.

Docket File OI&E (2) Gray File  
 NRC PDR TBarnhart-E. Conner Sincerely,  
 Local PDR LSchneider  
 ORB Rdg ACRS (10)  
 DEisenhut OPA  
 PMKreutzer-3 RFerguson  
 CNelson RDiggs  
 OELD RBallard  
 SECY NSIC  
 Enclosures: ASLAB  
 1. Amendment No. to DPR-67  
 2. EIA  
 3. Notice of Issuance and Negative Declaration

Christian C. Nelson, Project Manager  
 Operating Reactors Branch #3  
 Division of Licensing

OELD  
 SA/21/82

OFFICE	cc: w/enclosures See next page	DL:ORB#3	DL:ORB#3	DL:ORB#3	EEB	ADL
SURNAME		CNelson/dd	PKreutzer	RAClark	Ballard	IMNovak
DATE		4/29/82	4/29/82	4/29/82	4/30/82	4/3/82



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

DISTRIBUTION:  
Docket File  
ORB#3 Rdg  
PMKreutzer

Docket No. 50-335

Docketing and Service Section  
Office of the Secretary of the Commission

SUBJECT: FLORIDA POWER & LIGHT COMPANY, St. Lucie Plant, Unit No.1

Two signed originals of the Federal Register Notice identified below are enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies ( 12 ) of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s): Time for Submission of Views on Antitrust Matters.
- Notice of Availability of Applicant's Environmental Report.
- Notice of Proposed Issuance of Amendment to Facility Operating License.
- Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- Notice of Availability of NRC Draft/Final Environmental Statement.
- Notice of Limited Work Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Other: Amendment no. 50  
Referenced documents have been provided PDR.

Division of Licensing  
Office of Nuclear Reactor Regulation

Enclosure:  
As Stated

OFFICE →	ORB#3: <i>PH</i>				
SURNAME →	<i>PMKreutzer/pn</i>				
DATE →	<i>6/2/82</i>				

Florida Power & Light Company

cc:

Harold F. Reis, Esquire  
Lowenstein, Newman, Reis & Alexrad  
1025 Connecticut Avenue, N.W.  
Washington, D. C. 20036

Norman A. Coll, Esquire  
McCarthy, Steel, Hector & Davis  
14th Floor, First National Bank Building  
Miami Florida 33131

Indian River Junior College Library  
3209 Virginia Avenue  
Fort Pierce, Florida 33450

Administrator  
Department of Environmental Regulation  
Power Plant Siting Section  
State of Florida  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Mr. Weldon B. Lewis  
County Administrator  
St. Lucie County  
2300 Virginia Avenue, Room 104  
Fort Pierce, Florida 33450

U.S. Environmental Protection Agency  
Region IV Office  
ATTN: Regional Radiation  
Representative  
345 Courtland Street, N.E.  
Atlanta, Georgia 30308

Mr. Charles B. Brinkman  
Manager - Washington Nuclear Operations  
C-E Power Systems  
Combustion Engineering, Inc.  
4853 Cordell Avenue, Suite A-1  
Bethesda, Maryland 20014

Regional Administrator  
Nuclear Regulatory Commission, Region II  
Office of Executive Director for Operations  
101 Marietta Street, Suite 3100  
Atlanta, Georgia 30303

Mr. Jack Schreve  
Office of the Public Counsel  
Room 4, Holland Building  
Tallahassee, Florida 32304

Resident Inspector  
c/o U.S.N.R.C.  
7900 S. A1A  
Jensen Beach, Florida 33457

cc w/enclosure(s) and incoming  
dated: 10/27/80, 3/12/81

Bureau of Intergovernmental  
Relations  
660 Apalachee Parkway  
Tallahassee, Florida 32304



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

DESIGNATED ORIGINAL

Certified By

*Patricia Hoxon*

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-335

ST. LUCIE PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 50  
License No. DPR-67

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The applications for amendment by Florida Power & Light Company (the licensee) dated October 27, 1980 and March 12, 1981, comply 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 applications, 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.

2. Accordingly, Facility Operating License No. DPR-67 is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and:

A. Revise paragraph 2.C.(2) to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 50, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

B. Delete in its entirety paragraph 2.F.(2).

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

FOR THE NUCLEAR REGULATORY COMMISSION

*Robert A. Clark*  
Robert A. Clark, Chief  
Operating Reactors Branch #3  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: May 21, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 50

FACILITY OPERATING LICENSE NO. DPR-67

DOCKET NO. 50-335

Replace the following pages of the 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.

Remove

Appendix B -

Title Page

ii

3-1

3-4

3-5

3-8

3-13

4-1

5-1

5-2

5-3

5-4

5-5

5-7

5-15

5-15a

5-16

5-17

6-1

-

-

-

-

-

-

-

-

-

Insert

Appendix B - Part I

Title Page

ii

3-1

-

3-5

3-8

3-13

4-1

5-1

5-2

5-3

-

5-5

5-7

5-15

-

5-16

5-17

6-1

Appendix B- Part II

Title Page

1

2

3

4

5

6

7

APPENDIX B - PART I

RADIOLOGICAL  
ENVIRONMENTAL TECHNICAL SPECIFICATIONS

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE UNIT NO. 1

OPERATING LICENSE NO. DPR-67

Docket No. 50-335

TABLE OF CONTENTS (Cont'd)

