

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-16

ST. LUCIE PLANT, UNIT 2

APRIL 1983

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

## 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 Final Environmental Statement (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 2 FES which relate to water quality matters are regulated by way of the licensee's National Pollutant Discharge Elimination System (NPDES) permit.

## 2.0 Environmental Protection Issues

In the FES-OL, the staff considered the environmental impacts associated with the operation of the St. Lucie Plant Unit 2. Certain environmental issues were identified which required study or license conditions for resolution of environmental concerns and to assure adequate environmental protection.

With assumption of aquatic monitoring programs by U.S. Environmental Protection Agency (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. The only exception will involve the aquatic and terrestrial marine turtle programs which will be conducted under NRC jurisdiction (Section 2.1 of this EPP).

2.1 Terrestrial/aquatic issues raised in the Unit 2 FES-OL on marine turtles will be addressed by programs as follows:

1. Beach nesting surveys
2. Engineering/behavioral studies to evaluate and/or mitigate intake entrapment
3. Studies to evaluate and/or mitigate intake canal mortality
4. Light screen provisions at the beach to prevent hatchling misorientation
5. Nest survey and relocation programs in the vicinity of the beach and near-shore construction areas
6. Capture and release program including gross necropsy examinations on selected turtles

NRC requirements with regard to marine turtles issues are specified in Subsection 4.2.1 of this EPP.

### 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 significantly 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), supplements to the FES, environmental impact appraisals, or in any decisions of the Atomic Safety and

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

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 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 Certifications.
2. The licensee shall provide the NRC with a copy of any 316(b) related documentation and other biotic monitoring reports required by NPDES Permit conditions at the same time they are submitted to the permitting agency.
3. Changes and additions to the NPDES Permit or the State Certifications 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 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. Events covered by Section 3.2 of this EPP will be subject to reporting requirements as defined in that section and not subject to these requirements.

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 Terrestrial/Aquatic Issues

Issues on endangered or threatened sea turtles raised in the Unit 2 FES-OL and in the Endangered Species Biological Assessment (March 1982) will be addressed by programs as follows:

#### 4.2.1 Beach Nesting Surveys

Beach nesting surveys for all species of sea turtles will be conducted on a yearly basis for the period of 1982 through 1986. These surveys will be conducted during the nesting season from approximately mid-April through August.

The Hutchinson Island beach will be divided into 36 one km-long survey areas. In addition, the nine 1.26 km-long survey areas used in previous studies (1971-1979) will be maintained for comparison purposes. Survey areas will be marked with numbered wooden plaques and/or existing landmarks.

The entire beach will be surveyed seven days a week. All new nests and false crawls will be counted and recorded in each area. After counting, all crawl tracks will be obliterated to avoid recounting. Predation on nests by raccoons or other predators will be recorded as it occurs. Records will be kept of any seasonal changes in beach topography that may affect the suitability of the beach for nesting.

#### 4.2.2 Studies to Evaluate and/or Mitigate Intake Entrapment

A program that employs light and/or sound to deter turtles from the intake structure will be conducted. The study will determine with laboratory and field experiments if sound and/or light will result in a reduction of total turtle entrapment rate.



The study shall be implemented no later than after the final removal from the ocean of equipment and structures associated with construction of the third intake structure and the experiments shall terminate 18 months later. Four months after the conclusion of the experimental period, a report on the results of the study will be submitted to NRC, EPA, National Marine Fisheries Survey (NMFS), and the U.S. Fish and Wildlife Service (USFWS) for their evaluation. If a statistically significant reduction in annual total turtle entrapment rate of 80% or greater can be demonstrated, using the developed technology and upon FPL receiving written concurrence by NRC, EPA, NMFS, and USFWS then permanent installation of the deterrent system shall be completed and functioning no later than 18 months after the agencies' concurrence. The design of this study needs to take into account the significant annual variation in turtle entrapment observed in the past.

