

HARDEE POWER PARTNERS

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JUL 15 1991

July 11, 1991

Division of Air
Resources Management

Certified Mail #P 276 822 165
Return Receipt Requested

Mr. Hamilton S. Oven, Jr., P.E.
Administrator
Siting Coordination Office
Florida Department of
Environmental Regulation
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400

Re: Hardee Power Station
Natural Gas Pipeline
Post Certification Submittal

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Dear Mr. Oven:

Hardee Power Partners hereby offers the following in response to your letter of June 20, 1991, concerning the above referenced project. It is our understanding these issues were raised by Ms. Trudy Bell as a result of her review of the post certification submittal package.

Item 1 Condition XXXII A.4 - An ecological survey was conducted and submitted to the FDER on May 29, 1991, with the post certification submittal. In addition, enclosed for your records is proof of submittal to the Florida Game and Freshwater Fish Commission, U.S. Fish and Wildlife Service, as well as FDER-Tampa. Please note that a copy of the submittal letter dated June 18, 1991, was previously sent to your office.

Item 2 Condition XXXII A.12 and 13 - The Exotic Species Removal Plan included with the post certification submittal package for the natural gas pipeline has previously been submitted and approved by the FDER for the Hardee/Pebbledale transmission line. Furthermore, since the wetlands associated with this project are located within a county-maintained roadside ditch, adverse impacts from exotic vegetation removal would be unlikely

Hardee Power Partners

P. O. Box 111, Tampa, Florida 33601-1111

(813)228-1330

702 N. Franklin Street, Tampa, Florida 33602

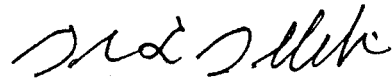
FAX(813)228-1308

Mr. Hamilton S. Oven, Jr., P.E.
July 11, 1991
Page 2

to occur, considering normal ditch maintenance by the county road department. Thus, we believe our exotic removal and control plan is adequate for this project.

Should you have further questions or comments, please contact Paul Carpinone or me.

Sincerely,



Gordon L. Gillette
Director, Project Services

GLG/gdc

Enclosure

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HARDEE POWER PARTNERS

June 18, 1991

Mr. Douglas B. Bailey
Assistant Director
Office of Environmental
Services
Florida Game and Freshwater
Fish Commission
Farris Bryant Building
620 South Meridian Street
Tallahassee, FL 32399-1600

Mr. Robert Stetler
Environmental Administrator
Water Management
Southwest District
Florida Department of
Environmental Regulation
4520 Oak Fair Boulevard
Tampa, FL 33610-7347

Mr. David L. Ferrell
Field Supervisor
United States Fish and
Wildlife Services
P.O. Box 2676
Vero Beach, FL 32961-2676

Re: Hardee Power Station
Conditions of Certification (PA 89-25)
Natural Gas Pipeline
Ecological Survey

Gentlemen:

Please find enclosed one copy of the ecological survey of Hardee Power Partners natural gas pipeline ROW. This survey was conducted in accordance with the requirements stated in the Conditions of Certification (Condition XXXII A.4.) for the Hardee Power Station (PA 89-25).

Should you have any questions or comments, please call Paul Carpinone or me.

Sincerely,



Gordon L. Gillette
Director, Project Services

GLG/gdc

Enclosure

cc: Mr. H. S. Oven, Jr., P.E., FDER - Tallahassee
Mr. W. A. Hartmann, P.E., SWFWMD

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**HARDEE POWER PARTNERS
HARDEE POWER STATION
NATURAL GAS PIPELINE
ENDANGERED SPECIES ASSESSMENT**

SUBMITTED TO:

**HARDEE POWER PARTNERS
P.O. BOX 111
TAMPA, FL 33601-0111**

SUBMITTED BY:

**DAMES & MOORE
ONE N. DALE MABRY, SUITE 700
TAMPA, FL 33609**

MAY, 1991

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The list and the map were distributed to Dames & Moore field personnel for use as a guideline during their field investigations. Subsequent to completion of the field reconnaissance, the list was revised based upon actual field observations.

The third phase was accomplished through aerial photointerpretation and field investigations of the proposed pipeline corridor. Both wetland and upland surveys were conducted along the entire proposed route. Field investigations of wetland areas along the pipeline route were conducted on January 24, 1991. The upland field survey was conducted on April 27, 1991.