	<u>Page</u>
3.1.B Deleted .....	3-1
a. Deleted .....	3-4
b. Deleted .....	3-4
c. Deleted .....	3-4
d. Deleted .....	3-4
e. Deleted .....	3-4
f. Deleted .....	3-4
3.2 Radiological Environmental Monitoring .....	3-5
3.3 Onsite Meteorological Monitoring .....	3-16
4.0 <u>SPECIAL SURVEILLANCE &amp; SPECIAL STUDY ACTIVITIES</u> .....	4-1
4.1 Deleted .....	4-1
4.2 Deleted .....	4-1
5.0 <u>ADMINISTRATIVE CONTROLS</u> .....	5-1
5.1 Responsibility .....	5-1
5.2 Organization .....	5-1
5.3 Review and Audit .....	5-1
5.4 Action to be Taken if a Limiting Condition Is Exceeded .....	5-3
5.5 Procedures .....	5-3
5.6 Reporting Requirements .....	5-5
5.6.1 Routine Reports .....	5-5
5.6.2 Non-Routine Reports .....	5-15
5.6.3 Changes in Radiological Environmental Technical Specifications .....	5-16
5.7 Records Retention .....	5-16
6.0 <u>SPECIAL CONDITIONS</u> .....	6-1
6.1 Deleted .....	6-1

3.0 ENVIRONMENTAL SURVEILLANCE

3.1 Non-Radiological Surveillance

3.1.A ABIOTIC

Deleted

3.1.B BIOTIC

Deleted

## 3.2 RADIOLOGICAL ENVIRONMENTAL MONITORING

### Objective

The Operational Radiological Environmental Surveillance Program is conducted to measure radiation levels and radioactivity in the environs, and to assist in verifying any projected or anticipated radioactivity release resulting from plant operations which could bring about public exposure to radiation.

### Specifications

- 3.2.a Environmental samples shall be collected at the designated locations shown in Table 3.2-1 and Figures 3.2-1 and 3.2-2.
- 3.2.b The criteria for the type and the number of samples to be collected at a given sampling location, the frequency of collection, and the type and frequency of radioactivity analysis to be completed on the collected samples shall be as shown in Table 3.2-2.
- Direct radiation shall be measured by thermoluminescence dosimetry (TLD) at locations shown in Table 3.2-1 and Figures 3.2-1 and 3.2-2. The system shall be capable of measuring 26 mrem/year with a precision of  $\pm 10\%$  at the 95% confidence level based on a quarterly collection frequency.
- 3.2.c The radiation detection capabilities of the radioanalytical methods used shall be as shown in Table 3.2-3.
- 3.2.d A census of gardens producing fresh leafy vegetation for human consumption shall be conducted near the end of the growing season to determine their location with respect to the plant site. This census is limited to gardens having an area of 500 ft<sup>2</sup> or more, and shall be conducted under the following conditions:
1. Within a 1 mile radius of the plant site, enumerated by door-to-door or equivalent counting technique.
  2. If no milk-producing animals are located in the vicinity of the site, as determined by Specification 3.2.e below, the census described in item 1, above, shall be extended to a distance of 5 miles from the site.
  3. If this census reveals the existence of a garden at a location yielding a calculated thyroid dose greater than that from a previously sampled garden, the new location shall replace the garden previously having the maximum iodine concentration. Also, any location from which fresh leafy vegetables can no longer be obtained may be dropped from the

TABLE 3.2-1 (Continued)

Station No.	Description	Bearing*	Distance*	Vector Sampled
H31	North Port St. Lucie Water System, Prima Vista Blvd.	250°	10.619 km (6.60 mi)	Potable Water (Well) - Port St. Lucie
H32	Department of Health and Rehabilitative Services Entomology Laboratory, East of U.S. 1, Vero Beach	338°	30.571 km (19.00 mi)	Aquatic Biota, Ocean Water & Bottom Sediment, Air Particulates & Iodine, Soil, Direct Radiation, Beach Sand
H33	On Site, between Canals, east of AIA	138°	945 m (0.59 mi)	Air Particulates & Iodine, Direct Radiation
H34	On Site, Meteorological Tower	27°	762 m (0.47 mi)	Air Particulates & Iodine, Direct Radiation
H36	On Site, Discharge Canal west of AIA	101°	305 m (0.19 mi)	Surface Water, Bottom Sediment
H39	Vista Royal Condominium, 1 mile north of H32, east of U.S. 1, Vero Beach	338°	32.180 km (20.00 mi)	Food Crop (Citrus)
H40	Dan Smith Dairy, 6451 Jog Road, 1/2 mi. North of the West Terminus of Hypoluxo Road, Palm Beach County	174°	85.6 km (53.2 mi)	Milk
H41	Paul J. Goldfarb - Garden, 8407 South Indian River Drive	245°	3.06 km (1.9 mi)	Fresh, Leafy Vegetables

