

## **Appendix E**

### **Florida Power and Light Company's Compliance Status and Consultation Correspondence**

## **Appendix E**

### **Florida Power and Light Company's Compliance Status and Consultation Correspondence**

The licenses, permits, consultations, and other approvals obtained from Federal, State, regional, and local authorities for St. Lucie Units 1 and 2 are listed in Table E-1.

Following Table E-1 are reproductions of correspondence prepared and sent during the evaluation process of the application for renewal of the operating licenses for St. Lucie Units 1 and 2.

**Table E-1.** Federal, State, Local, and Regional Licenses, Permits, Consultations, and Other Approvals for St. Lucie Units 1 and 2

Agency	Authority	Description	Number	Expiration Date	Remarks
NRC	10 CFR Part 50	Operating license, St. Lucie Unit 1	DPR-67	3/1/16	Authorizes operation of Unit 1
NRC	10 CFR Part 50	Operating license, St. Lucie Unit 2	NPF-16	4/6/23	Authorizes operation of Unit 2
FWS	Section 7 of the Endangered Species Act (16 USC 1536)	Consultation	None	None	Section 7 of the Endangered Species Act requires that Federal agencies, in cooperation with the license applicant, consult with the FWS and/or the NMFS concerning the potential impacts of a proposed licensing action on threatened or endangered species. Correspondence with FWS and NMFS related to Section 7 is included in Appendix E.
NMS	Section 7 of the Endangered Species Act (16 USC 1536)	Consultation	None	5/18/11	Section 7 of the Endangered Species Act requires that Federal agencies, in cooperation with the license applicant, consult with the NMFS concerning the potential impacts of a proposed licensing action on threatened or endangered species. NRC staff has been in consultation with NMFS with respect to marine species since the early 1980s. The current biological opinion provides an incidental take statement for threatened or endangered sea turtles.

Table E-1. (cont'd)

Agency	Authority	Description	Number	Expiration Date	Remarks
U.S. Army Corps of Engineers	Rivers and Harbors Act (33 USC 403) and Clean Water Act (33 USC 1344)	Dredging permit	199301803	12/21/03	Authorizes maintenance dredging of intake canal
Florida Department of Community Affairs	Section 307 of the Coastal Zone Management Act [16 USC 1456(c)(3)(A)]	Consistency determination with the Florida Coastal Management Program	Letter from Shirley Collins, Florida Department of Community Affairs, to FPL; FL200201111376C; March 6, 2002	None	The Department of Community Affairs determined that renewal of the St. Lucie OLS would be consistent with the Florida Coastal Management Program.
Florida Division of Historic Resources	Section 106 of the National Historic Preservation Act (16 USC 470f)	Consultation	Letter from Janet Snyder Matthews, State Historic Preservation Officer to FPL, 5/22/01		The National Historic Preservation Act requires Federal agencies to take into account the effect of any undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places. The Florida Division of Historical Resources determined that renewal of the OLS is not an undertaking that is likely to affect historic properties.
FDEP	Clean Water Act, Section 402; Florida Statutes, Chapter 403	NPDES permit (Industrial Wastewater Permit)	FL0002208-Major	1/9/05	Permit covers surface-water discharges and stormwater discharges from diked petroleum storage and handling areas. NPDES requirements are incorporated into the Industrial Wastewater Facility Permit issued by FDEP.

Table E-1. (cont'd)

Agency	Authority	Description	Number	Expiration Date	Remarks
FDEP	Florida Statutes, Chapter 376	Annual storage tank registration	Facility ID: 8630677 Placard No.: 135878	6/30/02	Registration covers five above ground petroleum storage tanks.
FDEP and Siting Board (Governor and Cabinet)	Florida Statutes, Sections 403.501 - 518	Certification under the Florida Electrical Power Plant Siting Act	Case No: PA74-02	Life of plant	Siting, construction, and operation of St. Lucie Unit 2 (Unit 1 was permitted before enactment of the Siting Act in 1973)
FDEP	Florida Statutes, Chapter 403	Air emissions permit	1110071-003-AO	6/26/05	Permit covers emissions from six emergency diesel generators, miscellaneous diesel-driven equipment, and facility-wide fugitive emissions from storage tanks, roadways, and paint/sandblasting activities.
FFWCC	Florida Administrative Code, Chapter 39	Special purpose permit	02R-018	6/30/03	Permit covers collection and possession of marine organisms for experimental purposes.
FFWCC	Florida Administrative Code, Chapter 39	Marine turtle permit	TP#026	1/31/04	Permit authorizes FPL to conduct public turtle watches and maintain and display preserved specimens.
FFWCC	Florida Administrative Code, Chapter 39	Marine turtle permit	TP#125	1/31/04	Permit authorizes various turtle activities including net capture, tagging, nesting surveys, hand capture, nest relocation, rescue and release of hatchlings, and stranding and salvage activities.

**Table E-1. (cont'd)**

<b>Agency</b>	<b>Authority</b>	<b>Description</b>	<b>Number</b>	<b>Expiration Date</b>	<b>Remarks</b>
FFWCC	Florida Administrative Code, Chapter 39	Scientific collecting permit	WS01374	6/25/04	FPL system-wide permit authorizing carcass or wildlife salvage and possession for scientific or educational purposes.
FFWCC	Florida Administrative Code, Chapter 39	Migratory bird nest permit	WN01373	6/25/03	FPL system-wide permit authorizing destruction of inactive migratory bird nests other than osprey nests.
SFWMD	Florida Administrative Code, Section 40E-20.042	General water use permit	56-01238-W	5/21/09	Permit covers remediation of surficial aquifer.
SFWMD	Florida Administrative Code, Section 65-25	Stormwater discharge permit	56-00848-S	Perpetual	Permit authorizes stormwater discharge from the overflow parking lot.
SFWMD	Florida Administrative Code, Section 65-25	Stormwater discharge permit	85-142	Perpetual	Permit authorizes stormwater discharge from the simulator building.

CFR = Code of Federal Regulations  
 FDEP = Florida Department of Environmental Protection  
 FFWCC = Florida Fish and Wildlife Conservation Commission  
 FWS = U.S. Fish and Wildlife Service  
 ID = identification number  
 NMFS = National Marine Fisheries Service  
 NPDES = National Pollution Discharge Elimination System  
 NRC = U.S. Nuclear Regulatory Commission  
 OL = operating license  
 SFWMD = South Florida Water Management District  
 USC = United States Code

Appendix E

**Table E.2.** Consultation Correspondence

<b>Source</b>	<b>Recipient</b>	<b>Date of Letter</b>
U.S. Nuclear Regulatory Commission (C. I. Grimes)	U.S. Fish and Wildlife Service (S. Slack)	February 27, 2002
U.S. Fish and Wildlife Service (L. S. Ferrell)	U.S. Nuclear Regulatory Commission (C. I. Grimes)	March 15, 2002
U.S. Nuclear Regulatory Commission (P. T. Kuo)	U.S. Fish and Wildlife Service (J. Slack)	July 24, 2002
U.S. Fish and Wildlife Service (L. S. Ferrell)	U.S. Nuclear Regulatory Commission (P. T. Kuo)	October 4, 2002
U.S. Nuclear Regulatory Commission (P. T. Kuo)	National Marine Fisheries Service (J. E. Powers)	June 3, 2002
National Marine Fisheries Service (J. E. Powers)	U.S. Nuclear Regulatory Commission (P. T. Kuo)	July 30, 2002
U.S. Nuclear Regulatory Commission (B. T. Moroney)	National Marine Fisheries Service (J. E. Powers)	August 23, 2002
U.S. Nuclear Regulatory Commission (B. T. Moroney)	Florida Power and Light Company (J. A. Stall)	August 23, 2002
U.S. Nuclear Regulatory Commission (P. T. Kuo)	National Marine Fisheries (R. Crabtree)	February 10, 2003
Florida Department of Environmental Protection (R. W. Hall)	Florida State Clearinghouse (M. Murray)	February 8, 2002
Florida Coastal Management Program (S. W. Collins)	Florida Power and Light Company (D. E. Jernigan)	March 6, 2002

February 27, 2002

Mr. Jay Slack, Field Supervisor  
US Fish and Wildlife Service  
South Florida Ecological Service Office  
1339 20<sup>th</sup> Street  
Vero Beach, FL 32960

SUBJECT: REQUEST FOR LIST OF PROTECTED SPECIES WITHIN THE AREA UNDER  
EVALUATION FOR THE ST. LUCIE PLANT LICENSE RENEWAL

The Nuclear Regulatory Commission (NRC) is evaluating an application submitted by Florida Power and Light Company for the renewal of the operating licenses for its St. Lucie Plant, Units 1 and 2. The NRC is preparing a supplement to its "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (NUREG-1437) for this proposed license renewal, for which we are required to evaluate potential impacts to threatened and endangered species. A member of my staff, Dr. Michael T. Masnik, visited your Vero Beach, Florida office on December 17, 2001, and had preliminary discussions related to the FPL application for license renewal with Mr. Charles Kelso of your staff.

The proposed action would include use and continued maintenance of existing facilities and transmission lines and would not result in new construction or disturbance. The St. Lucie Plant and the associated transmission corridor that is under review as part of the license renewal application is located in St. Lucie County, Florida. The transmission corridor is approximately 11 miles long and varies from 660 to 813 feet in width. The plant uses once-through cooling water from the Atlantic Ocean to remove waste heat from the facility. Ocean water is drawn through three offshore intake structures into an intake canal that leads to the plant. The heated water is discharged back to the Atlantic Ocean through offshore diffusers. The Atlantic Ocean in the vicinity of the plant is considered part of the aquatic environment of interest.

To support the environmental impact statement preparation process and to ensure compliance with Section 7 of the Endangered Species Act, the NRC requests a list of species and information on protected, proposed, and candidate species and critical habitat that may be in the vicinity of the St. Lucie Plant and its associated transmission lines.

Also, we would like confirmation that the South Florida Ecological Service Office will serve as the U.S. Fish and Wildlife Service's point of contact for Endangered Species Act compliance, including any Section 7 consultation that may be needed, for the St. Lucie Plant.

## Appendix E

J. Slack

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If you have any comments or questions, please contact Dr. Michael T. Masnik, Senior Project Manager, at (301) 415-1191 or [MTM2@NRC.GOV](mailto:MTM2@NRC.GOV).

Sincerely,

**Original Signed By: CIGrimes**

Christopher I. Grimes, Program Director  
License Renewal and Environmental Impacts  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket Nos. 50-335 and 50-389

cc: See next page



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

February 27, 2002

RECEIVED  
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BY \_\_\_\_\_

50-335/389

Mr. Jay Slack, Field Supervisor  
US Fish and Wildlife Service  
South Florida Ecological Service Office  
1339 20<sup>th</sup> Street  
Vero Beach, FL 32960

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U.S. Fish and Wildlife Service  
1339 20<sup>th</sup> Street  
Vero Beach, Florida 32960  
561-562-3909 Fax 561-562-4288



Service Record Number 2002-4008

Enclosed find a complete list and discussion of federally listed species and their habitats, in the future please visit our web page at:  
[http://verobeach.fws.gov/Species\\_lists/countyfr.html](http://verobeach.fws.gov/Species_lists/countyfr.html) or  
<http://verobeach.fws.gov/Programs/Recovery/vbms5.html>.

*Leisa S. Peterson*  
Leisa S. Peterson  
Chief, Project Planning  
South Florida Ecological Services Office

*3-15-02*  
Date

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A089

**U.S. Fish & Wildlife Service**  
**South Florida Field Office**

## Multi-Species Recovery Plan

Now Available on the  
Internet!

**U. S. Fish & Wildlife Service Unveils South Florida  
Multi-species Recovery Plan**  
May 18, 1999



**B**ruce Babbitt, Secretary, Department of the Interior and Sam Hamilton, Regional Director, U.S. Fish & Wildlife Service Southeast Region, presided over a landmark signing ceremony for the **Multi-species Recovery Plan** at the recent South Florida Restoration Science Forum in Boca Raton Florida. This event marked a major step toward South Florida Ecosystem restoration and the recovery of threatened and endangered species in South Florida.

Executive Summary  
(220KB)

Department of Interior News Brief as a .pdf file

Introduction  
(463KB)

The South Florida  
Ecosystem  
(1.5mMB)

The Ecological  
Communities

The Species

Implementation  
(103KB)

Appendices

All documents on these pages are available as .PDF files. PDF files can be downloaded and read using Adobe Acrobat Reader.

This software is free and is available from Adobe Inc.

<http://www.adobe.com/acrobat/>

The Multi-species Recovery Plan is one of the first and most far reaching ecosystem plans developed by the Service. It serves as a blueprint to recover 68 threatened and endangered species, and to restore and maintain biodiversity of native plants and animals in the 23 natural communities throughout about 26,000 square miles of the 19 southernmost counties in Florida.

The final document is available from the Fish & Wildlife Service Reference Service. The CD-ROM copy is provided free of charge. Other formats include photocopy and microfiche, however, please contact the Reference Service to determine applicable duplication and mailing charges. You can order your copy by e-mailing your request to the Reference Service, calling their toll free number (800)582-3421, or mailing your request to:

Fish & Wildlife Service Reference Service  
5430 Grosvenor Lane  
Suite 110  
Bethesda, MD 20814.