Additionally, various regulatory agencies were contacted for information concerning protected species potentially occurring along the proposed pipeline route. Contacted were Dr. Ken Langdon of the Florida Department of Agriculture and Consumer Services, Division of Plant Industry (DACS), the Florida Game and Fresh Water Fish Commission (GFC) and the FWS. Agency correspondence is included in Appendix A.

APPLICABLE REGULATIONS

Endangered and threatened species are classified at both the state and federal level. Congress has defined "endangered species" within the Federal Endangered Species Act in 16 United States Code (USC) 1532 (6) as including the following:

any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this chapter would present an overwhelming and overriding risk to man.

"Threatened species" include any species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range as defined in 16 USC Section 1532(20). Federally designated endangered and threatened plants and wildlife are listed in 50 Code of Federal Regulations (CFR) 17.12 and 17.11, respectively.

The state of Florida has adopted similar definitions of endangered and threatened species in Section 372.072, Florida Statutes. An endangered species is defined as:

any species of fish and wildlife naturally occurring in Florida, whose prospects of survival are in jeopardy due to modification or loss of habitat; over-utilization for commercial, sporting, scientific, or educational purposes; disease; predation; inadequacy of regulatory mechanisms; or other natural or manmade factors affecting its continued existence.

The species classified by the GFC as endangered are listed in Rule 39-27.003, Florida Administrative Code (F.A.C.).

The state of Florida defines "threatened species" as any species of fish or wildlife naturally occurring in Florida which may not be in immediate danger of extinction, but which exists in such small populations as to become endangered if it is subjected to increased stress as a result of further modification of its environment. Threatened species are listed in Rule 39-27.004, F.A.C., and presently include a total of 27 species.

Additionally, the GFC has classified 48 other species as "species of special concern" as listed in Rule 39-27.005, F.A.C. The classification of "species of special concern" is defined as follows:

species, subspecies or isolated population which warrant special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance or substantial human exploitation which, in the foreseeable future, may result in its becoming a threatened species; may already meet certain criteria for designation as a threatened species but for which conclusive data are limited or lacking; may occupy such an unusually viable and essential ecological niche that should it decline significantly in numbers or distribution other species would be adversely affected to a significant degree; or has not sufficiently recovered from past population depletion.

Once listed as endangered or threatened, a species becomes subject to protection and management by the FWS, the GFC (freshwater and upland species), and the Florida Department of Natural Resources (DNR) (marine species). These agencies exercise direct regulatory control over the taking (harassment, wounding, killing, possession or sale) of these species or their nests. Certain civil and criminal penalties may be imposed for violation of the prohibitions against these actions. Consequently, a Florida developer whose project necessitates "take" (e.g. destruction or removal of an endangered or threatened species or its nest or eggs) must first secure a permit from the executive director of the GFC or DNR, pursuant to Rule 39-27.002 (3), F.A.C. A permit and habitat conservation plan may also be required from the FWS.

Additionally, a project's general impact upon endangered or threatened species, or species of special concern, will be evaluated by state and federal agencies as part of the application procedure.

The "Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida" include 117 species of animals which are protected pursuant to Florida Administrative Code Rule 39-27.03-05 (GFC, 1990). The GFC ranks these species within three categories: endangered (E), threatened (T), and species of special concern (SSC). The FWS lists 141 animal species within Florida which are protected pursuant to 50 CFR 17.11-12. The FWS recognizes four categories: endangered, threatened, threatened by similarity of appearance (T - S/A), and under review (UR-1 through UR-5, denoting a high and low priority for listing, respectfully). Additionally, the Convention on International

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Trade in Endangered Species (CITES) lists 26 Florida species on two appendices. CITES requests protection of these species due to trade exploitation. These lists are not mutually exclusive because they contain overlap of species.

RESULTS

The following is a discussion of preferred habitat types and reported sightings of potentially occurring species along the proposed TECO natural gas pipeline route.

Bald eagle (Haliaeetus leucocephalus)

The bald eagle is classified as threatened by the GFC, endangered by the FWS and is included in Appendix I of the CITES. It is also protected by the Bald Eagle Protection Act. Preferred habitats include riparian areas, especially lake and river shores. In Florida, some interior pairs nest far from expanses of open water on marshes and ponds. Habitat requirements are somewhat altered when nesting is finished and migration occurs. The birds are not as closely limited to the open water during this time, with both adults and immatures gathering food where it is most easily available. The breeding season of bald eagles varies with latitude. The general tendency is for winter breeding in the south with a progressive shift toward spring breeding in northern areas. In Florida, some breeding activity may occur year round, except for perhaps in mid-summer. In the region of the proposed pipeline, breeding typically occurs late November to early December. The eagle may sit on the eggs in January with the young fledgling in March - April.