If a 80% reduction of turtle entrapment cannot be projected to all three intake structures, then an interagency task force composed of NRC, EPA, NMFS, USFWS, and FPL shall convene 18 months after completion of the third intake and determine if other courses of action to mitigate and/or reduce turtle entrapment are warranted (e.g., such as physical barrier, emergence of new technology or methods to deter turtles).

#### 4.2.3 Studies to Evaluate and/or Mitigate Intake Canal Mortality

Alternate methods or procedures for the capture of sea turtles entrapped in the intake canal will be evaluated. If a method or procedure is considered feasible and cost effective and may reduce capture mortality rates, it will be field tested in the intake canal.

#### 4.2.4 Light Screen to Minimize Turtle Disorientation

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

#### 4.2.5 Capture and Release Program

Sea turtles removal from the intake canal will be conducted on a continuing basis. The turtles will be captured with large mesh nets, or other suitable nondestructive device(s) if deemed appropriate. A formalized daily inspection, from the shoreline, of the capture device(s) will be made by a qualified individual when the device(s) are deployed. The turtles will be identified to species, measured, weighed (if appropriate), tagged and released back into the ocean. Records of wounds, fresh or old, and a subjective judgement on the condition of the turtle (e.g., barnacle coverage, underweight) will be maintained. Methods of obtaining additional biological/physiological data, such as blood analyses, and parasite loads, from captured sea turtles will be pursued. Dead sea turtles will be subjected to a gross necropsy, if found in fresh condition.

These conditions of the EPP are contingent upon licensee or its contractors being able to obtain an endangered species permit to take, handle, and experiment with sea turtles. If licensee is unable to obtain the necessary permits, then NRC shall be notified of alternatives by the licensee.

## 5.0 Administrative Procedures

### 5.1 Review and Audit

The licensee shall provide for review and audit of compliance with the Environmental Protection Plan. The audits shall be conducted independently of the individual or groups responsible for performing the specific activity. A description of the organization structure utilized to achieve the independent review and audit function and results of the audit activities shall be maintained and made available for inspection.

### 5.2 Records Retention

Records and logs relative to the environmental aspects of plant operation shall be made and retained in a manner convenient for review and inspection. These records and logs shall be made available to NRC on request.

Records of modifications to plant structures, systems and components determined to potentially affect the continued protection of the environment shall be retained for the life of the plant. All other records, data and logs relating to this EPP shall be retained for five years or, where applicable, in accordance with the requirements of other agencies.

### 5.3 Changes in Environmental Protection Plan

Request for change in the Environmental Protection Plan shall include an assessment of the environmental impact of the proposed change and a supporting

justification. Implementation of such changes in the EPP shall not commence prior to NRC approval of the proposed changes in the form of a license amendment incorporating the appropriate revision to the Environmental Protection Plan.

#### 5.4 Plant Reporting Requirements

##### 5.4.1 Routine Reports

An Annual Environmental Operating Report describing implementation of this EPP for the previous calendar year shall be submitted to the NRC prior to May 1 of each year. The initial report will cover the period from the date of OL issuance to December 31, 1983.

The report shall include summaries and analyses of the results of the environmental protection activities required by Subsection 4.2 of this Environmental Protection Plan for the report period, including a comparison with preoperational studies, operational controls (as appropriate), and previous non-radiological environmental monitoring reports, and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of trends towards irreversible damage to the environment are observed, the licensee shall provide a detailed analysis of the data and a proposed course of action to alleviate the problem.

The Annual Environmental Operating Report shall also include:

- (a) A list of EPP noncompliances and the corrective actions taken to remedy them.

- (b) A list of all changes in station design or operation, tests, and experiments made in accordance with Subsection 3.1 which involved a potentially significant unreviewed environmental issue.
  
- (c) A list of nonroutine reports submitted in accordance with Subsection 5.4.2.

In the event that some results are not available by the report due date, the report shall be submitted noting and explaining the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

#### 5.4.2 Nonroutine Reports

A written report shall be submitted to the NRC within 30 days of occurrence of nonroutine event. The 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 this 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.

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