\*Bearings and distances from the center of Generating Stations

OPERATIONAL ENVIRONMENTAL RADIOLOGICAL SURVEILLANCE PROGRAMST. LUCIE PLANT

<u>Exposure Pathway and/or Sample</u>	<u>Criteria and Sampling Locations</u>	<u>Collection Frequency</u>	<u>Type and Frequency of Analysis</u>
4. <u>AQUATIC BIOTA</u> (cont'd)			
4.2 Fish			
4.2.1 Carnivores	1 location, vicinity of discharge structure: H 15 1 location, Vero Beach: H32 (Control)	Semi-annually	Gamma spectral analysis Sr-89 & 90
4.2.2 Herbivores	1 location, vicinity of discharge structure: H15 1 location, Vero Beach: H32 (Control)	Semi-annually	Gamma spectral analysis Sr-89 & 90
5. <u>TERRESTRIAL</u>			
5.1 Milk	1 location within 15 mile radius of plant and in the prevailing wind direction from the plant: H03	Semi-monthly	Gamma spectral analysis Sr-89 & 90 I-131
	1 location, 53.2 mi south of the plant, Palm Beach County H40 (Control)	Monthly	Gamma spectral analysis Sr-89 & 90 I-131
	Dairy herd census	Semi-annually	
5.2 Biota			
5.2.1 Food Crop (Citrus)	6 locations, H10, H22, H23, H24, H25, H26	Harvest Time	Gamma spectral analysis Sr-89 & 90
5.2.2 Food Crop (Edible Leafy vegetation)	1 location, Vero Beach: H39 (control) 1 location as determined by garden census (Specification 3.2.d)	Harvest Time Harvest Time	Gamma spectral analysis Sr-89 & 90 Gamma spectral analysis I-131
5.3 Soil	5 locations within a 15 mile radius of plant: H03, H08, H09, H10, H30. 1 location, Vero Beach: H32 (Control)	Once per 3-year period	Gamma spectral analysis Sr-90

4.0 SPECIAL SURVEILLANCE AND SPECIAL STUDY ACTIVITIES

4.1 Entrainment of Aquatic Organisms

Deleted

## 5.0 ADMINISTRATIVE CONTROLS

The purpose of this section is to describe the administrative and management controls necessary to provide continuing protection to the environment, and to implement the radiological environmental technical specifications (ETS).

### 5.1 Responsibility

The Director, Environmental Affairs Department has the ultimate responsibility for the implementation of the ETS. He may delegate to other departments and/or organizations the work of establishing and executing portions of the ETS, but shall retain responsibility thereof.

The Vice President of Nuclear Energy is responsible for executing the radioactive effluents and the Radiological Environmental Surveillance sections.

The Director of Nuclear Affairs shall be responsible for periodic audits, conducted according to the corporate Quality Assurance program, to insure compliance with the ETS.

### 5.2 Organization

The corporate organization involved in environmental matters is depicted in Figure 5.2-1.

### 5.3 Review and Audit

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, with an audit conducted at least once per year. Contractor operations shall also be audited once per year.

CERG is responsible for management review of items 5.3.1 through 5.3.8 below. Independent audit functions for 5.3.1 and 5.3.8 below will be provided through the Quality Assurance Program.

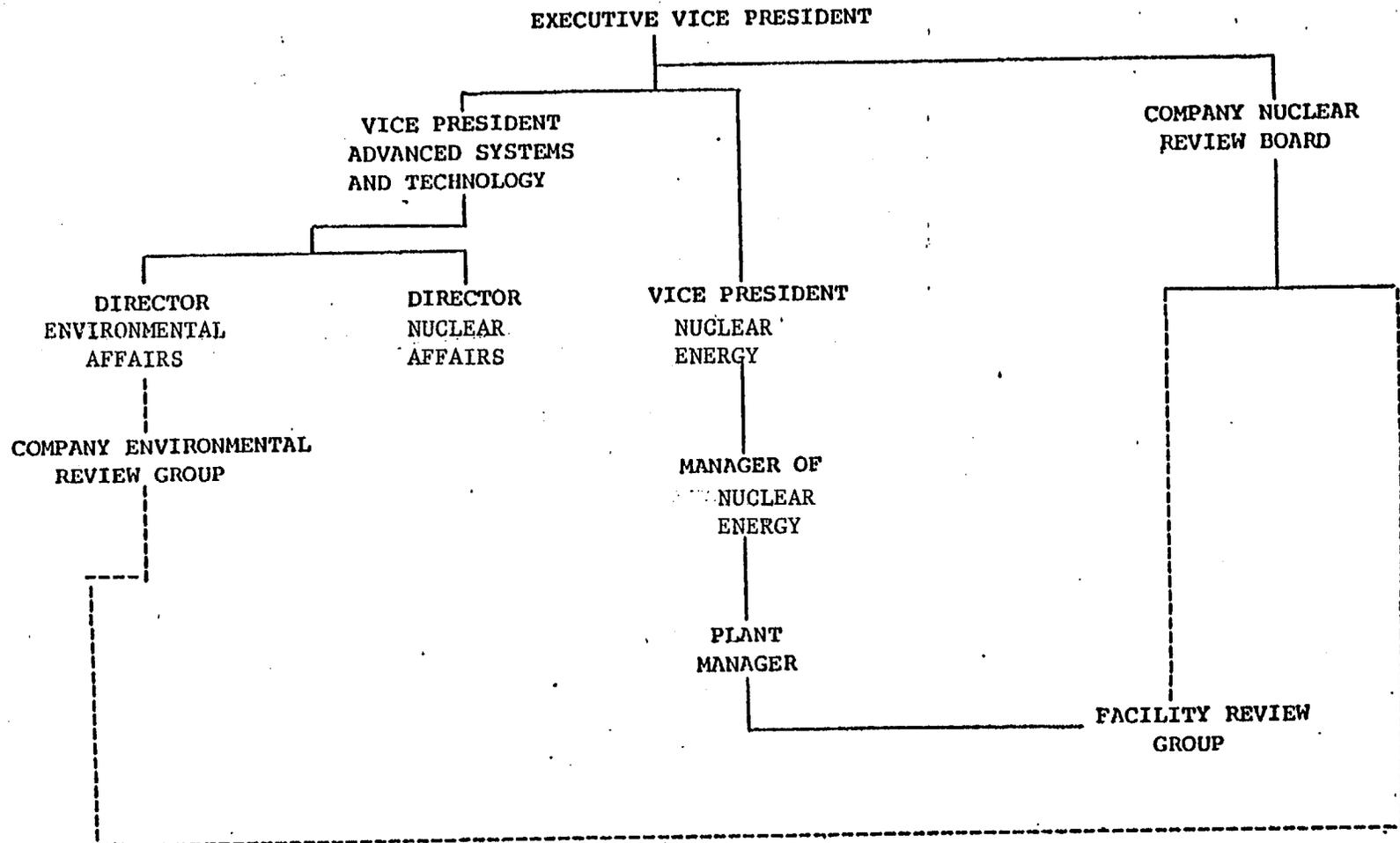
5.3.1 Environmental Technical Specifications for the facility.