The FWS "Habitat Management Guidelines for the Bald Eagle in the Southeast Region" details recommended restrictions to be followed when bald eagle nests are encountered. The FWS recognizes two management zones: the primary and secondary. The primary zone encompasses an area extending from 750 to 1,500 feet outward from the nest tree. Within this area, recommended restrictions, at all times, include the following: 1) residential, commercial or industrial development, tree cutting, logging, construction and mining; and 2) use of chemicals toxic to wildlife. Additional recommended restrictions in the primary zone during nesting period include the following: 1) unauthorized human entry; and 2) helicopter or fixed-wing aircraft operation within 500 feet vertical distance or 1,000 feet horizontal distance from a nest.

The secondary zone encompasses an area extending outward from the boundary of the primary zone a distance of 750 feet to one mile. Recommended restrictions within the secondary zone include, but are not limited to the following: 1) development of new commercial and industrial sites; 2) construction of multi-story buildings and high density housing developments between the nest and the eagles' feeding area; 3) construction of new roads, trails, and canals which would tend to facilitate access to the nest; and 4) use of chemicals toxic to wildlife, such as herbicides or pesticides. Additional recommended restrictions during nesting within the secondary zone include the following: 1) logging, land clearing, construction, seismographic activities employing explosives, mining, oil well

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drilling, and 2) low-level aircraft operations. Minor activities such as hiking, bird watching, fishing, camping, picnicking, hunting, and recreational off-road vehicle use may be allowed in the secondary zone at any time.

A bald eagle sighting was recorded by FNAI in Section 12, Township 32 South, Range 23 East approximately three quarter miles west of the proposed route. This eagle was not observed during extensive field investigations and because the sighting occurred in 1989, the bird may have relocated. An eagle on a nest was observed during field investigations in Section 1, Township 32 South, Range 23 East approximately one eighth mile west of the proposed route. This nest and its protection zones have been fully considered during the site certification process and pipeline route selection. The current pipeline route satisfies all certification conditions which protect the bald eagle.

Wood stork (Mycteria americana)

The wood stork is classified as endangered by both the FWS and GFC. Preferred habitats include freshwater and brackish wetlands, cypress or mangrove swamps, and marshes. Primary nesting sites are usually located in cypress or mangrove swamps. Wood storks feed in freshwater marshes, flooded pastures and ditches. Depressions in marshes and swamps are particularly attractive feeding areas because fish and invertebrates become concentrated during periods of declining water levels. Wood storks are a particularly resilient species in terms of foraging and are commonly observed feeding in highly disturbed areas.

A wood stork was sighted during field investigations in Section 12, Township 32 South, Range 23 East along the proposed route. The bird was in flight and may not have been a local resident to the area. There are no expected impacts to wood storks with this project.

Gopher tortoise (Gopherus polyphemus)

The gopher tortoise is classified as a species of special concern by the GFC and is under review (UR2) by the FWS. The gopher tortoises require dry, well-drained soils in xeric habitats such as beach scrub, sand pine, longleaf pine-turkey oak and live oak hammock. Additionally, old field successional stages leading to the previously mentioned xeric habitats also are utilized. The gopher tortoise feeds primarily on grasses, with fallen leaves (particularly oak trees) and herbs, as well as occasional wild fruits and berries. Grazing by these tortoises is usually extremely habitual with the result that paths and small clearings are maintained by constant grazing in an otherwise developed herbaceous layer.

Gopher tortoises excavate long burrows, occupied semi-permanently and used by both tortoises and a variety of other organisms such as the pine snake, Eastern indigo snake, Florida mouse and gopher frog. Large burrows may extend to a length exceeding 30 feet with a depth of nearly 12 feet. Typical burrows are approximately 20' long and 8' deep.

Gopher tortoise habitat was observed adjacent to the proposed route in Section 35, Township 32 South, Range 23 East. Abandoned gopher tortoise burrows were sighted in Section 31, Township 32 South, Range 24 East adjacent to the route.

No animals or their burrows occur within the pipeline construction ROW. Some tortoises are expected in the vicinity of the pipeline ROW as evidenced by several abandoned burrows discovered adjacent to the ROW. Due to the rapid return of herbaceous species along the proposed route and the ability of the gopher tortoise to recolonize the ROW following construction, no impacts on tortoises are expected.