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Page 1 of 2

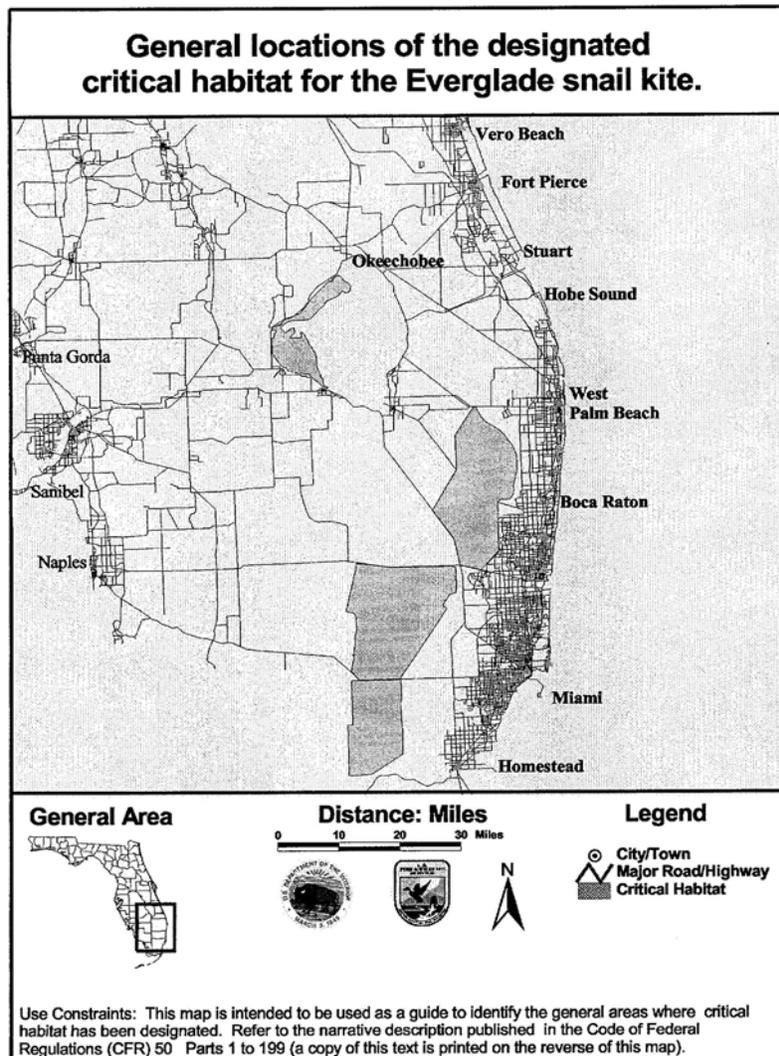
Listed Species in St. Lucie County (updated June 2000)		
Species	Federal status	Habitat
Southeastern beach mouse <i>Peromyscus polionotus niveiventris</i>	T	Beach dune/Coastal strand
West Indian manatee <i>Trichechus manatus</i>	E (CH)	Mangrove, Seagrass, Nearshore reef
Audubon's crested caracara <i>Polyborus plancus audubonii</i>	T	Mesic temperate hammock, Mesic pine flatwoods, Hydric pine flatwoods, Dry prairie, Wet prairie
Bald eagle <i>Haliaeetus leucocephalus</i>	T	High pine, Scrubby high pine, Maritime hammock, Mesic temperate hammock, Pine rockland, Scrubby flatwoods, Mesic pine flatwoods, Hydric pine flatwoods, Dry prairie, Wet prairie, Freshwater marsh, Seepage swamp, Flowing water swamp, Pond swamp, Mangrove, Saltmarsh, Seagrass
Everglade snail kite <i>Rostrhamus sociabilis plumbeus</i>	E (CH)	Hydric pine flatwoods, Freshwater marsh, Pond swamp
Florida scrub-jay <i>Aphelocoma coerulescens</i>	T	Scrub, Scrubby flatwoods
Red-cockaded woodpecker <i>Picoides (= Dendrocopos) borealis</i>	E	High pine, Mesic pine flatwoods, Hydric pine flatwoods
Wood stork <i>Mycteria americana</i>	E	Hydric pine flatwoods, Wet prairie, Freshwater marsh, Seepage swamp, Flowing water swamp, Pond swamp, Mangrove, Saltmarsh, Seagrass
American alligator <i>Alligator mississippiensis</i>	T (S/A)	Hydric pine flatwoods, Wet Prairie, Freshwater marsh, Seepage swamp, Pond Swamp, Mangrove, Hydric pine flatwoods, Wet prairie, Seepage swamp, Flowing water swamp, Pond swamp
Eastern indigo snake <i>Drymarchon corais couperi</i>	T	High pine, Tropical hardwood hammock, Scrubby high pine, Beach dune/Coastal strand, Maritime hammock, Mesic temperate hammock, Pine rockland, Scrubby flatwoods, Mesic pine flatwoods, Hydric pine flatwoods, Dry prairie, Cutthroat grass, Freshwater marsh, Seepage swamp, Flowing water swamp, Pond swamp, Mangrove
Green sea turtle <i>Chelonia mydas (incl. Agassizi)</i>	E	Beach dune/Coastal strand, Seagrass, Nearshore reef
Leatherback sea turtle <i>Dermochelys coriacea</i>	E	Beach dune/Coastal strand, Seagrass, Nearshore reef
Loggerhead sea turtle <i>Caretta caretta</i>	T	Beach dune/Coastal strand, Seagrass, Nearshore reef
Four-petal pawpaw <i>Asimina tetramera</i>	E	Scrub
Fragrant prickly-apple <i>Cereus eriophorus var. fragrans</i>	E	Scrub, Scrubby flatwoods
Johnson's seagrass <i>Halophila johnsonii</i>	T (CH)	Seagrass
Lakela's mint <i>Dicerandra immaculata</i>	E	Scrub
Tiny polygala <i>Polygala smallii</i>	E	High pine, Scrub, Pine rockland, Scrubby flatwoods

file://P:\Outreach\webpage\wildlife\Species\_lists\spl-sl.html

3/11/2002

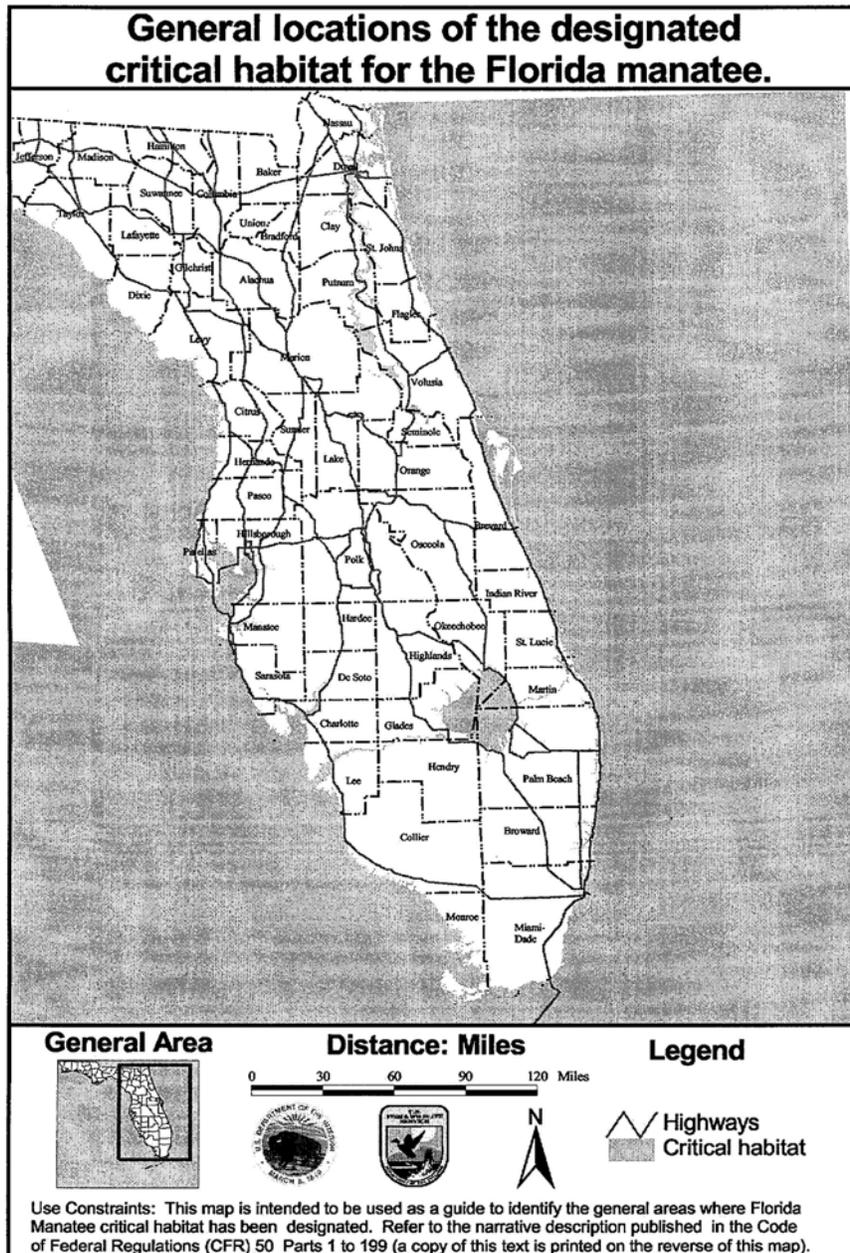
**Critical Habitat for the Everglade snail kite**  
*(Rostrhamus sociabilis plumbeus)*  
as defined in the Code of Federal Regulations 50 Parts 1 to 199,  
revised as of October 1, 2000.

Florida. Areas of land (predominantly marsh), water, and airspace, with the following components (Tallahassee Meridian): (1) St. Johns Reservoir, Indian River County: T33S R37E SW1/4 Sec. 6, W1/2 Sec. 7, Sec. 18, Sec. 19; (2) Cloud Lake Reservoir, St. Lucie County; T34S R38E S1/2 Sec. 16, N1/2 Sec. 21; (3) Strazzulla Reservoir, St. Lucie County: T34S R38E SW1/4 Sec. 21; (4) western parts of Lake Okeechobee, Glades and Hendry counties, extending along the western shore to the east of the levee system and the undiked high ground at Fisheating Creek, and from the Hurricane Gate at Clewiston northward to the mouth of the Kissimmee River, including all the *Eleocharis* flats of Moonshine Bay, Monkey Box, and Observation Shoal, but excluding the open water north and west of the northern tip of Observation Shoal, north of Monkey Box, and east of Fisheating Bay; (5) Loxahatchee National Wildlife Refuge (Central and Southern Florida Flood Control District Water Conservation Area 1), Palm Beach County, including Refuge Management Compartments A, B, C, and D, and all of the main portion of the Refuge as bounded by Levees L-7, L-39, and L-40; (6) Central and Southern Florida Flood Control District Water Conservation Area 2A, Palm Beach and Broward Counties, as bounded by Levees L-6, L-35B, L-36, L-38, and L-39; (7) Central and Southern Florida Flood Control District Water Conservation Area 2B, Broward County, as bounded by Levee L-35, L-35B, L-36, and L-38; (8) Central and Southern Florida Flood Control District Water Conservation Area 3A, Broward and Dade Counties, as bounded by Florida Highway 84. Levees L-68A, L-67A (north of Miami Canal), L-67C (south of Miami Canal). L-29, and L-28, and a line along the undiked northwestern portion of the Area; (9) that portion of Everglades National Park, Dade County, within the following boundary: Beginning at the point where the Park boundary meets Florida Highway 94 in T54S R35 Sec. 20, thence eastward and southwest along the Park boundary to the southwest corner of Sec. 31 in T7S R37E, thence southwestward along a straight line to the southwest corner of Sec. 2 in T58S R35E, thence westward along the south sides of Sec. 3, 4, 5, and 6 in T58S R35E to the Dade-Monroe county line, thence northward along the Dade-Monroe county line to the Park boundary, thence eastward and northward along the Park boundary to the point of beginning.



Critical Habitat for the **Florida manatee** (*Trichechus manatus*)  
as defined in the Code of Federal Regulations 50 Parts 1 to 199,  
revised as of October 1, 2000.

Crystal River and its headwaters known as King's Bay, Citrus County; the Little Manatee River downstream from the U.S. Highway 301 bridge, Hillsborough County; the Manatee River downstream from the Lake Manatee Dam, Manatee County; the Myakka River downstream from Myakka River State Park, Sarasota and Charlotte Counties; the Peace River downstream from the Florida State Highway 760 bridge, De Soto and Charlotte Counties; Charlotte Harbor north of the Charlotte-Lee County line, Charlotte County; Caloosahatchee River downstream from the Florida State Highway 31 bridge, Lee County; all U.S. territorial waters adjoining the coast and islands of Lee County; all U.S. territorial waters adjoining the coast and islands and all connected bays, estuaries, and rivers from Gordon's Pass, near Naples, Collier County, southward to and including Whitewater Bay, Monroe County; all waters of Card, Barnes, Blackwater, Little Blackwater, Manatee, and Buttonwood Sounds between Key Largo, Monroe County, and the mainland of Dade County; Biscayne Bay, and all adjoining and connected lakes, rivers, canals, and waterways from the southern tip of Key Biscayne northward to and including Maule Lake, Dade County; all of Lake Worth, from its northernmost point immediately south of the intersection of U.S. Highway 1 and Florida State Highway A1A southward to its southernmost point immediately north of the town of Boynton Beach, Palm Beach County; the Loxahatchee River and its headwaters, Martin and West Palm Beach Counties; that section of the intracoastal waterway from the town of Seawalls Point, Martin County to Jupiter Inlet, Palm Beach County; the entire inland section of water known as the Indian River, from its northernmost point immediately south of the intersection of U.S. Highway 1 and Florida State Highway 3, Volusia County, southward to its southernmost point near the town of Seawalls Point, Martin County, and the entire inland section of water known as the Banana River and all waterways between Indian and Banana Rivers, Brevard County; the St. Johns River including Lake George, and including Blue Springs and Silver Glen Springs from their points of origin to their confluences with the St. Johns River; that section of the Intracoastal Waterway from its confluences with the St. Marys River on the Georgia-Florida border to the Florida State Highway A1A bridge south of Coastal City, Nassau and Duval Counties.









UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE  
SOUTH FLORIDA ECOLOGICAL SERVICES OFFICE  
1339 20TH STREET  
VERO BEACH, FLORIDA 32960-3559  
OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE, \$300



United States Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

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## Appendix E

July 24, 2002

Mr. Jay Slack, Field Supervisor  
U.S. Fish and Wildlife Service  
South Florida Ecological Service Office  
1339 20<sup>th</sup> Street  
Vero Beach, FL 32960

SUBJECT: BIOLOGICAL ASSESSMENT FOR LICENSE RENEWAL AT ST. LUCIE,  
UNITS 1 AND 2 AND REQUEST FOR INFORMAL CONSULTATION  
(TAC NOS. MB3407 AND MB3411)

Dear Mr. Slack:

The Nuclear Regulatory Commission (NRC) is evaluating an application submitted by Florida Power and Light Company for the renewal of the operating licenses for an additional 20 years for its St. Lucie Nuclear Plant, Units 1 and 2. The St. Lucie plant is located in St. Lucie County, Florida, on Hutchinson Island approximately 7.2 km (4.5 miles) east of the city of Port St. Lucie, Florida. The current license for Unit 1 will expire on March 1, 2016, and for Unit 2 on April 6, 2023. License renewal will extend the operating license for each unit an additional 20 years past the above dates. The proposed action would include the continued operation and maintenance of the existing facilities at the St. Lucie plant site and the transmission corridor that connects St. Lucie, Units 1 and 2 to the regional electrical grid. The proposed action will not include any new construction or onsite disturbance. The NRC is preparing a supplement to its 1996 "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (NUREG-1437) for this proposed license renewal. As part of the renewal review, we evaluate potential impacts to Federally listed, proposed, or candidate species, as well as designated or proposed critical habitat.

In a letter to you dated February 27, 2002, the NRC staff requested a list of Federally-protected species and any critical habitat known from the vicinity of the St. Lucie plant. The NRC staff received correspondence from Ms. L. Ferrell of your staff, dated March 15, 2002, that provided a list of listed, proposed, or candidate species known from the vicinity of the plant site. On April 2, 2002, the NRC staff conducted a site audit of the St. Lucie facility in which subject matter experts from a variety of disciplines were present to conduct the environmental evaluation. Mr. C. Kelso, of your staff, was present at the site audit.

Since April 2, 2002, the NRC staff and its contractor, Pacific Northwest National Laboratory, has evaluated the potential impact of the power plant re-licensing on the list of species provided in your March 15, 2002, correspondence. We have prepared the enclosed biological assessment (BA) that provides an evaluation of the potential for impact to each of the 14 Federally-protected species known from the vicinity of the site.