5.3.2 Results of the environmental monitoring programs prior to their submittal in each Annual Environmental Monitoring Report.

5.3.3 Proposed changes to the Environmental Technical Specifications in effect for the facility and the evaluated impact of the changes.

5.3.4 Proposed changes or modifications to plant systems or equipment, which would require a change in the procedures described in 5.5 below, or which have been determined by the Plant Manager to affect the licensed facility's environmental impact.

5.3.5 Proposed tests or experiments which have been determined by the Plant Manager to affect the licensed facility's environmental impact.



FLORIDA POWER & LIGHT COMPANY  
CORPORATE ORGANIZATION - ENVIRONMENTAL AFFAIRS  
FIGURE 5.2-1

———— AUTHORITY  
- - - - COMMUNICATION

5.3.6 Coordination of Environmental Technical Specification (Appendix B Part I to facility license) development with the Safety Technical Specifications (Appendix A to the facility license) to avoid conflicts and for consistency.

5.3.7 Proposed sampling analyses, calibration and alarm check procedures, as specified in 5.5.1, and any other proposed procedures or changes thereto as determined by the Plant Manager to affect the licensed facility's environmental impact.

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

5.4 Action to be Taken if a Limiting Condition is Exceeded

5.4.1 When a Limiting Condition is exceeded, action shall be taken as permitted by the applicable specification until the condition can be met.

5.4.2 Exceeding a Limiting Condition shall be investigated by the Company Environmental Review Group or by the Facility Review Group.

5.4.3 All reviews and actions taken, with reasons therefor, shall be recorded and maintained as part of the permanent records.

5.4.4 Each instance whereby a Limiting Condition is exceeded shall be reported to the Company Nuclear Review Board.

5.5.5 A report for each occurrence shall be prepared as specified in Section 5.6.2.

5.5 Procedures

5.5.1 Detailed written procedures, including applicable check lists and instructions, shall be prepared and followed for activities involved in carrying out the radiological environmental technical specifications. Procedures shall include sampling, data recording and storage, instrument calibration, measurements and analyses, and actions to be taken when limits are exceeded. Testing frequency of any alarms shall be included.

5.5.2 Plant operating procedures shall include provisions to ensure that plant systems and components are operated in compliance with the radiological environmental technical specifications.

5.6 Reporting Requirements

5.6.1 Routine Reports

5.6.1.a Annual Non-Radiological Environmental Monitoring Report

Deleted

5.6.1.b Annual Radiological Environmental Monitoring Report

A report on the radiological environmental surveillance programs for the previous 12 months of operation shall be submitted to the Director of the NRC Regional Office (with a copy to the Director, Office of Nuclear Reactor Regulation) as a separate document within 90 days after January 1 of each year. The period of the first report shall begin with the date of initial criticality. The reports shall include summaries, interpretations, and statistical evaluation of the results of the radiological environmental surveillance activities for the report period, including a comparison with preoperational studies, operational controls (as appropriate), and previous environmental surveillance reports and an assessment of the observed impacts of the plant operation on the environment. The reports shall also include the results of land use censuses required by the specifications. If harmful effects or evidence of irreversible damage are detected by the monitoring, the licensee shall provide an analysis of the problem and a proposed course of action to alleviate the problem.

Results of all radiological environmental samples taken shall be summarized on an annual basis in a format similar to that indicated in Table 5.6.1-A. 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 supplementary report.

5.6.1.c Semiannual Radioactive Effluent Release Report

A report on the radioactive discharges (Regulatory Guide 1.21, Rev. 1, June 1974) released from the site during the previous 6 months of operation shall include the following:

Analyses of Effluent releases shall be summarized on a quarterly basis and reported in a format similar to Tables 5.6.1-B, C, D, and E.

Supplemental information shall be included covering topics similar to those itemized in Data Sheet 5.6.1-1.

Abnormal releases should be handled as batch releases for accounting purposes.

Solid wastes shall be summarized on a quarterly basis and reported in a format similar to that of Table 5.6.1-F.