The staff has determined that the proposed action is not a major construction activity. The proposed action will "not effect" the American alligator (*Alligator mississippiensis*), the bald

J. Stack

- 2 -

eagle (*Haliaeetus leucocephalus*), the wood stork (*Mycteria americana*), the red-cockaded woodpecker (*Picoides borealis*), the Audubon's crested caracara (*Polyborus plancus audubonii*), the Everglades snail kite (*Rostrhamus sociabilis*), the southern beach mouse (*Peromyscus polionotus niveiventris*), the Lakela's mint (*Dicerandra immaculate*) and the tiny milkwort (*Polygala smallii*). The staff has determined that the proposed action is "not likely to adversely affect" the eastern indigo snake (*Drymarchon corias couperi*), the Florida scrub-jay (*Aphelocoma coerulescens*), the Florida manatee (*Trichechus manatus*), the four-petal pawpaw (*Asimina tetramera*), or the fragrant prickly apple (*Harrisia (Cereus) eriophorus*).

The staff has also determined that there is designated critical habitat for the Florida manatee in all of the Indian River Lagoon that forms the western boundary of the St. Lucie, Units 1 and 2 site. Direct effects of plant operations on the designated critical habitat on the manatees in the Indian River Lagoon are determined to be non-existent. Nearby Big Mud Creek, an arm of the Indian River Lagoon that is closest to the plant, is closed to the general public for reasons of plant physical security and the licensee withdraws no water or has any routine activities in this or any other nearby habitat designated critical during normal plant operations.

The reasons for our conclusions related to the "no effect" or "not likely to adversely affect" for each of the 14 species and a discussion of the critical habitat in Indian River are documented in the enclosed BA. We are placing a copy of the BA in our project files and on our public docket for this license renewal application and are requesting your concurrence with our determination.

If you have questions regarding the proposed action, the BA, or the staff's request for concurrence, please contact the environmental project manager, Dr. Michael Masnik, by telephone at 301-415-1191 or e-mail at MTM2@NRC.GOV.

Sincerely,

**Original Signed By: PTKuo**

Pao-Tsin Kuo, Program Director

License Renewal and Environmental Impacts

Division of Regulatory Improvement Program

Office of Nuclear Reactor Regulation

Docket Nos.: 50-335 and 50-389

Enclosure: As stated

cc w/encl.: See next page

# **Biological Assessment**

**St. Lucie Units 1 and 2  
License Renewal Review**

**St Lucie County, Florida**

**June 2002**

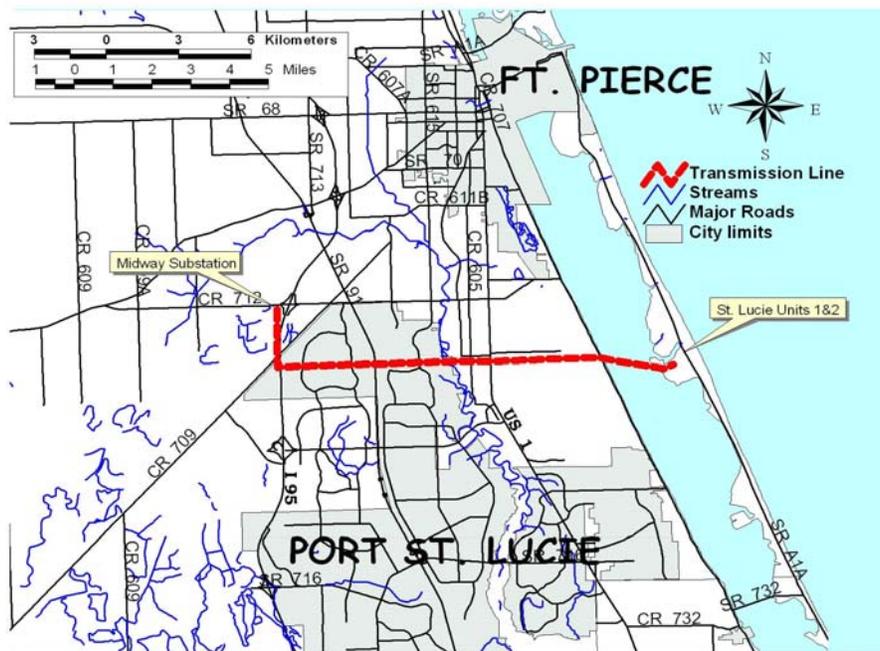
**Docket Nos. 50-335 and 50-389**

**U.S. Nuclear Regulatory Commission  
Rockville, Maryland**

**Evaluation of the Potential Effects on Endangered or Threatened Species from the Proposed License Renewal for the St. Lucie Units 1 and 2 Nuclear Power Plants.**

**The Setting:**

The proposed license renewal will apply to the facilities at the site of St. Lucie Units 1 and 2 on Hutchinson Island approximately 11.2 km (7 mi) southeast of Ft. Pierce, FL, as well as the 17.6 km (11 mi) long transmission line that connects the nuclear units with the regional transmission grid at the Midway Substation (Figure 1).



**Figure 1. General Location of the St. Lucie Units 1 and 2 Nuclear Power Station, and the associated transmission corridor.**

Hutchinson Island is typical of the offshore sandbars which line the southern U.S. Atlantic coastline. It consists of a sandbar on the eastern side that rises to about 4.6 m (15 ft) above MSL and a broader, sloping swale on the western side. The seaward side of the dunes currently have no vegetation and the inland side of the dunes are dominated by sea oats (*Unida paniculata*), sea grape (*Coccoloba uvifera*), salt marsh hay (*Spartina patens*), Australian pine (*Casuarina equisetifolia*), marsh ox-eye (*Barrichia*

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*frutescens*), beach sunflower (*Helianthus debilis*), marsh elder (*Iva frutescens*), bay bean (*Canavalia rosea*), and railroad vine (*Ipomoea pescaprae*) (Foster Wheeler 2001).

Prior to the 1930s, the mangrove swamps on the western side of the island were maintained by tidal and occasional storm driven incursions of sea water as well as by rain (AEC 1973). The swales were dominated by red mangrove (*Rhizophora mangle*), with black mangrove (*Avicennia nitida*) and white mangrove (*Ragunularia racemosa*) established in the higher and less frequently flooded ground. These mangrove swamps are noteworthy for their high productivity, and the rich animal communities that they support. Much of these natural mangrove swamps were destroyed during the 1930s and 1940s as part of a mosquito control program initiated by the Work Projects Administration (W.P.A). The swamps were trenched, dyked, and flooded with sea water which greatly reduced mosquito breeding, but also led to the loss of many trees, especially the black mangroves (AEC 1973). Since that time, there has been partial restoration of the swales, but much of the area continues to be maintained in an inundated state by the local mosquito control districts.

There are also a few small tropical hammock habitats on Hutchinson Island near the St. Lucie site; the largest is among the mangrove stands north of the discharge canal. These habitats are unusual this far north, prominent species include gumbo-limbo (*Bursera simaruba*), paradise tree (*Simarouba glauca*), white and Spanish stoppers (*Eugenia axillaris* and *E. foetida*), wild lime (*Zanthoxylum fagara*), white indigo berry (*Randia aculeata*), mastic (*Mastichodendron foetidissimum*), and snow berry (*Chiocococca alba*).

Habitat in the transmission line corridor is a mixture of man-altered areas, sand pine scrub, prairie/pine flatwoods, wet prairie, and isolated marshes. In the 1970s, much of the corridor was used for agricultural purposes such as orange groves, row crops, and pastureland (AEC 1973). Most of that agricultural use has since been abandoned, except for the western portions that are used for grazing.

There is designated critical habitat for the Florida manatee in all of the Indian River Lagoon to the west of St. Lucie Units 1 and 2, including Big Mud Creek, an extension of Indian River which adjoins the plant site to the north. Critical habitat for the snail kite is located approximately 19 km (11.8 mi) northwest of the Midway Substation. Additionally, although not designated as critical habitat, the beach areas on the eastern side of Hutchinson Island are important nesting areas for the loggerhead (*Caretta caretta*) sea turtle, and they are also used to a lesser extent for nesting by green (*Chelonia mydas*) and leatherback (*Dermochelys coriacea*) sea turtles. Potential impacts to endangered or threatened sea turtles has been evaluated through a separate consultation with the National Marine Fisheries Service.

### Proposed Action

The proposed action is the granting of a renewal of the current operating licenses for St. Lucie Units 1 and 2, that would allow these units to continue operations for an additional 20 years beyond their current license terms. The license for Unit 1 is currently set to expire in March, 2016, and the Unit 2 License will expire in April 2023. The proposed license renewal will, therefore, extend the license terms for Unit 1 until 2036 and for Unit 2 until 2043. The extension of the license terms will result in the continuation of the operation and maintenance of the nuclear power reactors, the cooling water intake and discharge structures and canals, and support facilities at the plant site. No changes are expected in terms of

ecological or environmental impacts of the present operations. In addition, the renewal of the operating license is not anticipated to require any significant new construction or modification of existing terrestrial or aquatic habitats. The St. Lucie site occupies approximately 457 ha (1130 ac), of which approximately one-third has been significantly modified for the construction and operation of the power production reactors, intake and discharge canals, switchyard, and support facilities.

If the license renewal is granted, the transmission lines and corridor that connects St. Lucie Units 1 and 2 to the regional transmission grid will continue to be operated and maintained as they have for the last 25 years. FPL maintains the Midway Corridor using a combination of trimming, mowing, and herbicide application. When required, FPL trims trees at a height of 22.5 m (14 ft) to maintain clearances below the conductors. Tree trimming is typically needed only at the midspan of the transmission lines between the towers. In open areas, FPL usually follows a five-year mowing cycle. Herbicides are used both for spot treatment of individual trees and occasionally as broadcast applications to control exotic grasses. FPL uses only non-restricted use herbicides, which are applied under the supervision of licensed pesticide applicators. FPL uses a computer database to prepare management prescriptions for each section of transmission line corridor that incorporates known management concerns and environmental sensitivities, including rare species.

#### Species Evaluated

There are 14 species listed as threatened or endangered under the Federal ESA within St. Lucie County (Table 1). There are no species currently proposed for formal listing or considered candidates for listing in St. Lucie County. The NRC has determined that the proposed action will either have *no effect* or will be *not likely to adversely affect* the endangered or threatened species in the vicinity of the St. Lucie plant and associated transmission corridor. The basis for the determinations for each species in the vicinity of the plant site and transmission corridor are discussed in the following paragraphs.

##### 1. *Drymarchon corias couperi*, Eastern indigo snake

The eastern indigo snake has not been observed on the St. Lucie site or along the transmission corridor, but individuals have been observed elsewhere on Hutchinson Island (FPL 2001). Gopher tortoises (*Gopherus polphemus*) are present on the site, especially on the leeward side of the dunes to the east of the plant site and intake/discharge canals (FPL 2001). Gopher tortoises also occur within the St. Lucie to Midway transmission corridor, particularly in the strip between the Indian River and the eastern marshes of the Savannas State Preserve (Foster Wheeler 2001). Indigo snakes are known to seek out gopher tortoise burrows for shelter and denning (FWS 1999) and they have been observed elsewhere on Hutchinson Island and in St. Lucie County. Presumably, the St. Lucie plant site and portions of the St. Lucie to Midway transmission corridor constitute suitable habitat, and the staff has chosen to assume that the eastern indigo snake is present in the vicinity of the site and transmission corridor. The proposed extension of the operating license would not result in any changes to the habitat at the plant site or along the transmission corridor, and in some ways may act to preserve areas of

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**Table 1.** Species Listed as Endangered or Threatened under the Endangered Species Act That Have Been Reported to Occur Within St. Lucie County, Florida.

Scientific Name	Common Name	Federal Status <sup>(a)</sup>	Determination
<b>Reptiles</b>			
<i>Drymarchon corias couperi</i>	Eastern indigo snake	T	Not likely to adversely affect
<i>Alligator mississippiensis</i>	American alligator	T(SA)	No Effect
<b>Birds</b>			
<i>Aphelocoma coerulescens</i>	Florida scrub-jay	T	Not likely to adversely affect
<i>Haliaeetus leucocephalus</i>	Bald eagle	T	No Effect
<i>Mycteria americana</i>	Wood stork	E	No Effect
<i>Picoides borealis</i>	Red-cockaded woodpecker	E	No Effect
<i>Polyborus plancus audubonii</i>	Audubon's crested caracara	T	No Effect
<i>Rostrhamus sociabilis</i>	Everglades snail kite	E	No Effect
<b>Mammals</b>			
<i>Peromyscus polionotus niveiventris</i>	Southeastern beach mouse	T	No Effect
<i>Trichechus manatus</i>	Florida manatee	E	Not likely to adversely affect
<b>Plants</b>			
<i>Asimina tetramera</i>	Four-petal paw paw	E	Not likely to adversely affect
<i>Dicerandra immaculate</i>	Lakela's mint	E	No Effect
<i>Harrisia (Cereus) eriophorus</i>	Fragrant prickly apple	E	Not likely to adversely affect
<i>Polygala smallii</i>	Tiny milkwort	E	No Effect

(a)E = endangered, T = threatened, T(SA) = threatened due to similarity of appearance, Sources: Based on FWS [<http://verobeach.fws.gov>], FNAI [<http://www.fnai.org>], FFWCC [<http://floridaconservation.org/pubs/endanger.html>], Atlas of Florida Vascular Plants [<http://www.plantatlas.usf.edu>] and Florida Geographic Data Library [<http://www.fgd.org>] Internet Sites as of March 2002.

suitable habitat from other forms of development. Additionally, FPL staff and corridor maintenance workers are trained to recognize and avoid the eastern indigo snake, and FPL incorporates sensitive species protection in its corridor maintenance specifications. Therefore,

although the eastern indigo snake is likely to be present within the project area, the NRC staff has determined that the continued operation of St. Lucie Units 1 and 2 is not likely to adversely affect the eastern indigo snake.

2. *Alligator mississippiensis*, American alligator

American alligators are common in freshwater wetland areas throughout South Florida. They are not present at the St. Lucie plant site because all of the aquatic environments in the immediate vicinity of the St. Lucie site are either salty or brackish. Alligators may occur in the freshwater marsh areas and along the St. Lucie River, west of the plant site, within or near the transmission corridor. However, the proposed activities (continued transmission corridor maintenance) will not result in detectable modifications of these freshwater systems, and will not alter the habitat quality of the surrounding areas. Therefore, the NRC staff has determined that the proposed license renewal would have no effect on American alligators.

3. *Apelocoma coerulescens*, Florida scrub-jay

Florida scrub-jays are found in various forms of Florida scrub, including the coastal scrub found in eastern St. Lucie County. The largest populations of Florida scrub-jays are located in the central portion of the Florida Peninsula in Polk and Highlands Counties, but they are also found along both coasts, and north of Orlando in Volusia, Lake, and Marion Counties. Although it is fairly widespread throughout peninsular Florida, it has extremely specific habitat requirements, the ancient dune ecosystems, which are dominated by xeric oaks (FWS 1999). The habitat on the plant site is not typical of the Florida scrub-jay requirements. There have not been any onsite sightings of Florida scrub-jays. Scrub-jays have been observed beneath the transmission lines in the vicinity of the FEC Railroad, and there is a narrow band of vegetation between the Indian River and the Savannas State Preserve that is suitable scrub-jay habitat. There have been other periodic sightings of Florida scrub-jays within the coastal scrub areas along the west shore of the Indian River within approximately 3 km (1.8 mi) of the St. Lucie transmission line (FGDL 2002). In general, the maintenance practices used by the applicant within the St. Lucie to Midway corridor (i.e., selective removal of larger trees) may help to maintain the open scrub habitat required by the scrub-jays. The applicant has indicated that it has no plans to change the way that this or any other portion of the transmission corridor is maintained. The FPL transmission corridor database clearly indicates that the strip between the Indian River and the Savannas State Preserve is suitable habitat for Florida scrub-jays, and the maintenance is planned and performed with that in mind. Therefore, the NRC staff has determined that the proposed license renewal for St. Lucie Units 1 and 2 is not likely to adversely affect Florida scrub-jays within the transmission corridor.