The following information should be reported for shipments of solid waste and irradiated fuel transported from the site during the report period:

1. The semiannual total quantity in cubic meters and the semiannual total radioactivity in curies for the categories or types of waste.
  - a. Spent resins, filter sludges, evaporator bottoms;
  - b. Dry compressible waste, contaminated equipment, etc.;
  - c. Irradiated components, control rods, etc.;
  - d. Other (furnish description).
2. An estimate of the total activity in the categories of waste in 1, above.
3. The disposition of solid waste shipments. (Identify the number of shipments, the mode of transport, and the destination.)
4. The disposition of irradiated fuel shipments. (Identify the number of shipments, the mode of transport, and the destination.)

5.6.2 Non-Routine Reports

5.6.2.a Non-Radiological Environmental Reports

Deleted

5.6.2.b Radioactive Effluent Reports

Liquid Radioactive Wastes Report

If the cumulative releases of radioactive materials in liquid effluents, excluding tritium and dissolved gases, should exceed one-half the design objective annual quantity during any calendar quarter, the licensee shall make an investigation to identify the causes of such releases and define and initiate a program of action to reduce such releases to the design objective levels. A written report of these actions shall be submitted to the NRC within 30 days from the end of the quarter during which the release occurred.

Gaseous Radioactive Wastes Report

Should the conditions a), b), or c) listed below exist, the licensee shall make an investigation to identify the causes of the release rates and define and

and initiate a program of action to reduce the release rates to design objective levels. A written report of these actions shall be submitted to the NRC within 30 days from the end of the quarter during which the releases occurred.

- a. If the average release rate of noble gases for the site during any calendar quarter exceeds one-half the design objective annual quantity.
- b. If the average release rate per site of all radioiodines and radioactive materials in particulate form with half-lives greater than eight days during any calendar quarter exceeds one-half the design objective annual quantity.
- c. If the amount of iodine-131 released during any calendar quarter is greater than 0.5 Ci/reactor.

#### Unplanned or Uncontrolled Release Report

Any unplanned or uncontrolled offsite release of radioactive materials in excess of 0.5 curie in liquid or in excess of 5 curies of noble gases or 0.02 curie of radioiodines in gaseous form requires notification. This notification must be made by a written report within 30 days to the NRC. The report shall describe the event, identify the causes of the unplanned or uncontrolled release and report actions taken to prevent recurrence.

#### 5.6.2.c Radiological Environmental Surveillance Reports

If a confirmed measured level of radioactivity in an environmental medium exceeds ten times the control station value, a written report shall be submitted to the Director of the NRC Regional Office (with a copy to the Director, Office of Nuclear Reactor Regulation) within 10 days after confirmation of the validity of the measured level. Confirmation shall be completed at the earliest time consistent with the analysis, but in any case, within 30 days. This report shall include an evaluation of any release conditions, environmental factors, or other aspects necessary to explain the anomalous result.

#### 5.6.3 Changes in Radiological Environmental Technical Specifications

Request for changes in radiological environmental technical specifications shall be submitted to the Director of Nuclear Reactor Regulation for review and authorization. The request shall include an evaluation of the environmental impact of the proposed change.

#### 5.7 Records Retention

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

- a. Records and drawings detailing plant design changes and modifications made to systems and equipment as described in 5.3.4.
- b. Records of all environmental surveillance data.
- c. Records to demonstrate compliance with the limiting conditions in Section 2.

5.7.2

All other records and logs relating to the radiological environmental technical specifications shall be retained for five years following logging or recording. These shall include (but are not limited to) the following:

- a. Details or any abnormal operating conditions having an effect on the environment, and actions taken to correct those conditions.
- b. Maintenance activities to environment monitoring equipment, including but not limited to:
  - 1) routine maintenance and component replacement,
  - 2) equipment failures,
  - 3) replacement of principal items of equipment.
- c. Records of radioactivity levels in liquid and gaseous wastes released to the environment.
- d. All reviews, including actions taken and reasons therefor, required in Sections 2, 3, and 4 of this specification.

6.0 SPECIAL CONDITIONS

6.1 Light Screen to Minimize Turtle Disorientation

Deleted

APPENDIX B - PART II

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

TECHNICAL SPECIFICATIONS

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE UNIT NO. 1

OPERATING LICENSE NO. DPR-67

Docket No. 50-335

## 1.0 Objectives of the Environmental Protection Plan

The Environmental Protection Plan (EPP) is to provide for protection of the local area environment of the St. Lucie Nuclear Plant during construction and operation.

The principle objectives of the EPP are to:

1. Verify that the plant is operated in an environmentally acceptable manner as established by the FES and other NRC environmental impact assessments
2. Coordinate NRC requirements and maintain consistency with other Federal, State and local requirements for environmental protection
3. Keep NRC informed of the environmental effects of facility construction and operation and of actions taken to control those effects

Environmental concerns identified in the Unit I FES which relate to water quality matters are to be regulated by way of the licensee's NPDES permit.