4. *Haliaeetus leucocephalus*, Bald eagle

Bald Eagles are known to nest approximately 2 km (1.2 mi) south of the St. Lucie transmission corridor. They usually nest in tall trees near major waterways and feed on fish, waterfowl, and occasionally carrion. Bald eagles are occasionally observed along the Indian River and near the St. Lucie plant site, but they are not regular inhabitants of these areas. According to the Southeast Region bald eagle habitat management guidelines (FWS 1987), many activities should be restricted within 450 m (1500 ft) of a nest site, but, in general, activities beyond 1.6

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km (1 mi) from the nest site will not adversely affect nesting eagles. Therefore, the NRC staff has determined that the proposed action will have no effect on bald eagles.

### 5. *Polyborus plancus audubonii*, Audubon's crested caracara

The Audubon's crested caracara is a large, long-legged, boldly patterned, non-migratory raptor. It occurs in south Texas, southwestern Arizona, and through Mexico from Baja, California, to Panama and Cuba. Only the Florida population is protected under the ESA (FWS 1999). In South Florida, the caracara occurs in dry or wet prairies with scattered cabbage palms (*Sabal palmetto*), or occasionally in lightly wooded areas. They usually build well concealed nests within cabbage palms. Much of the historical habitat areas for the caracara have been greatly modified or destroyed, but there are indications that the caracara is able to utilize improved or semi-improved pastures (FWS 1999). Caracaras are opportunistic feeders, and will consume both carrion and live prey. The species has not been reported from the plant site. Although individuals may be present in the vicinity of the transmission corridor, there are no known observations in the area. They are primarily found in the western portions of St. Lucie County. Field surveys (Foster Wheeler 2001) indicated that, at best, marginal habitat was present within the transmission corridor. Therefore, the NRC staff has determined that the proposed license renewal would have no effect on the Audubon's crested caracara.

### 6. *Mycteria americana*, Wood stork

Wood storks are a large wading bird that rely on freshwater and estuarine habitats for nesting, roosting, and foraging. They build nests in colonies, usually in medium to tall trees that occur in either swamps or on islands surrounded by open water (FWS 1999) and they often share these rookeries with other wading birds. Wood storks forage by tactolocation and, therefore, rely on prey that is relatively concentrated. The alterations of the natural hydrologic regime in south Florida has eliminated much of the seasonal hydrological variation on which wood storks historically relied, in that they exploited the fish that would become concentrated in alligator holes and other depressions during the dry season. Wood storks are observed occasionally in the vicinity of the St. Lucie plant and the transmission corridor, but there are no known rookeries within many miles of the plant site or transmission corridor. The maintenance of the plant site and transmission corridor will not adversely modify the swamps, marshes, or other freshwater habitats, nor significantly alter the surrounding upland habitats. There have been no reported mortalities of wood storks related to the operation or maintenance of the St. Lucie transmission line. Therefore, the NRC staff has determined that the proposed license renewal for St. Lucie Units 1 and 2 will have no effect on the wood stork.

### 7. *Rostrhamus sociabilis*, Everglades snail kite

The snail kite is a medium sized raptor with very specialized dietary requirements in that it feeds almost exclusively on apple snails (*Pomacea paludsa*) which are found in freshwater marshes and the shallow, vegetated edges of lakes. Most of the snail kite populations are located on the west side of Lake Okeechobee and in the everglades west of Palm Beach, Fort Lauderdale, and Miami. However, there is one small area within St. Lucie County that has been designated as critical habitat for the snail kite. This area includes the Cloud Lake and Strazzulla Reservoirs, approximately 19 km (12 mi) northwest of the Midway substation. This species has been occasionally observed within several kilometers of the transmission corridor

(FGDL 2002) and it is possible that they may use the scattered freshwater marshes in the vicinity for foraging. However, there is no indication that this species is a regular inhabitant in the vicinity of the transmission corridor, and it was not observed during field surveys of the corridor (Foster Wheeler 2001). Therefore, the staff has determined that the proposed license renewal for St. Lucie Units 1 and 2 will have no effect on the snail kite.

8. *Picoides borealis*, Red-cockaded woodpecker

Red-cockaded woodpeckers occur throughout the southeastern United States in pine stands or pine-dominated pine-hardwood stands with sparse understory and ample old-growth trees (FWS 1999). Population levels have drastically declined over the last century due to logging and conversion of habitat to other uses. The status of red-cockaded woodpeckers in south Florida, including St. Lucie County, is not well known (FWS 1999), but because of the species' requirements for old-growth pine-dominated forests, they are highly unlikely to occur at or near the St. Lucie plant and suitable habitat is very limited or absent from the transmission corridor (Foster Wheeler 2001) as well. Therefore, the NRC staff has determined that the proposed license renewal action will have no effect on the red-cockaded woodpecker.

9. *Peromyscus polionotus niveiventris*, Southeastern beach mouse

Southeastern beach mice inhabit the sea oats zone of the primary coastal dunes (FWS 1999). In many cases, suitable habitat for the southeastern beach mouse may only be a few meters wide, and in most cases it is highly heterogeneous. They primarily feed on the seeds of sea oats and panic grass (*Panicum amarum*), although they will eat seed of other dune species as well as insects. The current distribution is severely limited by the modification and destruction of habitat along the Florida barrier islands. The largest populations are located at Canaveral National Seashore, and other locations within Brevard County, and Indian River County has a number of populations. Individuals were captured during a survey conducted in the mid to late 1980's from St. Lucie County at Pepper Beach County Park, Fort Pierce Inlet State Recreation Area, and Surfside Beach State Park, all located at least 13 km (8.1 mi) north of the St. Lucie plant. However, more recent surveys have failed to collect any southeastern beach mice at the historic population sites within St. Lucie County, and the beach mouse may have been extirpated from the county. There have not been any specific recent surveys for this species at the St. Lucie plant site; however, if it were present, the site would certainly function as a refugium for this species, because the vegetation on the lee sides of the coastal dunes is relatively undisturbed, and human interference in this area is minimal with limited public access to the beach. Because the species is not known from the site and no indication that the species is present at the plant site or along the transmission corridor, the NRC staff has determined that the proposed license renewal will have no effect on the southeastern beach mouse.

10. *Trichechus manatus*, Florida manatee

The Florida or West Indian manatee inhabits the Indian River Lagoon and Atlantic coastal waters off Hutchinson Island. Although preferred habitats are in the Indian River Lagoon and other inland waterways, where food sources are abundant, they do occasionally travel up and down the coast near shore. The entire inland section of water known as the Indian River is designated as critical habitat for the manatee (50 CFR Part 17.108). Manatees are mostly found where food sources are abundant. Water is not withdrawn nor discharged to the Indian

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River for normal operations at St. Lucie Units 1 and 2 and there is little attached vegetation in the near-oceanshore environment adjacent to the St. Lucie plant. Manatees are present in the area known as Big Mud Creek within the plant boundaries. This area has been closed to public access since September 2001 due to NRC security concerns. Any boats that are operated within Big Mud Creek are required to travel at idle-speed and produce no wake.

There have been five occasions when manatees have entered in the intake canal. During 1991, two individuals entered the intake canal and FPL coordinated the capture with the FWS and Florida Department of Environmental Protection (predecessor to the FWCC). After capture, the animals underwent evaluation and rehabilitation and were released to the wild. Except for the first manatee, the animals were removed from the canal within a day of each first sighting. Two of these animals were taken to rehabilitation facilities prior to their release. One was treated for deep propeller wounds that it incurred prior to entering the canal and one appeared to be a small calf separated from its mother. None of the manatees appeared to have been harmed or to have died as a result of entering the intake canal. FPL procedures require coordination with the FWCC on the capture and evaluation of entrapped manatees. FPL assists the FWCC, as needed, in transporting ill or injured animals to approved rehabilitation facilities, and in releasing animals that have entered the intake canal back to the wild (Ecological Associates 2001). The last manatee to enter the intake canal from the ocean through the velocity cap was in December 1997.

In addition to potential impacts from the water intake system, the attraction to or contact with the warm waters discharged from the plant need to be considered. The discharge canal transports the heated cooling water to two discharge pipes. The pipes transport water beneath the beach and dune system back to the Atlantic Ocean. The pipes extend about 366 m (1500 ft) and 1036 m (3400 ft) offshore, and terminates in a two-port "Y" diffuser. The discharge of heated water through the Y-port and multiport diffusers ensure distribution over a wide area and rapid and efficient mixing with ambient waters (FPL 1996, Foster Wheeler 2000). Modeling studies presented by the Atomic Energy Commission (AEC) and NRC in the operating stage Final Environmental Statements indicate that the areas of the thermal plumes to the 1.1 °C (2 °F) isotherm from the St. Lucie Units 1 and 2 diffusers under typical conditions would be about 72.8 hectares (180 acres) and 70.8 hectares (175 acres), respectively (AEC 1973, NRC 1982). Considering that some of the manatee-captures have occurred during summer months, there seems to be no compelling evidence to infer that manatees congregate at, or are attracted to, the warm water discharges of the St. Lucie plant.

Direct effects of the St. Lucie plants on manatees in the Indian River Lagoon or Big Mud Creek are essentially non-existent, and access and boat speeds within Big Mud Creek are controlled to prevent adverse impacts to the manatees.

FPL has worked with the appropriate state and federal agencies to develop a system to detect and remove the infrequent manatees that may find their way into the intake canals. These procedures appear to adequately protect those manatees that enter the cooling canal system. Therefore, the NRC has determined that the proposed renewal of the operating licenses for St. Lucie Units 1 and 2 is not likely to adversely affect the West Indian manatee.

11. *Asimina tetramera*, Four-petal pawpaw

The four petal pawpaw is an aromatic shrub approximately 1 to 3 m (3 to 10 ft) tall. It occurs in sand pine scrub within the coastal dune system. It's historic range has been greatly reduced by habitat conversion, and it is now known from few locations between Palm Beach Gardens and the Savannas State Preserve in Martin County, and a few locations in northern St. Lucie County (FWS 1999). This species is found in various seral stages of sand pine scrub, and is adapted to infrequent, intense fires. This species is not likely to be found at the St. Lucie site, and along the transmission corridor, it would only be found near the west shore of the Indian River where suitable habitat is present. Although field surveys did not detect the four petal pawpaw within the transmission corridor (Foster Wheeler 2001), there appears to be a reasonable potential that this species could occur within or very near the transmission corridor on the west edge of the Indian River. However, because this area is maintained using minimal disturbance because of other known ecological sensitivities, the NRC has determined that the proposed license renewal for St. Lucie Units 1 and 2 is not likely to adversely affect the four petal pawpaw.

12. *Dicerandra immaculate*, Lakela's mint

Lakela's mint is a small aromatic shrub that inhabits scrub areas of the Atlantic coastal ridge (FWS 1999). It occupies sites with varying amounts of organic litter, from partly covered to bare sand. This species is currently known from approximately six sites between Fort Pierce and Vero Beach, and at Hobe Sound National Wildlife Refuge, where it was introduced in 1991 and 1992 (FWS 1999). Although suitable habitat exists in the vicinity of the transmission corridor at the western shore of the Indian River, none were found during field surveys (Foster Wheeler 2001). Because all of the natural populations are found at least eight to ten miles from the transmission corridor, it is unlikely that individuals would be present within the small area of suitable habitat included in the transmission corridor. Therefore, the NRC has determined that renewal of the operating licenses for St. Lucie Units 1 and 2 will have no effect on Lakela's mint.

13. *Hamisia (Cereus) eriophorus*, Fragrant prickly apple

The fragrant prickly apple is a solitary tree cactus that is endemic to St. Lucie County, and is known only from approximately 11 small, disjunct sites, all along the Atlantic Coastal Ridge on the western shore of the Indian River (FWS 1999). The St. Lucie to Midway transmission corridor crosses this ridge between the Indian River and the marshes on the east side of the Savannas State Preserve. Several of the known populations are located within 2 to 3 km (1.2 to 1.9 mi) of the St. Lucie to Midway transmission corridor but none of the known populations are close enough to the transmission corridor to be directly affected by maintenance of the corridor. Although field surveys of the corridor did not reveal any fragrant prickly apple specimens (Foster Wheeler 2001), there appears to be a reasonable potential that the fragrant prickly apple could occur within or very near the transmission corridor on the west edge of the Indian River. However, because this area is maintained using minimal disturbance because of other known ecological sensitivities, the NRC has determined that the proposed license renewal for St. Lucie Units 1 and 2 is not likely to adversely affect the fragrant prickly apple.

14. *Polygala smallii*, Tiny milkwort

The tiny milkwort is a small, short lived, herbaceous species that is restricted to sand pockets within pine rocklands, open sand pine scrub, slash pine, high pine, and well drained coastal spoil (FWS 1999). It requires high light levels, and little to no organic litter accumulation. All known populations are within 9.7 km (6 mi) of the Atlantic coast between Miami-Dade County

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and St. Lucie County. The only known population in St. Lucie County is located approximately 6.7 km (4.3 miles) south of the St. Lucie to Midway transmission line. Field surveys of the corridor did not detect the presence of the tiny milkwort (Foster Wheeler 2001). Because the only known population in St. Lucie County is a considerable distance from the transmission corridor, and no individuals were observed during field surveys of the affected area, the NRC has determined that the proposed renewal of the operating licenses for St. Lucie Units 1 and 2 will have no effect on the tiny milkwort.

In addition to the species listed in Table 1, there are several other Federally listed species that have been reported from the counties surrounding St. Lucie county. These conceivably could occur in the vicinity of the St. Lucie plant or associated transmission line. These species include Atlantic salt marsh snake (*Nerodia fasciata taeniata*), Florida grasshopper sparrow (*Ammodramus savannarum floridanus*), piping plover (*Charadrius melodus*), Florida panther (*Felis concolor coryi*), Perforate reindeer lichen (*Cladonia perforata*), and beach clustervine (*Jacquemontia reclinata*). Because there is no clear indication that these species are near the plant or associated transmission line, the NRC has determined that the proposed action would have no effect on those species.

## REFERENCES

1. U.S. Atomic Energy Commission (AEC), *Final Environmental Statement Related to the St. Lucie Plant Unit No. 1; Florida Power & Light Company*, Docket No. 50-335, Directorate of Licensing, Washington, D.C., June 1973.
2. Ecological Associates, Inc., *Survey of Aquatic Environments Potentially Affected by the Operation of the St. Lucie Power Plant, Hutchinson Island, Florida*. Prepared for Florida Power & Light Company, Jensen Beach, FL by Ecological Associates, Inc., Jensen Beach, FL, 2001.
3. Florida Natural Areas Inventory (FNAI), 2002. FNAI website: <http://www.fnai.org>
4. Florida Fish and Wildlife Conservation Commission (FFWCC), 2002. FFWC endangered species website: <http://floridaconservation.org/pubs/endanger.html>
5. Florida Geographic Data Library (FGDL), Florida Geographic Data Library, Version 3.0, State Data. GeoPlan Center, University of Florida, Gainesville, FL, 2002. <http://www.fgdl.org/fgdl.htm>.
6. Florida Power and Light (FPL), Applicants Environmental Report, Operating License Renewal Stage, Florida Power and Light Company, Juno Beach, FL, 2001.
7. Florida Power & Light Company (FPL), *St. Lucie Plant Wastewater Permit Application*, Jensen Beach, FL, April 1996.
8. Foster-Wheeler Environmental Corporation, *Annual Operation & Maintenance Status Report (1999-2000) for FPL St. Lucie Power Plant Unit 1 & Unit 2*, Remedial Action, Suart, FL, August 3, 2000.
9. Foster Wheeler Environmental Corporation, *Florida Power and Light Co. St. Lucie Power Plant and Transmission Line Threatened and Endangered Species Survey*, February 2001.
10. U.S. Nuclear Regulatory Commission (NRC), *Final Environmental Statement Related to the Operation of St. Lucie Plant, Unit No. 2; Florida Power & Light Company, Orlando Utilities Commission of the City of Orlando, Florida*, Docket No. 50-389, NUREG-0842, Office of Nuclear Reactor Regulation, Washington, D.C., April 1982.
11. University of South Florida, *Atlas of Florida Vascular Plants, 2002*. [<http://www.plantatlas.usf.edu>]
12. U.S. Fish And Wildlife Service (FWS), *Habitat Management Guidelines for the Bald Eagle in the Southeast Region, 3<sup>rd</sup> Revision*, Atlanta, GA., 9 pp., 1987.

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13. U.S. Fish And Wildlife Service (FWS), South Florida Multi-Species Recovery Plan, Atlanta, GA, 2172 pp., 1999a..
14. U.S. Fish And Wildlife Service (FWS), 2002b, Vero Beach Ecological Services website: <http://verobeach.fws.gov>



United States Department of the Interior

FISH AND WILDLIFE SERVICE  
 South Florida Ecological Services Office  
 1339 20<sup>th</sup> Street  
 Vero Beach, Florida 32960



October 4, 2002

Pao-Tsin Kuo  
 Licence Renewal and Environmental Impacts  
 Division of Regulatory Improvement Program  
 Office of Nuclear Reactor Regulation  
 United States Nuclear Regulatory Commission  
 Washington, D.C. 20555-0001

Service Log No.: 4-1-02-I-1959  
 Application No.: MB3407 and MB3401  
 Dated: July 24, 2002  
 Applicant: Florida Power and Light  
 County: St. Lucie

Dear Mr. Kuo

The Fish and Wildlife Service (Service) has reviewed the plans, maps, and other information provided by the Nuclear Regulatory Commission (NRC) for the project referenced above, including the conservation measures proposed to reduce adverse effects to Federally-listed species and their designated critical habitat in St. Lucie County, Florida. These comments are provided under the provisions of section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

PROJECT DESCRIPTION

The proposed action is the granting of a renewal of the current operating licenses for St. Lucie Units 1 and 2 that would allow these units to continue operations for an additional 20 years beyond their current license terms. The license for Unit 1 is currently set to expire in March 2016, and the Unit 2 License will expire in April 2023. The proposed license renewal will, therefore, extend the license terms for Unit 1 until 2036 and for Unit 2 until 2043. The extension of the license terms will result in the continuation of the operation and maintenance of the nuclear power reactors, the cooling water intake and discharge structures and canals, and support facilities at the plant site. No changes are expected in terms of ecological or environmental impacts of the present operations. In addition, the renewal of the operating license is not anticipated to require any significant new construction or modification of existing terrestrial or aquatic habitats. The project is located 4.5 miles east of the city of Port St. Lucie on South Hutchinson Island, at 27° 21' 24" North latitude and 80° 14' 43" West longitude, St. Lucie County, Florida. The St. Lucie site occupies approximately 457 ha (1,130 ac), of which

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Pao-Tsin Kuo  
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approximately one-third has been significantly modified for the construction and operation of the power production reactors, intake and discharge canals, switchyard, and support facilities.

If the license renewal is granted, the transmission lines and corridor that connect St. Lucie Units 1 and 2 to the regional transmission grid will continue to be operated and maintained as they have for the last 25 years. Florida Power and Light (FPL) maintains the Midway Corridor using a combination of trimming, mowing, and herbicide application. When required, FPL trims trees at a height of 22.5 m (14 ft) to maintain clearances below the conductors. Tree trimming is typically needed only at the midspan of the transmission lines between the towers. In open areas, FPL usually follows a five-year mowing cycle. Herbicides are used both for spot treatment of individual trees and occasionally as broadcast applications to control exotic grasses. FPL uses only non-restricted use herbicides, which are applied under the supervision of licensed pesticide applicators. FPL uses a computer database to prepare management prescriptions for each section of transmission line corridor that incorporates known management concerns and environmental sensitivities, including rare species.

### THREATENED AND ENDANGERED SPECIES

There are 14 species listed as threatened or endangered under the ESA within St. Lucie County. There are no species currently proposed for formal listing or considered candidates for listing in St. Lucie County. The NRC has determined that the proposed action will either have "no effect" or is "not likely to adversely affect" the endangered or threatened species in the vicinity of the St. Lucie plant and associated transmission corridor. The Service concurs with NRC's determinations for the following species within the action area of the proposed relicensing:

1. *Drymarchon corias couperi*, Eastern indigo snake

The eastern indigo snake has not been observed on the St. Lucie site or along the transmission corridor, but individuals have been observed elsewhere on Hutchinson Island (FPL 2001). Presumably, the St. Lucie plant site and portions of the St. Lucie to Midway transmission corridor constitute suitable habitat, and the staff has chosen to assume that the eastern indigo snake is present in the vicinity of the site and transmission corridor. The proposed extension of the operating license would not result in any changes to the habitat at the plant site or along the transmission corridor, and in some ways may act to preserve areas of suitable habitat from other forms of development. Additionally, FPL staff and corridor maintenance workers are trained to recognize and avoid the eastern indigo snake, and FPL incorporates sensitive species protection in its corridor maintenance specifications. Therefore, although the eastern indigo snake is likely to be present within the project area, the NRC staff has determined that the continued operation of St. Lucie Units 1 and 2 is not likely to adversely affect the eastern indigo snake.

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2. *Alligator mississippiensis*, American alligator

Although American alligators are common in freshwater wetland areas throughout South Florida, they are not present at the St. Lucie plant site. Alligators may occur in the freshwater marsh areas and along the St. Lucie River, west of the plant site, within or near the transmission corridor. However, the proposed activities (continued transmission corridor maintenance) will not result in detectable modifications of these freshwater systems and will not alter the habitat quality of the surrounding areas. Therefore, the NRC staff has determined that the proposed license renewal would have no effect on American alligators.

3. *Aphelocoma coerulescens*, Florida scrub-jay

The habitat on the plant site does not include Type I or Type II habitat typical of the Florida scrub-jay requirements, and no Florida scrub-jays have been documented on the plant site. Scrub-jays have been observed beneath the transmission lines in the vicinity of the Florida East Coast Railroad, and there is a narrow band of vegetation between the Indian River and the Savannas State Preserve that is suitable scrub-jay habitat. There have been other periodic sightings of Florida scrub-jays within the coastal scrub areas along the west shore of the Indian River within approximately 3 km (1.8 miles) of the St. Lucie transmission line (University of Florida 2002). In general, the maintenance practices used by the applicant within the St. Lucie to Midway corridor (i.e., selective removal of larger trees) may help to maintain the open scrub habitat required by the scrub-jays. The applicant has indicated that it has no plans to change the way that this or any other portion of the transmission corridor is maintained. The FPL transmission corridor database clearly indicates that the strip between the Indian River and the Savannas State Preserve is suitable habitat for Florida scrub-jays, and corridor maintenance is planned and performed with this in mind. Therefore, the NRC staff has determined that the proposed license renewal for St. Lucie Units 1 and 2 is not likely to adversely affect Florida scrub-jays within the transmission corridor.

4. *Haliaeetus leucocephalus*, Bald eagle

Bald eagles are known to nest approximately 2 km (1.2 mi) south of the St. Lucie transmission corridor. Bald eagles are occasionally observed along the Indian River and near the St. Lucie plant site, but they are not regular inhabitants of these areas. According to the Southeast Region bald eagle habitat management guidelines (FWS 1987), many activities should be restricted within 450 m (1,500 ft) of a nest site, but, in general, activities beyond 1.6 km (1 mi) from the nest site will not adversely affect nesting eagles. Therefore, the NRC staff has determined that the proposed action will have no effect on bald eagles.

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### 5. *Polyborus plancus audubonii*, Audubon's crested caracara

The Audubon's crested caracara has not been documented on the plant site. Although individuals may be present in the vicinity of the transmission corridor, there are no known observations in the area. They are primarily found in the western portions of St. Lucie County. Field surveys (Foster Wheeler 2001) indicated that, at best, marginal habitat was present within the transmission corridor. Therefore, the NRC staff has determined that the proposed license renewal would have no effect on the Audubon's crested caracara.

### 6. *Mycteria americana*, Wood stork

Wood storks are observed occasionally in the vicinity of the St. Lucie plant and the transmission corridor. However, the nearest wood stork rookery is 8.5 miles southwest of the plant site and 6.0 miles south of the transmission corridor. The maintenance of the plant site and transmission corridor will not adversely modify the swamps, marshes, or other freshwater habitats, nor significantly alter the surrounding upland habitats. There have been no reported mortalities of wood storks related to the operation or maintenance of the St. Lucie transmission line. Therefore, the NRC staff has determined that the proposed license renewal for St. Lucie Units 1 and 2 will have no effect on the wood stork.

### 7. *Rostrhamus sociabilis*, Everglades snail kite

Snail kites have been occasionally observed within several kilometers of the transmission corridor (University of Florida 2002), and it is possible that they may use the scattered freshwater marshes in the vicinity for foraging. However, there is no indication that this species is a regular inhabitant in the vicinity of the transmission corridor, and it was not observed during field surveys of the corridor (Foster Wheeler 2001). Therefore, the staff has determined that the proposed license renewal for St. Lucie Units 1 and 2 will have no effect on the snail kite.

### 8. *Picoides borealis*, Red-cockaded woodpecker

The status of red-cockaded woodpeckers in south Florida, including St. Lucie County, is not well known (Service 1999), but because of the species' requirements for old-growth pine-dominated forests, they are highly unlikely to occur at or near the St. Lucie plant, and suitable habitat is very limited or absent from the transmission corridor (Foster Wheeler 2001) as well. Therefore, the NRC staff has determined that the proposed license renewal action will have no effect on the red-cockaded woodpecker.

### 9. *Peromyscus polionotus niveiventris*, Southeastern beach mouse

Southeastern beach mice were captured during a survey conducted in the mid to late 1980's from St. Lucie County at Pepper Beach County Park, Fort Pierce Inlet State Recreation Area, and

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Surfside Beach State Park, all located at least 13 km (8.1 mi) north of the St. Lucie plant. However, more recent surveys have failed to collect any southeastern beach mice at the historic population sites within St. Lucie County, and the beach mouse may have been extirpated from the county. There have not been any recent surveys for this species at the St. Lucie plant site; however, if it were present, the site would certainly function as a refugium for this species, because the vegetation on the lee sides of the coastal dunes is relatively undisturbed, and human interference in this area is minimal with limited public access to the beach. Because the species is not known from the site and no indication that the species is present at the plant site or along the transmission corridor, the NRC staff has determined that the proposed license renewal will have no effect on the southeastern beach mouse.

#### 10. *Trichechus manatus*, West Indian manatee

The West Indian manatee inhabits the Indian River Lagoon and Atlantic coastal waters off Hutchinson Island. Although preferred habitats are in the Indian River Lagoon and other inland waterways where food sources are abundant, they do occasionally travel up and down the coast near shore. The entire inland section of water known as the Indian River is designated as critical habitat for the manatee (50 CFR Part 17.108). Water is not withdrawn nor discharged to the Indian River for normal operations at St. Lucie Units 1 and 2, and there is little attached vegetation in the near-oceanshore environment adjacent to the St. Lucie plant. Manatees are present in the area known as Big Mud Creek within the plant boundaries. This area has been closed to public access since September 2001 due to NRC security concerns. Any boats that are operated within Big Mud Creek are required to travel at idle-speed and produce no wake.

There have been five occasions when manatees have entered in the intake canal. During 1991, two individuals entered the intake canal and FPL coordinated the capture with the Service and Florida Fish and Wildlife Conservation Commission (FWC). After capture, the animals underwent evaluation and rehabilitation and were released to the wild. Except for the first manatee, the animals were removed from the canal within a day of each first sighting. Two of these animals were taken to rehabilitation facilities prior to their release. One was treated for deep propeller wounds that it incurred prior to entering the canal and one appeared to be a small calf separated from its mother. None of the manatees appeared to have been harmed or to have died as a result of entering the intake canal. FPL procedures require coordination with the FWC on the capture and evaluation of entrapped manatees. FPL assists the FWC, as needed, in transporting ill or injured animals to approved rehabilitation facilities, and in releasing animals that have entered the intake canal back to the wild (Ecological Associates 2001). The last manatee to enter the intake canal from the ocean through the velocity cap was in December 1997.

In addition to potential impacts from the water intake system, the attraction to or contact with the warm waters discharged from the plant need to be considered. The discharge canal transports the heated cooling water to two discharge pipes. The pipes transport water beneath the beach and dune system back to the Atlantic Ocean. The pipes extend about 450 m (1,500 ft) and

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1,036 m (3,400 ft) offshore, and terminate in a two-port "Y" diffuser. The discharge of heated water through the Y-port and multiport diffusers ensure distribution over a wide area and rapid and efficient mixing with ambient waters (FPL 1996, Foster Wheeler 2000). Modeling studies presented by the Atomic Energy Commission (AEC) and NRC in the operating stage Final Environmental Statements indicate that the areas of the thermal plumes to the 1.1 °C (2 °F) isotherm from the St. Lucie Units 1 and 2 diffusers under typical conditions would be about 72.8 hectares (180 acres) and 70.8 hectares (175 acres), respectively (AEC 1973, NRC 1982). Considering that some of the manatee-captures have occurred during summer months, there seems to be no compelling evidence to infer that manatees congregate at, or are attracted to, the warm water discharges of the St. Lucie plant.

Direct effects of the St. Lucie plants on manatees in the Indian River Lagoon or Big Mud Creek are essentially non-existent, and access and boat speeds within Big Mud Creek are controlled to prevent adverse impacts to the manatees.

FPL has worked with the appropriate state and federal agencies to develop a system to detect and remove the infrequent manatees that may find their way into the intake canals. These procedures appear to adequately protect those manatees that enter the cooling canal system. Therefore, the NRC has determined that the proposed renewal of the operating licenses for St. Lucie Units 1 and 2 is not likely to adversely affect the West Indian manatee.