## 2.0 Environmental Protection Issues

In the FES-OL dated June 1973, NRC staff considered the environmental impacts associated with the operation of the St. Lucie Plant Unit I. Certain environmental issues were identified which required study or license conditions for resolution of environmental concerns and to assure adequate environmental protection. The Unit I Appendix B Environmental Technical Specifications accompanying license DPR-67 included discharge restrictions and monitoring

programs to resolve the issues. Prior to issuance of this EPP, ETS requirements related to non-radiological environmental activities have included the following programs:

2.1 Aquatic monitoring programs to insure:

1. Protection of the local aquatic communities by limiting thermal stress to aquatic organisms
2. Minimization of cooling system organism entrainment and impingement levels
3. Protection of local aquatic biota by minimizing the release of chlorine used to control cooling system biofouling to that necessary to maintain plant efficiency and integrity
4. That the local aquatic environment is protected from potential discharges of heavy metals, discharge of water with unacceptable pH from the plant and insuring that no significant dissolved oxygen alteration due to plant operation occurred

To insure that the issues identified in items 1, 2, 3 and 4 above have and are being satisfied, extensive chemical, thermal and biotic monitoring has been performed since plant operation began in 1976.

With assumption of aquatic monitoring programs by EPA through the NPDES program, as delineated in NPDES Permit FL0002208 effective January 29,

1982, NRC will rely on EPA for resolution of issues involving the monitoring of water quality and aquatic biota.

2.2 Terrestrial issues raised have led to programs on sea turtles that:

1. Document the nesting at the site and vicinity; determine effects of the discharge thermal plume on nesting patterns and hatchling migration; and investigate thermal stress on hatching and rearing factors by using turtle eggs from displaced nests
2. Minimize turtle hatchling disorientation by planting a light screen along the beach

The above programs specifically addressed as conditions in the Unit 1 FES, Operating License and Technical Specifications have been completed and the requirements have been satisfied.

3.0 Consistency Requirements

3.1 Plant Design and Operation

The licensee may make changes in station design or operation or perform tests or experiments affecting the environment provided such changes, tests or experiments do not involve an unreviewed environmental question. Changes in plant design or operation or performance of tests or experiments which do not affect the environment are not subject to this requirement.

Before engaging in unauthorized construction or operational activities which may affect the environment, the licensee shall perform an environmental evaluation of such activity.\* When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activities and obtain prior approval from the NRC.

A proposed change, test or experiment shall be deemed to involve an unreviewed environmental question if it concerns (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the final environmental statement (FES) as modified by staff's testimony to the Atomic Safety and Licensing Board, supplements to the FES, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or power level (in accordance with 10 CFR Part 51.5(b)(2) or (3) a matter not previously reviewed and evaluated in the documents specified in (1) of this Subsection, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in facility design or operation and of tests and experiments carried out pursuant to this Subsection. These records shall include a written evaluation which provides bases for the determination that the change, test, or experiment does not involve an unreviewed environmental question.

\*Activities are excluded from this requirement if all measurable nonradiological effects are confined to the on-site areas previously disturbed during site preparation and plant construction.

Activities governed by Section 3.3 of this EPP are not subject to the requirements of this section.

3.2 Reporting related to the NPDES Permit and State Certification (pursuant to Section 401 of the Clean Water Act)

1. Violations of the NPDES Permit or the State 401 Certification Conditions shall be reported to the NRC by submittal of copies of the reports required by the NPDES Permit or State 401 Certification.
2. The licensee shall provide the NRC with a copy of any 316(b) studies and/or related documentation at the same time it is submitted to the permitting agency.
3. Changes and additions to the NPDES Permit or the State 401 Certification shall be reported to the NRC within 30 days following the date the change is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.
4. The NRC shall be notified of changes to the effective NPDES Permit proposed by the licensee by providing NRC with a copy of the proposed change at the same time it is submitted to the permitting agency. The licensee shall provide the NRC a copy of the application for renewal of the NPDES Permit at the same time the application is submitted to the permitting agency.

### 3.3 Changes Required for Compliance with Other Environmental Regulations

Changes in plant design or operation and performance of tests or experiments which are required to achieve compliance with or approval from other Federal, State, or local environmental regulations are not subject to the requirements of Section 3.1.

### 4.0 Environmental Conditions

#### 4.1 Unusual or Important Environmental Events

Any occurrence of an unusual or important event that indicates or could result in significant environmental impact causally related to station operation shall be recorded and promptly reported to the NRC within 72 hours followed by a written report within 30 days. No routine monitoring programs are required to implement this condition.

The written report shall (a) describe, analyze, and evaluate the event, including extent and magnitude of the impact and plant operating characteristics, (b) describe the probable cause of the event, (c) indicate the action taken to correct the reported event, (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems, and (e) indicate the agencies notified and their preliminary responses.

Events reportable under the subsection which also require reports to other Federal, State or local agencies shall be reported in accordance with those reporting requirements in lieu of the requirements of this subsection. The

NRC shall be provided a copy of such report at the same time it is submitted to the other agency.

The following are examples of unusual or important events: excessive bird impaction events; onsite plant or animal disease outbreaks; mortality or unusual occurrence of any species protected by the Endangered Species Act of 1973; unusual fish kills; increase in nuisance organisms or conditions; and unanticipated or emergency discharge of waste water or chemical substances.

#### 4.2 Light Screen to Minimize Turtle Disorientation

Australian pine or other suitable plants (i.e., native vegetation such as live oak, native figs, wild tamarind and others) shall be planted and maintained as a light screen, along the beach dune line bordering the plant property to minimize turtle disorientation.