### 11. *Asimina tetramera*, Four-petal pawpaw

The four petal pawpaw occurs in sand pine scrub within the coastal dune system. It's historic range has been greatly reduced by habitat conversion, and it is now known from few locations between Palm Beach Gardens and the Savannas State Preserve in Martin County, and a few locations in northern St. Lucie County (Service 1999). This species is not likely to be found at the St. Lucie site, and along the transmission corridor, it would only be found near the west shore of the Indian River where suitable habitat is present. Although field surveys did not detect the four petal pawpaw within the transmission corridor (Foster Wheeler 2001), there appears to be a reasonable potential that this species could occur within or very near the transmission corridor on the west edge of the Indian River. However, because this area is maintained using minimal disturbance because of other known ecological sensitivities, the NRC has determined that the proposed license renewal for St. Lucie Units 1 and 2 is not likely to adversely affect the four petal pawpaw.

### 12. *Dicerandra immaculate*, Lakela's mint

Lakela's mint is a small aromatic shrub that inhabits scrub areas of the Atlantic coastal ridge (Service 1999). This species is currently known from approximately six sites between Fort Pierce and Vero Beach, and at Hobe Sound National Wildlife Refuge, where it was introduced in 1991 and 1992 (Service 1999). Although suitable habitat exists in the vicinity of

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the transmission corridor at the western shore of the Indian River, none were found during field surveys (Foster Wheeler 2001). Because all of the natural populations are found at least eight to ten miles from the transmission corridor, it is unlikely that individuals would be present within the small area of suitable habitat included in the transmission corridor. Therefore, the NRC has determined that renewal of the operating licenses for St. Lucie Units 1 and 2 will have no effect on Lakela's mint.

13. *Harrisia (Cereus) eriophorus*, Fragrant prickly apple

The fragrant prickly apple is a solitary tree cactus that is endemic to St. Lucie County and is known only from approximately 11 small, disjunct sites, all along the Atlantic Coastal Ridge on the western shore of the Indian River (Service 1999). The St. Lucie to Midway transmission corridor crosses this ridge between the Indian River and the marshes on the east side of the Savannas State Preserve. Several of the known populations are located within 2 to 3 km (1.2 to 1.9 mi) of the St. Lucie to Midway transmission corridor, but none of the known populations are close enough to the transmission corridor to be directly affected by maintenance of the corridor. Although field surveys of the corridor did not reveal any fragrant prickly apple specimens (Foster Wheeler 2001), there appears to be a reasonable potential that the fragrant prickly apple could occur within or very near the transmission corridor on the west edge of the Indian River. However, because this area is maintained using minimal disturbance because of other known ecological sensitivities, the NRC has determined that the proposed license renewal for St. Lucie Units 1 and 2 is not likely to adversely affect the fragrant prickly apple.

14. *Polygala smallii*, Tiny milkwort

All known populations of the tiny milkwort are within 9.7 km (6 mi) of the Atlantic coast between Miami-Dade County and St. Lucie County. The only known population in St. Lucie County is located approximately 6.7 km (4.3 miles) south of the St. Lucie to Midway transmission line. Field surveys of the corridor did not detect the presence of the tiny milkwort (Foster Wheeler 2001). Because the only known population of tiny milkworts in St. Lucie County is a considerable distance from the transmission corridor, and no individuals were observed during field surveys of the affected area, the NRC has determined that the proposed renewal of the operating licenses for St. Lucie Units 1 and 2 will have no effect on the tiny milkwort.

In conclusion, if modifications are made to the project, if additional information involving potential effects to listed species becomes available, if a new species is listed, or if designated critical habitat may be affected by the project, re-initiation of consultation may be necessary.

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Thank you for your cooperation and effort in protecting threatened and endangered species. If you have any questions please contact Chuck Kelso, Fish and Wildlife Biologist, at (772) 562-3909, extension 241.

Sincerely yours,



Linda S. Ferrell  
Assistant Field Supervisor  
South Florida Ecological Services Office

cc:  
EPA, West Palm Beach, FL (Richard Harvey)  
FWC (BPSM), Tallahassee, FL (Mary Duncan)  
FWC, Vero Beach, FL  
FWC, Tequesta, FL  
NMFS, St. Petersburg, FL  
EPA, West Palm Beach, FL  
SFWMD, Ft. Myers, FL (Karen Johnson)  
St. Lucie County Board of County Commissioners, Ft. Pierce, FL (Doug Anderson)

June 3, 2002

Dr. Joseph E. Powers, Acting Regional Administrator  
National Marine Fisheries Service  
Southeast Regional Office (SERO)  
9721 Executive Center Drive North  
St. Petersburg, FL 33702

**SUBJECT: ENVIRONMENTAL REVIEW ON FLORIDA POWER AND LIGHT COMPANY'S APPLICATION FOR A 20-YEAR RENEWAL OF THE OPERATING LICENSES FOR ST. LUCIE, UNITS 1 AND 2**

Dear Dr. Powers:

The Nuclear Regulatory Commission (NRC) is evaluating an application submitted by Florida Power and Light Company (FPL) for the renewal of the operating licenses for St. Lucie Nuclear Plant (St. Lucie), Units 1 and 2, located on Hutchinson Island, Florida. The operating license for St. Lucie Unit 1 expires in 2016 and Unit 2 in 2023. The NRC is preparing a site-specific supplement to its "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (NUREG-1437) for this proposed action. As part of the action, the NRC evaluates potential impacts to threatened and endangered species under the Endangered Species Act (ESA).

The proposed action would include use and continued maintenance of existing facilities and transmission lines and FPL has indicated that the proposed action would not result in new construction or habitat disturbance. St. Lucie and the associated transmission corridor that is under review as part of the license renewal application is located in St. Lucie County, Florida. The transmission corridor is approximately 17.7 km (11 mi) long and varies from 200 to 250 m (660 to 813 ft) in width. The plant uses once-through cooling water from the Atlantic Ocean to remove waste heat from the facility. Ocean water is drawn through three offshore intake structures into an intake canal that leads to the plant. The heated water is discharged back to the Atlantic Ocean through offshore diffusers. The Atlantic Ocean in the vicinity of the plant is considered part of the aquatic environment of interest.

On May 4, 2001, the National Marine Fisheries Service (NMFS) issued a biological opinion (F/SER/2000/01394) related to the operation of the St. Lucie plant on federally protected marine species. The May 4, 2001, biological opinion (Opinion) provided a list of protected species under the jurisdiction of NMFS known to occur in the vicinity of St. Lucie. The Opinion concluded that species of large whales and Johnson's seagrass (and its critical habitat), which are protected under the Endangered Species Act, are not likely to be affected by the continued operation of the plant. The Opinion also identified five species of sea turtle known to inhabit the waters in the vicinity of the plant that may be affected by plant operation. However, the Opinion concluded that the continued operation of the circulating seawater cooling system at St. Lucie is not likely to jeopardize the continued existence of the loggerhead (*Caretta caretta*), Kemp's ridley turtle (*Lepidochelys kempii*), green turtle (*Chelonia mydas*), leatherback turtle

J. Powers

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*(Dermochelys coriacea)*, and hawksbill turtle (*Eretmochelys imbricata*), in accordance with section 7 of the Endangered Species Act of 1973, as amended (ESA). On June 8, 2001, by letter to Mr. R. Hoffman, the NRC confirmed the discussions of a telephone conference call clarifying certain provisions of the Incidental Take Statement (ITS) contained in the May 4, 2001, Opinion. In its reply to the June 8, 2001, letter, NMFS responded to each of the six issues identified in the NRC's letter. Based on the May 4, 2001, Opinion and on subsequent correspondence, the NRC has accepted and implemented the NMFS position on the potential for impact of plant operations on the aquatic species protected under the ESA, and we believe that no additional consultation, either formal or informal, is necessary at this time.

We understand that FPL is planning to make modifications to their intake canal and existing turtle excluder net near the A1A Bridge. These modifications have been discussed with NMFS (Mr. R. Hoffman of your staff). We believe that the proposed modifications will further reduce sea turtle morbidity and mortality that could result from plant operation.

During the course of the NRC review for the proposed license renewal action the staff did identify one requirement in the Opinion, as clarified by your October 8, 2001 letter, that we want to assure that we are interpreting correctly. In your correspondence dated October 8, 2001, in your response to our question four, you state that "... if the number of loggerhead and green turtles injured or killed as a result of plant operation were greater than 1% of the total number of loggerhead and green turtles taken by the end of said year", then reinitiation of formal consultation is required. Based on this statement the NRC will reinitiate consultation if the number of loggerheads and green turtles injured or killed in a calendar year is greater than one percent (rounded up to the next whole number), of the total green and loggerhead turtles taken in that calendar year. We emphasize that the action level is "greater than" rather than "greater than or equal to".

Although not required for our record of decision for the proposed license renewal action, we are requesting confirmation that no additional consultation related to federally protected species under the jurisdiction of NMFS is necessary at this time. We believe that the "Terms and Conditions" section of the Opinion will provide adequate limits and controls on the licensee to assure a continued "no jeopardy" conclusion relative to the five species of sea turtles known to inhabit the waters near the plant. Furthermore, the NRC staff recognizes that future informal and formal consultations are likely over the continued operation of the plant, even during the period of initial licensing, as changes occur in the sea turtle populations and local habitat. We are committed to continue to work closely with your staff in the protection of species under your jurisdiction. Additionally, if we have interpreted incorrectly the action level that requires reinitiation of consultation for green and loggerhead turtles we do need written clarification on the issue.

J. Powers

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If you have any comments or questions, please contact Dr. Michael T. Masnik, Senior Project Manager, at (301) 415-1191 or MTM2@NRC.GOV.

Sincerely,  
**Original Signed By: PTKuo**  
Pao-Tsin Kuo, Program Director  
License Renewal and Environmental Impacts  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket Nos. 50-335 and 50-386

cc: See next page



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Southeast Regional Office  
9721 Executive Center Drive North  
St. Petersburg, FL 33702  
(727) 570-5312; FAX 570-5517  
<http://caldera.sero.nmfs.gov>

JUL 30 2002

F/SER3:BH:mdh

*50-335/389*

Mr. Pao-Tsin Kuo  
License Renewal and Environmental Impacts  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
Washington D.C. 20555-0001

Dear Mr. Kuo:

This is in response to your letter dated June 3, 2002, regarding Florida Power and Light Company's (FPL) application for a 20-year renewal of the operating licenses for the St. Lucie Power Plant's units 1 and 2. This would allow the continued operation and maintenance of existing facilities and transmission lines, including the cooling water intake system for these units beginning in 2016 and 2023 respectively. FPL has indicated that the proposed action would not result in new construction or habitat disturbance. FPL's St. Lucie Power Plant is located in St. Lucie County, Florida. The National Marine Fisheries Service (NOAA Fisheries) consultation number for this project is I/SER/2002/00628; please refer to this number in future correspondence on this project.

NOAA Fisheries in a biological opinion (Opinion) dated May 4, 2001, determined that the use of the cooling water intake system for both units was likely to adversely affect loggerhead, green, Kemp's ridley, hawksbill, and leatherback sea turtles. In its May 4, 2001, Opinion NOAA Fisheries determined that the effects associated with the cooling water intake system were not likely to jeopardize the continued existence of the five species of sea turtles listed above over a ten year period. However, NOAA Fisheries determined take of these species was likely and issued an incidental take statement (ITS) with its Opinion. The ITS also contained mandatory terms and conditions to minimize the effects of this take. Because the proposed action is so far in the future, NOAA Fisheries does not believe additional consultation is required at this time. The current Opinion is valid until May 4, 2011, at which time consultation should be reinitiated and another Opinion issued. Consultation should also be reinitiated if new information reveals effects of the action not previously considered, or the identified action is subsequently modified in a manner that causes an effect to listed species or critical habitat in a manner or to an extent not previously considered, if a new species is listed or critical habitat designated that may be affected by the identified action or if the plant meets or exceeds the current ITS levels.

Your letter mentions our letter dated June 8, 2001, and the clarification we gave regarding the incidental take of loggerhead and green turtles. In this letter we state, "the ITS limits for injured and dead loggerhead and green turtles are based on a percentage (1%) of the total loggerhead and

*Add: Pao-Tsin Kuo*



*A089*

green turtles taken in one year; therefore, reinitiation would have to take place if the number of loggerhead and green turtles injured or killed as a result of plant operations were greater than 1% of the total number of loggerhead and green turtles taken by the end of said year"; however, this is incorrect. Consultation should be reinitiated if take is *greater than or equal to* that of the May 4, 2001, Opinion. We apologize for this error and any inconvenience it may have caused.

Your letter also indicates that FPL is planning a separate action that would make modifications to the intake canal and its existing turtle excluder net. Please send the plans for this modification to us for review and consultation under section 7 of the Endangered Species Act (ESA).

If you have any questions about this ESA section 7 consultation, please contact Mr. Robert Hoffman, fishery biologist, at the number listed above.

Sincerely yours,



for Joseph E. Powers, Ph.D.  
Acting Regional Administrator

cc: F/PR3  
F/SER43 - Mike Johnson

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File: 1514.22f.1  
Ref: I/SER/2002/00628

## Appendix E

August 23, 2002

Joseph E. Powers, Ph. D.  
Acting Regional Administrator  
National Marine Fisheries Service  
Southeast Regional Office  
9721 Executive Center Drive North  
St. Petersburg, FL 33702

SUBJECT: REQUEST FOR CONSULTATION UNDER SECTION 7 OF THE  
ENDANGERED SPECIES ACT FOR THE ST. LUCIE NUCLEAR PLANT

Dear Dr. Powers:

We have received your letter of July 30, 2002, regarding the incidental take of protected sea turtles at the St. Lucie nuclear plant located on Hutchinson Island, St. Lucie County, Florida. Based on the clarification provided in your July 30, 2002, letter to the incidental take statement contained in your May 4, 2001, Biological Opinion for the St. Lucie Plant, we request reinitiation of consultation regarding the incidental capture of green and loggerhead turtles (*Chelonia mydas* and *Caretta caretta*). Our decision to request reinitiation was communicated by phone to Mr. Robert Hoffman of your staff by Dr. Michael Masnik, NRC, on August 13, 2002.

Within the next couple of months the NRC staff plans to provide the National Marine Fisheries Service with the facts surrounding the green and loggerhead turtle mortalities attributable to plant operation that occurred during calendar year 2001. Additionally, as requested by your letter dated July 30, 2002, the NRC staff will provide you with the details of Florida Power and Light Company's plans to modify the St. Lucie intake canal and the existing turtle excluder (block) net. The planned modifications should result in a reduction of sea turtle mortalities.

If you have any comments or questions, please contact me at (301) 415-3974 or Dr. Masnik at (301) 415-1191.

Sincerely,  
*IRAI*

Brendan T. Moroney, Project Manager, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-335 and 50-389

cc: See next page

August 23, 2002

Mr. J. A. Stall  
Senior Vice President, Nuclear and  
Chief Nuclear Officer  
Florida Power and Light Company  
P.O. Box 14000  
Juno Beach, Florida 33408-0420

SUBJECT: REINITIATION OF CONSULTATION UNDER SECTION 7 OF THE  
ENDANGERED SPECIES ACT FOR THE ST. LUCIE NUCLEAR PLANT  
(TAC NOS. MB5940 AND MB5941)

Dear Mr. Stall:

In a letter dated July 30, 2002 (enclosed), the National Marine Fisheries Service (NMFS), Southeast Regional Office, provided further clarification on the incidental take statement in the May 4, 2001, Biological Opinion for the St. Lucie plant. Based on the information contained in the letter, the U.S. Nuclear Regulatory Commission (NRC) has decided to reinstate consultation with respect to green and loggerhead turtles (*Chelonia mydas* and *Caretta caretta*) incidently captured in the intake canal of the St. Lucie plant.

In order to conduct the consultation with NMFS, the NRC staff needs detailed information on the six green and loggerhead mortalities that occurred during Calendar year 2001. Information required, but not limited to, the following is requested: date, time, and location of discovery, condition of the specimen, general plant operating conditions during and immediately before capture, any unusual conditions in the intake canal or the condition of the block net, disposition of the specimen, any written notification documents provided to State or Federal authorities, and any conclusions on the probable cause of death.

Additionally, the NMFS letter also requested information regarding the planned modifications to the intake canal and the existing turtle excluder (block) net. The NRC staff requests a detailed description of the planned changes, a discussion as to why the changes are being made, and what the impact of the proposed changes might be on future turtle mortality rates and why.

It is the NRC staff's intent to prepare a report providing NMFS with detailed information regarding the six sea turtle mortalities that were considered causally related to St. Lucie plant operation during calendar year 2001, and a detailed description of your planned modifications to the intake canal and the turtle excluder net. The NRC staff expects to complete the report by November 1, 2002. We request a response to the above information request by September 30, 2002.

If you have any questions, please contact me at (301) 415-3974.

Sincerely,  
*/RAI*  
Brendan T. Moroney, Project Manager, Section 2  
Project Directorate II  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-335 and 50-389

Enclosure: NMFS letter dated July 30, 2002

cc w/enclosure: See next page

## Appendix E

February 10, 2003

Dr. Roy Crabtree  
Regional Administrator  
National Marine Fisheries Service  
Southeast Regional Office  
9721 Executive Center Drive North  
St. Petersburg, FL 33702

SUBJECT: INFORMAL SECTION 7 CONSULTATION FOR ST. LUCIE NUCLEAR PLANT

Dear Dr. Crabtree:

In a letter dated August 23, 2002, the NRC staff requested reinitiation of consultation for the green turtle (*Chelonia mydas*) and the loggerhead turtle (*Caretta caretta*) under Section 7 of the Endangered Species Act of 1973 for the St. Lucie nuclear plant, located on Hutchinson Island, St. Lucie County, Florida. The St. Lucie plant is owned and operated by the Florida Power and Light Company (FP&L, the licensee). The request for reinitiation of consultation was based on the reported causally related mortality rate for these two species during calendar year 2001. In our August 23, 2002, letter, we committed to provide you with the facts surrounding the 2001 green and loggerhead turtle mortalities attributed to plant operation. Additionally, we agreed to provide you with the details of FP&L's plans to modify the St. Lucie intake canal and the 12.7-cm (5-inch) turtle block (barrier) net.

Concurrent with our request for reinitiation of consultation, the NRC staff requested information from the licensee related to the 2001 causally related mortalities of green and loggerhead turtles as well as details related to the modification of the intake canal and turtle block net. The licensee provided the requested information in a letter dated September 20, 2002. A copy of the licensee's September 20, 2002, letter is enclosed for your information. In 2001, the licensee recovered 592 green and loggerhead (321 green and 271 loggerhead) sea turtles from the intake canal. Of the 592 total recoveries, the licensee reported six turtle mortalities (five green and one loggerhead) in the intake canal, attributable to plant operations. Details of the six mortalities, provided in the licensee's September 20, 2002, letter are summarized below.

On March 30, 2001, a moribund green turtle was recovered from the 12.7-cm (5-inch) block net. Although a necropsy was performed, the results were inconclusive. The circumstances of the recovery did not indicate a cause of death. Because no obvious cause of death was apparent, the licensee conservatively attributed the mortality to plant operation. In early November 2001, four moribund turtles (three green and one loggerhead) were recovered from the 12.7-cm (5-inch) net. The four mortalities occurred over two days, during a period of high algae and debris loading of the barrier net caused by the passage of Hurricane Michelle south of the plant. The licensee attributed net deformation and increased flow rates through the net, due to the high levels of debris in the water column, as the possible cause of the turtle mortality. The debris loading of the net became so severe that the net had to be lowered for a period of time to avoid destruction of the net. In late November 2001, an additional weakened, underweight turtle (green) was recovered from the Unit 1 intake well near the plant. The turtle died within

hours after recovery. The licensee believed that this turtle bypassed the block nets during the period of high debris flow and could have bypassed the net when it was lowered. Once beyond the block nets, there was no opportunity for escape from the intake canal and the turtle was eventually drawn into the plant intake structure. Five out of the six turtle mortalities in 2001 were associated with the November debris event. The NRC staff finds that the high turtle mortality during 2001 was substantially related to the condition and design of the block net system.

In 2002, the licensee initiated additional activities in the intake canal to further reduce the possibility of future turtle mortalities. The intake canal was dredged between the easternmost headwall region and the Route A1A Bridge. By increasing the cross-sectional area of the canal, the water flow rate was reduced in the area of the turtle block nets. The lower flow rate in the vicinity of the block net should reduce the likelihood of turtles being trapped against the nets. The 12.7-cm (5-inch) mesh net was replaced with a new 12.7-cm (5-inch) net made of a more durable material with a UV-resistant coating that has a smooth surface resistant to fraying. These qualities should reduce net deformation and fouling by debris and algae. A sediment removal system was installed at the base of the net to reduce sediment buildup. The system uses a pump and eductor to transfer silt to a location west of the second block net and the Route A1A Bridge. The licensee also installed two new concrete intermediate posts in the canal and a new net guy system to minimize net deformation and ballooning. This is expected to be particularly effective in reducing net deformation during periods of high debris flow. The modifications to the barrier net and the dredging of the intake canal were completed by the end of November 2002.

The improvements that the licensee made to the net and canal is expected to reduce the likelihood of future mortalities, particularly those associated with periods of high debris flow such as the conditions associated with Hurricane Michelle. We believe the losses sustained in 2001 were unusual and the result of a combination of bad weather, old net design, and a shoaling intake canal.

The turtle capture data for 2002 support the conclusion that the mortalities in 2001 were an unusual occurrence. The annual environmental operating report for 2002 will not be available before April 2003. However, the NRC staff requested the turtle capture information for 2002 from the licensee to assist us in this consultation. A total of 632 turtles [629 greens and loggerheads and 3 hawksbill sea turtles (*Eretmochelys imbricata*)] were recovered from the intake canal. During calendar year 2002, two green turtle mortalities were attributed to plant operation. One was recovered against the old 12.7-cm (5-inch) block net and one was determined to have drowned in one of the capture (drift) nets. A total of 18 turtles were determined to be injured or diseased from causes not attributable to plant operation. One additional mortality was determined not to be causally related to plant operation. The moribund turtle was badly tangled in fishing line and believed to have died due to the entanglement. Although a greater number of green and loggerhead turtles were recovered in 2002, there were significantly fewer causally related mortalities. We expect that this low rate will continue in the future, particularly after the significant improvements to the canal and block net. Therefore, the staff believes that the incidental take statement contained in the current Biological Opinion issued on May 4, 2001, as modified by letter dated July 30, 2002, remains appropriate and valid and no modifications to the Biological Opinion are necessary at this time. The staff does not

## Appendix E

R. Crabtree

3

plan to initiate formal consultation at this time; however, should the design improvements installed in 2002 perform as expected or better, then the NRC may, in the future, revisit consultation to reduce the incidental take limits. The staff believes that the elevated mortality rate during 2001 was an unusual occurrence resulting from severe weather and a block net system that could not cope with the debris loading present in association with a hurricane. Modifications to the canal and block net system should minimize or prevent future episodes of higher than expected mortality.

We will provide you with a copy of the 2002 annual environmental operating report after we receive it from the licensee in late April. This report will contain detailed data and analyses concerning turtle captures in 2002. If you have any comments or questions, please contact Dr. Michael Masnik at 301-415-1191 or [MTM2@NRC.GOV](mailto:MTM2@NRC.GOV).

Sincerely,

*/RA/*

Pao-Tsin Kuo, Program Director  
License Renewal and Environmental Impacts  
Division of Regulatory Improvement Program  
Office of Nuclear Reactor Regulation

Docket Nos.: 50-335 and 50-389

Enclosure: As stated

cc: w/encl.: See next page



## Department of Environmental Protection

Marjory Stoneman Douglas Building  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000

David B. Struts  
Secretary

February 8, 2002

Mr. Mike Murray  
Florida State Clearinghouse  
Department of Community Affairs  
2555 Shumard Oak Boulevard  
Tallahassee, Florida 32399-2100

Re: Department of Energy, Florida Power and Light Company, Environmental Report  
Operation License Renewal State, St. Lucie Units 1 and 2, Hutchinson Island, St. Lucie  
County

SAI: FL 200201111376C

Dear Mr. Murray:

We have reviewed the above-referenced Clearinghouse project and recommend the following action to improve functioning of the facility.

Anoxic conditions have been reported at the bottom of Big Mud Creek where the creek depth exceeds forty feet. Fish kills have been reported in that area for quite some time and it is recommended that the creek be filled to a more environmentally friendly depth, provided there are no critical operational constraints that would prohibit such action.

If you have questions regarding this letter, or if we may be of further assistance, please give me a call at (850) 487-2231.

Sincerely,

Robert W. Hall  
Office of Intergovernmental Programs

cc: Cheryl McKee  
Jeff Beal  
Jim Golden

"More Protection, Less Process"

Printed on recycled paper.



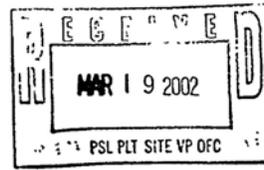
STATE OF FLORIDA  
DEPARTMENT OF COMMUNITY AFFAIRS

"Dedicated to making Florida a better place to call home"

JEB BUSH  
Governor

STEVEN M. SEIBERT  
Secretary

March 6, 2002



Mr. D.E. Jernigan  
Florida Power & Light Company  
6501 South Ocean Drive  
Jensen Beach, Florida 34957

RE: Department of Energy - Florida Power & Light Company - St. Lucie Nuclear Power Plant Units 1 and 2 - Applicant's Environmental Report Operating License Renewal Stage - Docket Nos. 50-335 and 50-389 - Hutchinson Island, St. Lucie County, Florida  
SAI: FL200201111376C

Dear Mr. Jernigan:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 95-359, the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended, and the National Environmental Policy Act, 42 U.S.C. §§ 4231, 4331-4335, 4341-4347, as amended, has coordinated a review of the above-referenced project.

The Florida Department of Environmental Protection (DEP) notes that anoxic conditions have been reported at the bottom of Big Mud Creek where the water depth exceeds 40 feet. Fish kills have been reported in that area over time; therefore, DEP recommends that the creek be filled to a more environmentally friendly depth, provided there are no critical operational constraints that would prohibit such action. Please refer to the enclosed DEP comments for further details.

The Florida Fish and Wildlife Conservation Commission (FWC) has not identified any new concerns for fish and wildlife resources involved with this license renewal. However, in a related matter, FWC will be reviewing Big Mud Creek to determine if additional manatee protection measures are warranted. This area may have thermal properties or other characteristics that are attractive to manatees. In addition, FWC would like to work with the

2555 SHUMARD OAK BOULEVARD • TALLAHASSEE, FLORIDA 32399-2100  
Phone: 850.488.8466/Suncom 278.8466 FAX: 850.921.0781/Suncom 291.0781  
Internet address: <http://www.dca.state.fl.us>

CRITICAL STATE CONCERN FIELD OFFICE  
2796 Overseas Highway, Suite 212  
Marathon, FL 33050-2227

COMMUNITY PLANNING  
2555 Shumard Oak Boulevard  
Tallahassee, FL 32399-2100  
INCOM 488-7956

EMERGENCY MANAGEMENT  
2555 Shumard Oak Boulevard  
Tallahassee, FL 32399-2100  
INCOM 413-0060

HOUSING & COMMUNITY DEVELOPMENT  
2555 Shumard Oak Boulevard  
Tallahassee, FL 32399-2100  
INCOM 488-7956

Mr. D.E. Jernigan  
March 6, 2002  
Page Two

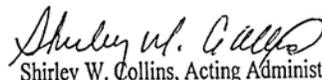
Florida Power & Light Company to formalize a protocol for the capture and recovery of manatees entrained in the power plant's intake canal. Please refer to the enclosed FWC comments for further details.

The Florida Department of Transportation (FDOT) notes that State Road A-1-A may be affected if work occurs on the power plant's intake and discharge systems. FDOT should be contacted regarding any activities that impact state owned rights-of-way, as permits may be required. All work within DOT rights-of-way must be accomplished in accordance with the requirements of FDOT's Utility Accommodation Manual. Please refer to the enclosed FDOT comments for further details.

Based on the information contained in the environmental report and the enclosed comments provided by our reviewing agencies, the state has determined that, at this stage, the above-referenced action is consistent with the Florida Coastal Management Program.

Thank you for the opportunity to review this project. If you have any questions regarding this letter, please contact Ms. Jasmin Raffington at (850) 922-5438.

Sincerely,

  
Shirley W. Collins, Acting Administrator  
Florida Coastal Management Program

SWC/dc

Enclosures

cc: Robert W. Hall, Florida Department of Environmental Protection  
Bradley J. Hartman, Florida Fish and Wildlife Conservation Commission  
Larry Hymowitz, Florida Department of Transportation

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION



ALLAN L. EGBERT, Ph D., Executive Director  
VICTOR J. HELLER, Assistant Executive Director

DAVID K. MEEHAN  
St. Petersburg

H. A. "HERKY" HUFFMAN  
Deltona

JOHN D. ROOD  
Jacksonville

QUINTON L. HEDGEPETH, DDS  
Miami

EDWIN P. ROBERTS, DC  
Pensacola

RODNEY BARRETO  
Miami

SANDRA T. KAUPE  
Palm Beach

BRADLEY J. HARTMAN, DIRECTOR  
OFFICE OF ENVIRONMENTAL SERVICES  
(850)488-6661 TDD (850)488-9542  
FAX (850)922-5675

February 11, 2002

Mr. Mike Murray  
Florida State Clearinghouse  
Department of Community Affairs  
2555 Shumard Oak Boulevard  
Tallahassee, FL 32399-2100

RE: SAI# FL200201111376C, Florida  
Power & Light Company, Operating  
License Renewal, St. Lucie Units 1 & 2

Dear Mr. Murray:

The Office of Environmental Services of the Fish and Wildlife Conservation Commission has reviewed the referenced project, and offers the following comments.

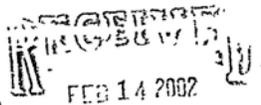
Florida Power & Light Company (FPL) is seeking approval from the U. S. Nuclear Regulatory Commission to renew the operating licenses for St. Lucie Units 1 and 2 for an additional 20 years. The applicant has not identified any changes to operations, or modifications or refurbishments to facilities necessary for this re-licensing, that would affect the environment or plant effluents.