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

DESIGNATED ORIGINAL

Certified By Patricia J. Rosen

ENVIRONMENTAL IMPACT APPRAISAL BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 50 TO FACILITY OPERATING LICENSE NO. DPR-67

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE PLANT, UNIT NO. 1

DOCKET NO. 50-335

Proposed Action

This Environmental Impact Appraisal addresses a change proposed by the licensee, Florida Power and Light Company (FP&L), in their letter of October 27, 1980. The proposed change to the Environmental Technical Specifications, Appendix B to Facility Operating License No. DPR-67 for St. Lucie Unit 1, is the termination and deletion of endangered sea turtle studies as required in Section 3.1.B.f.

Discussion and Assessment

At present the Appendix B Technical Specifications require that FP&L conduct several studies to determine the impact of plant operation on endangered sea turtles. The requirements are:

1. determine species, numbers and nesting characteristics of sea turtles along the beach in the vicinity of the plant during 1975 and 1977;
2. determine the effects of the discharge thermal plume on turtle nesting patterns and hatchling migration; and,
3. conduct control studies on temperature stress, hatching and rearing factors using turtle eggs from displaced nests.

FP&L has completed these studies and has reported the results in its Annual Non-Radiological Biological Monitoring Reports for 1976-1981. Therefore the requirements for the conduct and reporting of these studies have been satisfied. We have reviewed the results of these studies as part of the environmental impact review for licensing of St. Lucie Unit 2. That review is documented in our "Assessment of the Impacts of the St. Lucie Unit 2 Nuclear Station on Threatened or Endangered Species", S. Bellmund, et al., February 1982, which was submitted to the National Marine Fisheries Service and Fish and Wildlife Service which have jurisdiction for sea turtles under the Endangered Species Act.

B206080004 820521  
PDR ADOCK 05000335  
PDR  
P

The referenced assessment should be consulted for details regarding species and their numbers. Our assessments of the nesting characteristics, the effect of the discharge thermal plume on nesting patterns and hatchling migration, and the control studies are summarized below.

#### Nesting Characteristics

The nesting studies conducted by the licensee's consultants, Applied Biology, Inc. (ABI), indicate that the number of nests and the number of female loggerheads nesting along Hutchinson Island have exhibited only minor fluctuations since 1971 (ABI 1980) and were found to form a gradient along the beach with the greatest nesting along the southern portion of the island. Nest density and nesting success during 1975 were found to be less in the vicinity of the plant site than the rest of Hutchinson Island. This decline was attributed to shoreline constructional activities related to the intake and discharge pipelines. The nest density and nesting success returned to levels characteristic of the rest of the island by 1977 and 1979. The loggerhead turtle is the predominant species studied in the nesting surveys. Nests of other species were fewer in number and exhibited no general trend in numbers over the study years. We conclude that Unit 1 operation has no adverse impact on nesting and that FP&L has satisfied the intent of this requirement.

#### Effects of Discharge Thermal Plume

The concerns addressed by these studies are that the thermal plume may encourage early nesting, contribute to hatchling mortality through shock, or stress hatchlings as they move through the plume causing disorientation or increased predation.

The nesting studies performed, and discussed previously, showed no evidence of early nesting due to the existence of the thermal plume.

The licensee also studied the impact of the thermal plume on hatchlings during their movement from the beach to the open water (ABI 78). The LT<sub>50</sub> for loggerhead hatchlings was found to be 37.4°C (99°F), considerably higher than the maximum surface temperatures expected due to plant operation. The LT<sub>50</sub> of other marine turtles that nest on Hutchinson Island are expected to be similar to that of the loggerhead. Even if surface temperatures exceeded that LT<sub>50</sub> hatchlings would probably avoid such an area. High current velocity at the discharge ports prevents turtles from remaining in this area as well since it is much higher than the greatest estimated swimming speed for hatchlings.

Swimming rate for hatchling turtles changes with temperature, increasing with increasing temperature until a critical point is reached, past which activity rapidly declines (Mrosovsky and Shettleworth, 1968). ASI (1978) also found that temperatures of 33.3°C (91°F) produced a reduction in swimming speed and an impairment of orientation to brightness cues. Temperatures of 30°C (86°F) were high enough to produce significantly reduced swimming speeds. Temperatures below 30°C (86°F) seem to have negligible effect on hatchling loggerhead turtles. Frich (1976) found average swimming rate for green turtles to be 1.57 km/hr off Bermuda where ambient water temperature was 22°C (72°F). The response of green turtle hatchlings to elevated temperatures is thought to be similar to that of the loggerhead.

Since the maximum surface plume discharge temperature during the period of maximum hatchling emergence of July through September will only infrequently exceed 32°C (90°F) few hatchlings will be exposed to surface temperatures greater than 30°C (86°F). The maximum surface water temperature will be elevated 2.5°C (4.5°F). The maximum surface areas of the 1°C (2°F) isotherm is 390 ha (963 acres) resulting from a southward current when the discharge flow is 23.7 m<sup>3</sup>/sec (836 cfs) and the  $\Delta T$  is 18°C (32°F). Mortality due to high water temperature is not expected to occur. Mortality to hatchlings due to disorientation and increased predation will be minor since (1) the normal plume direction is northerly which results in the smallest plume dimensions, (2) hatchlings that enter the plume and exhibit reduced swimming speeds will be entertained in the plume and be rapidly moved into cooler water, and (3) access to the hottest portion of plume, which is at the submerged diffuser ports, will be denied due to the surface orientation of the hatchlings.