Because there are no significant changes to these facilities or their operation, we do not believe there are any new concerns for fish and wildlife resources involved with this renewal. However, pursuant to the settlement of a lawsuit, our agency will be reviewing Big Mud Creek to determine if additional manatee protection measures are warranted. This area may have thermal properties or other characteristics that are attractive to manatees. In addition, we would like to work with FPL to formalize a protocol for capture and recovery of manatees entrained in the power plant's intake canal. In this regard, the applicant should contact Mr. Ron Mezich at (850) 922-4330.

Sincerely,

  
Bradley J. Hartman, Director  
Office of Environmental Services

BJH/DBB  
ENV 1-2-3  
fplstluciesau  
cc: Mr. Ron Mezich



State of Florida Clearinghouse

620 South Meridian Street • Tallahassee • FL • 32399-1600  
www.floridaconservation.org



Jeb Bush  
Governor

## Department of Environmental Protection

Marjory Stoneman Douglas Building  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000

David B. Struhs  
Secretary

February 8, 2002

Mr. Mike Murray  
Florida State Clearinghouse  
Department of Community Affairs  
2555 Shumard Oak Boulevard  
Tallahassee, Florida 32399-2100

State of Florida Clearinghouse

Re: Department of Energy, Florida Power and Light Company, Environmental Report  
Operation License Renewal State, St. Lucie Units 1 and 2, Hutchinson Island, St. Lucie  
County

SAI: FL 200201111376C

Dear Mr. Murray:

We have reviewed the above-referenced Clearinghouse project and recommend the following  
action to improve functioning of the facility.

Anoxic conditions have been reported at the bottom of Big Mud Creek where the creek depth  
exceeds forty feet. Fish kills have been reported in that area for quite some time and it is  
recommended that the creek be filled to a more environmentally friendly depth, provided there  
are no critical operational constraints that would prohibit such action.

If you have questions regarding this letter, or if we may be of further assistance, please give me a  
call at (850) 487-2231.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert W. Hall".

Robert W. Hall  
Office of Intergovernmental Programs

cc: Cheryl McKee  
Jeff Beal  
Jim Golden

"More Protection, Less Process"

Printed on recycled paper.



**Florida Department of Transportation**

OFFICE OF MODAL DEVELOPMENT  
3400 WEST COMMERCIAL BOULEVARD  
FORT LAUDERDALE, FLORIDA 33309-3421  
TELEPHONE: (954) 777-4490; FAX: (954) 677-7892; Toll-Free: (866) 336-8435  
February 12, 2002

JEB BUSH  
GOVERNOR

THOMAS F. BARRY, JR.  
SECRETARY

Mr. Mike Murray, Coordinator  
Florida State Clearinghouse  
Department of Community Affairs  
2555 Shumard Oak Boulevard  
Tallahassee, Florida 32399-2100

Dear Mr. Murray:

Subject: FL20020111376C  
Hutchinson Island Plant

In response to the subject Intergovernmental Coordination and Review request, the Department has the following comments regarding the Department of Energy, FPL Applicant's Environmental Report Operating License Renewal Stage, for the St. Lucie Nuclear Power Plant Units 1 and 2 on Hutchinson Island (St. Lucie County).

A review of the subject application indicates that State Road A-1-A may be affected if work occurs on the Intake and Discharge systems. The Department should be contacted regarding any changes that take place that impact State owned right-of-way. Additionally, all work within FDOT right of way shall be accomplished in accordance with the requirements of the Florida Department of Transportation's Utility Accommodation Manual, dated January 1999. Permits may be required, and can be obtained through the District Permits office.

Thank you for the chance to participate in this review process. Please contact Ms. Amie Goddeau, Drainage Engineer, at (954) 777-4343 for any drainage questions pertaining to the project. Mr. Clark Turberville, P.E., FDOT District Permits Engineer at (954) 777-4377 may be contacted regarding FDOT permitting requirements and Mr. Rocco DePrimo, Production Support Manager, may be contacted at (954) 777-4125 regarding Utility Accommodation Manual requirements.

Sincerely,

Larry Hymowitz, AICP  
Intergovernmental Manager

LH:TS

cc: Sandra Whitmire  
Amie Goddeau  
Clark Turberville  
Rocco DePrimo  
Nancy Bungo

File 4280.15

[www.dot.state.fl.us](http://www.dot.state.fl.us)



COUNTY: ST. LUCIE  
 Message:  
 DATE: 1/10/02  
 COMMENTS DUE DATE: 2/10/02  
 CLEARANCE DUE DATE: 3/11/02  
 SAI#: FL20020111376C

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNITS
COMMUNITY AFFAIRS FISH & WILDLIFE CONSERV. COMM HEALTH X STATE TRANSPORTATION ENVIRONMENTAL PROTECTION  RECEIVED BUREAU OF HISTORIC PRESERVATION 02 JAN 15 AM 8:48	SOUTH FLORIDA WMD  01-4066 NHPA	ENVIRONMENTAL POLICY/C & ED  <i>St. Lucie</i> SA1-FPL 2002-288

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

- Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.
- Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.
- Outer Continental Shelf Exploration, Development or Production Activities (15 CFR 930, Subpart E). Operators are required to provide a consistency certification for state concurrence/objection.
- X Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

**Project Description:**

Department of Energy - Florida Power and Light Company - Applicant's Environmental Report Operating License Renewal Stage - St. Lucie Units 1 and 2 - Docket Nos. 50-335 and 50-389 - Hutchinson Island, St. Lucie County, Florida

<b>To:</b> Florida State Clearinghouse AGENCY CONTACT AND COORDINATOR (SCH) 2555 SHUMARD OAK BLVD TALLAHASSEE, FLORIDA 32399-2100 (850) 414-6580 (SC 994-6580) (850) 414-0479	<b>EO. 12372/NEPA</b> <input checked="" type="checkbox"/> No Comment <input type="checkbox"/> Comment Attached <input type="checkbox"/> Not Applicable	<b>Federal Consistency</b> <input checked="" type="checkbox"/> No Comment/Consistent <input type="checkbox"/> Consistent/Comments Attached <input type="checkbox"/> Inconsistent/Comments Attached <input type="checkbox"/> Not Applicable
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From: Division of Historical Resources  
 Division/Bureau: Bureau of Historic Preservation  
 Reviewer: SARAH JALVING  
 Date: 2/20/02

*Janet Snyder Matthews*  
 2/21/2002



COUNTY: ST. LUCIE  
 DATE: 1/10/02  
 COMMENTS DUE DATE: 2/10/02  
 CLEARANCE DUE DATE: 3/11/02  
 Message: SAI#: FL200201111376C

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNITS
COMMUNITY AFFAIRS FISH & WILDLIFE CONSERV. COMM HEALTH STATE X TRANSPORTATION ENVIRONMENTAL PROTECTION	SOUTH FLORIDA WMD	ENVIRONMENTAL POLICY/C & ED

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

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**Project Description:**

Department of Energy - Florida Power and Light Company - Applicant's Environmental Report Operating License Renewal Stage - St. Lucie Units 1 and 2 - Docket Nos. 50-335 and 50-389 - Hutchinson Island, St. Lucie County, Florida.

<p>To: Florida State Clearinghouse                  AGENCY CONTACT AND COORDINATOR (SCH)                  2555 SHUMARD OAK BLVD                  TALLAHASSEE, FLORIDA 32399-2100                  (850) 414-6580 (SC 994-6580)                  (850) 414-0478</p>	<p>EO. 12372/NEPA  <input type="checkbox"/> No Comment  <input checked="" type="checkbox"/> Comment Attached  <input type="checkbox"/> Not Applicable</p>	<p>Federal Consistency  <input type="checkbox"/> No Comment/Consistent  <input checked="" type="checkbox"/> Consistent/Comments Attached  <input type="checkbox"/> Inconsistent/Comments Attached  <input type="checkbox"/> Not Applicable</p>
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From: \_\_\_\_\_  
 Division/Bureau: FDOT D4  
 Reviewer: Jerry Scheuchert, AICP  
 Date: 2/12/02

FEB-08-2002 16:30

P.09

FLORIDA STATE CLEARINGHOUSE  
RPC INTERGOVERNMENTAL COORDINATION  
AND RESPONSE SHEET

FSU  
Refer  
Fl. Dir. cc  
5/1/02

SAI#: FL200201111376C

DATE: 1/10/02

COMMENTS DUE TO CLEARINGHOUSE: 1/11/02 2/10/02

AREA OF PROPOSED ACTIVITY: COUNTY: ST. LUCIE CITY: Hutchinson Island

FEDERAL ASSISTANCE  DIRECT FEDERAL ACTIVITY  FEDERAL LICENSE OR PERMIT  OCS

PROJECT DESCRIPTION

Department of Energy - Florida Power and Light Company - Applicant's Environmental Report Operating License Renewal Stage - St. Lucie Units 1 and 2 - Docket Nos. 50-335 and 50-389 - Hutchinson Island, St. Lucie County, Florida.

ROUTING: RPC  
X TREASURE COAST RPC

RECEIVED  
JAN 16 2002  
TREASURE COAST  
REGIONAL PLANNING COUNCIL

PLEASE CHECK ALL THE LOCAL GOVERNMENTS BELOW FROM WHICH COMMENTS HAVE BEEN RECEIVED; ALL COMMENTS RECEIVED SHOULD BE INCLUDED IN THE RPC'S CLEARINGHOUSE RESPONSE PACKAGE. IF NO COMMENTS WERE RECEIVED, PLEASE CHECK "NO COMMENT" BOX AND RETURN TO CLEARINGHOUSE.

COMMENTS DUE TO RPC: 1/11/02 2/3/02

\_\_\_ ST. LUCIE

NO COMMENTS: \_\_\_\_\_

(IF THE RPC DOES NOT RECEIVE COMMENTS BY THE DEADLINE DATE, THE RPC SHOULD CONTACT THE LOCAL GOVERNMENT TO DETERMINE THE STATUS OF THE PROJECT REVIEW PRIOR TO FORWARDING THE RESPONSE PACKAGE TO THE CLEARINGHOUSE.)

NOTES:

ALL CONCERNS OR COMMENTS REGARDING THE ATTACHED PROJECT (INCLUDING ANY RPC COMMENTS) SHOULD BE SENT IN WRITING BY THE DUE DATE TO THE CLEARINGHOUSE. PLEASE ATTACH THIS RESPONSE FORM AND REFER TO THE SAI # IN ALL CORRESPONDENCE. IF YOU HAVE ANY QUESTIONS REGARDING THE ATTACHED PROJECT, PLEASE CONTACT THE STATE CLEARINGHOUSE AT (850) 414-6580 OR SUNCOM 994-6580.

FEB-08-2002 16:31

P. 10

**DRAFT**

Subject to Modifications

**TREASURE COAST REGIONAL PLANNING COUNCIL  
INTERGOVERNMENTAL COORDINATION AND REVIEW LOG**

**TCRPC NUMBER:** 02-SL-01-16                      SAI# FL200201111376C

**APPLICANT:** Florida Power and Light Company

**PROJECT DESCRIPTION:** Environmental Report Operating License Renewal for St. Lucie Nuclear Power Plant Units 1 and 2

Florida Power and Light Company is applying to the United States Nuclear Regulatory Commission for renewal of operating licenses for St. Lucie Nuclear Power Plant's units 1 and 2. The license for Unit 1 will expire in 2016, and Unit 2 will expire in 2023. The renewal would permit FPL to operate each unit for an additional 20 years. The nuclear power plant is located on Hutchinson Island in St. Lucie County approximately 7 miles southeast of Fort Pierce and 8 miles north of Stuart.

**FUNDING AGENCY:** None

**PROJECT COSTS:** N/A

**RECOMMENDATIONS:** Renewal of the operating licenses is not in conflict or inconsistent with the goals and policies of the SRPP.

**AGENCIES CONTACTED:** City of Fort Pierce  
City of Port St. Lucie  
St. Lucie County

Appendix E

COUNTY: ST. LUCIE  
 DATE: 1/10/02  
 COMMENTS DUE DATE: 2/10/02  
 CLEARANCE DUE DATE: 3/11/02  
 SAI#: FL20020111376C

STATE AGENCIES	WATER MNGMNT. DISTRICTS	OPB POLICY UNITS
COMMUNITY AFFAIRS FISH & WILDLIFE CONSERV. COMM X HEALTH STATE TRANSPORTATION ENVIRONMENTAL PROTECTION	SOUTH FLORIDA WMD	ENVIRONMENTAL POLICY/C & ED

The attached document requires a Coastal Zone Management Act/Florida Coastal Management Program consistency evaluation and is categorized as one of the following:

- Federal Assistance to State or Local Government (15 CFR 930, Subpart F). Agencies are required to evaluate the consistency of the activity.
- Direct Federal Activity (15 CFR 930, Subpart C). Federal Agencies are required to furnish a consistency determination for the State's concurrence or objection.
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- X Federal Licensing or Permitting Activity (15 CFR 930, Subpart D). Such projects will only be evaluated for consistency when there is not an analogous state license or permit.

**Project Description:**  
 Department of Energy - Florida Power and Light Company - Applicant's Environmental Report Operating License Renewal Stage - St. Lucie Units 1 and 2 - Docket Nos. 50-335 and 50-389 - Hutchinson Island, St. Lucie County, Florida

To: Florida State Clearinghouse  
 AGENCY CONTACT AND COORDINATOR (SCH)  
 2555 SHUMARD OAK BLVD  
 TALLAHASSEE, FLORIDA 32399-2100  
 (850) 414-6580 (SC 994-6580)  
 (850) 414-0479

EO. 12372/NEPA

Federal Consistency

No Comment  
 Comment Attached  
 Not Applicable

No Comment/Consistent  
 Consistent/Comments Attached  
 Inconsistent/Comments Attached  
 Not Applicable

**RECEIVED**  
 JAN 15 2002  
 BUREAU OF  
 ONSITE SEWAGE  
 PROGRAMS

From:  
 Division/Bureau: HSES  
 Reviewer: Brod. Co. H  
 Date: 1-15-02

**SAI Routing Sheet**

COUNTY: ST. LUCIE

DATE: 01/11/2002

Message:

SAI#: FL200201111376C

PROJECT TO BE REVIEWED BY: (Div/Program)	ASSIGNED REVIEWERS (Print Last Name)	IS PROJECT LOCATED IN APPROVED DRJ? (Circle Yes/No)				Is Project CONSISTENT w/ COMPLAN? YES NO	Is Project CONSISTENT w/ FCMP? YES NO	Do you have any COMMENTS on project? YES NO	DATE REVIEW COMPLETED	RVWR/ SUPV INT
		YES		NO						
		Is Project Consistent with DO?	Is Project DRJ Score?	Monitoring Letter?	Monitoring Letter?					
DCP	RWD	YES	NO	YES	NO	NA			1/16/02	
1/14/02 Date Rec'd										
Complete and forward to Div/Prog Below no later than: 2/10/02										
DEM	Hampton								1/17/02	
1/10/02 Date Rec'd										
Complete and forward to Div/Prog Below no later than: 2/10/02										
CMP	Clanton	Wetlands?		Stormwater?					2-8-02	DL
2/7/02 Date Rec'd		YES	NO	YES	NO					
Complete and forward to ACC Coordinator no later than: 2/10/02										

1-17-02

Mike McDonald  
 Pls. review and send comments.  
 Return to Mary Lou.  
 Stamp

NO COMMENTS.  
 m. McDonald  
 2/7/02