#### Control Studies

The licensee conducted a study of the factors involved in artificially incubating turtle eggs taken from nests which could be or were already disturbed at the beach site. Twenty-five or more eggs from each of 13 nests were transported by aircraft to Atlanta, Georgia, where they were incubated in sand-filled pails until hatched. The temperature of the incubation room varied between 27° and 30°C over the study period.

All but one nest produced greater than 75 percent viable hatchlings. Other investigators reported about 60 percent success for green turtles and 64 percent for loggerheads. The generally higher values found by the licensee reflect the removal of obviously non-viable eggs prior to transfer.

Once hatched, the survival of turtles was between 46 and 100 percent. Low survival was observed in two nests which contained undersized hatchlings with a high incidence of limb deformities. All other nests had hatchling survival in excess of 80 percent. Turtles were returned to Hutchinson Island, Florida, and released at the conclusion of the study (Letter: Applied Biology, Inc. to Florida Power and Light Company, May 26, 1978).

The licensee also conducted a study on turtle nest relocation which is reported in FP&L's "Annual Non-Radiological Environmental Monitoring Report 1981". One green turtle, one leatherback turtle and 58 loggerhead turtle nests were relocated from near the plant construction site in 1981.

The mean number of eggs per nest of relocated loggerhead nests was 120 with a range of 72 to 164 eggs. This was slightly higher than the mean of 111 eggs for nests relocated from the same area in 1980 but it is within the average clutch size of 110 to 126 reported by other authors.

Incubation period is defined as the time from nest deposition until the majority of the hatchlings leave the nest. The mean incubation period for relocated nests was 51.8 days (range 46-59) and 51.5 days (range 47-56) for undisturbed nests. No significant difference was found between incubation periods for relocated and undisturbed nests. The incubation periods were similar for nests deposited in 1980 and 1981.

Hatch success is defined as the percentage of viable hatchlings from a single nest and is calculated as a ratio of the number of hatched eggs, less dead hatchlings, to the total number of eggs in the nest. The number of hatched eggs is determined by counting the shell fragments equal to or greater than one half an egg shell. The mean hatch success for relocated nests was 73.1 percent (range 2-98 percent) and the hatch success for undisturbed nests was 82.1 percent (range 20-98 percent). The mean relocated nest success in 1981 was lower than that found in 1980 when relocated and natural rates were 81 and 84 percent. Other investigators also reported a year-to-year variation in hatch success for laboratory incubated eggs of 72 to 85 percent.

Our review of the licensee's studies indicated they were completed, the results obtained are acceptable and the program may be terminated.

The Unit 2 endangered species assessment, cited earlier, should be consulted for additional details and references concerning impact of St. Lucie Unit 1 operation on sea turtles. Additional aspects of turtle monitoring are described in the endangered species assessment and will be required for Unit 2 or two unit operation as a result of the interagency review of the Unit 2 assessment. We do, however, conclude that the studies required pursuant to Section 3.1.B.f of Appendix B to the St. Lucie Unit 1 license have been completed and have shown the effects on sea turtles, attributable to Unit 1 operation, to be acceptable. Therefore the requirements of Section 3.1.B.f may be deleted.

Conclusion

On the basis of the foregoing, we conclude that the proposed changes are acceptable and will not significantly affect the quality of the human environment.

We conclude that the deletion of these programs from the Unit 1 license will not jeopardize the continued existence of the endangered or threatened sea turtles known to inhabit or utilize the site.

We have reviewed the proposed changes relative to the requirements set forth in 10 CFR Part 51 and the Council on Environmental Quality's Guidelines, 40 CFR 1500.6. We have determined that the proposed license amendment will not significantly affect the quality of the human environment. Therefore, the staff has found that an environmental impact statement need not be prepared, and that pursuant to 10 CFR 51.5(c), the issuance of a negative declaration to this effect is appropriate.

Date: May 21, 1982

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-335FLORIDA POWER & LIGHT COMPANYNOTICE OF ISSUANCE OF AMENDMENT TOFACILITY OPERATING LICENSEAND NEGATIVE DECLARATION

DESIGNATED ORIGINAL  
 Certified by *Fabrizio N...*

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 50 to Facility Operating License No. DPR-67, issued to Florida Power & Light Company (the licensee), which revised the Technical Specifications for operation of the St. Lucie Plant, Unit No. 1 (the facility), located in St. Lucie County, Florida. The amendment is effective as of the date of issuance.

The amendment pertains to the Environmental Technical Specifications (Appendix B to the Facility Operating License). The amendment (1) deletes all water quality requirements, (2) allows termination and deletion of endangered sea turtle programs, (3) changes and deletes organization titles in the section on administrative controls, and (4) makes minor revisions to locations of sample collection sites for the radiological monitoring program. The amendment also divides Appendix B Technical Specifications into two parts: Part I- Radiological Environmental Technical Specifications, and Part II - Environmental Protection Plan (Non-radiological) Technical Specifications.

- 2 -

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

The Commission has prepared an Environmental Impact Appraisal for this license amendment relating to the deletion of the endangered sea turtle programs, and has concluded that an environmental impact statement is not warranted because the action will not significantly affect the quality of the human environment. The Commission has determined that the organization changes in the administrative controls section of the environmental technical specifications and the changes to locations of sample collection sites for the radiological monitoring program will not result in any significant environmental impact and pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with these changes. The Commission has determined that the deletion of water quality requirements is a ministerial action required as a matter of law and that therefore no environmental impact statement or environmental impact appraisal and negative declaration need be prepared in connection with this action.