Florida gopher frog (Rana areolata aesopus)

The Florida gopher frog is classified as a species of special concern by the GFC and is under review (UR2) by the FWS. Gopher frogs typically inhabit sandhill communities on bluejack and turkey oak ridges, and sand pine scrub habitats. This species commonly shares the burrows of gopher tortoises, but has also been found in the burrow of a mouse (Peromyscus polionotus), in stump holes, in the bottom of post holes, and in the mouths of crawfish holes. The diet consists mainly of insects, but it frequently preys upon toads (Bufo spp.).

No Florida gopher frogs were observed during the field investigation or reported by FNAI; however, the gopher frog is a commensal species of the gopher tortoise and is considered as potentially occurring along the route. Consequently, any potential impacts will be restricted to very short term periods. No long term impacts are expected.

Eastern indigo snake (Drymarchon corais couperi)

The Eastern indigo snake is classified as threatened by both the FWS and GFC. This snake inhabits high pine communities, pine flatwoods, and moist tropical hammocks. The indigo snake is a commensal species of the gopher tortoise and is often found inhabiting gopher tortoise burrows. Because the indigo snake is susceptible to desiccation, gopher tortoise burrows constitute a critical factor necessary for the survival of the snake in areas with limited moisture. The indigo snake is an omnivorous reptile, preying upon small mammals and birds as well as upon frogs, lizards and other snakes, including venomous species.

One indigo snake sighting was reported in Section 31, Township 32 South, Range 24 East adjacent to the proposed pipeline route. Short term impacts may occur to this species

along the proposed route. Impacts are not expected due to the limited availability of suitable habitat in the vicinity of the proposed route and the inherent mobility of the species.

tm\barry\T&E.rep



DAMES & MOORE

1211 GOVERNORS SQUARE BOULEVARD, SUITE 300, TALLAHASSEE, FLORIDA 32301
 (904) 942-5615 FAX (904) 942-5619
 INCLUDING FLORIDA LAND DESIGN & ENGINEERING, A RECENT ACQUISITION

April 19, 1991

MAY 8 1991

Mr. Steve Nesbitt
 Florida Game & Fresh Water Fish Commission
 Wildlife Research
 4005 South Main Street
 Gainesville, Florida 32601

RE: Hardee Power Station, Natural Gas Pipeline
 Sections 34 and 35, Township 31 South, Range 23 East
 Sections 1, 12, 13, 18, 19, 30, and 31, Township 32 South,
 Range 23 East

Dear Mr. Nesbitt:

The TECO Power Services Corporation is planning to construct an eight mile natural gas pipeline in the vicinity of the Hardee Power Station. As part of the environmental studies, a survey for threatened and endangered species will be conducted. In order to compile a list of species which may be affected, we request your review of the enclosed route map with respect to bald eagles which may occur in the area. We have reviewed Florida Natural Areas Inventory quad maps and are requesting any additional information you or your field staff may be able to supply.

We would appreciate your response to this request as soon as possible to enable us to complete our field reconnaissance. Please call me at 904/942-5615 if you have any questions.

Sincerely,
 DAMES & MOORE

Jackie L. Fry

Jackie L. Fry
 Assistant Biologist

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 Enclosure

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5-3-91
We have no record of activity
not in the vicinity of Hardee
the only place we have
seen
TH



BOB CRAWFORD
COMMISSIONER

Florida Department of
Agriculture & Consumer Services

The Capitol
Tallahassee
32399-0810

PLEASE RESPOND TO:
Division of Plant Industry
1911 S.W. 34th St. / P.O. Box 1269
Gainesville, FL 32602-1269 / (904) 372-3505

April 25, 1991

APR 26 1991

Ms. Jackie L. Fry
Assistant Biologist
Dames & Moore
1211 Governors Square Boulevard, Suite 300
Tallahassee, Florida 32301

Dear Ms. Fry:

I have reviewed the TECO Power Services Corp. proposal for a gas pipeline in southwest Polk Co. According to the information I have available *Asclepias curtisii* is in Polk Co., including this area. For two other endangered plant species, *Nolina brittoniana* and *Ziziphus celata*, I lack specific distributional information and thus cannot pinpoint exact locations. These do occur in Polk Co. and additional information should be sought. The remaining endangered plant species in Polk Co. apparently do not occur in the project area.

I hope this information will be helpful. If we can be of further assistance, please let me know.

Sincerely,

BOB CRAWFORD
COMMISSIONER OF AGRICULTURE

K.R. Langdon

K. R. Langdon, Ph.D.
Botanist

KRL/z

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APR 26 1991

APPENDIX 1

ENDANGERED SPECIES ASSESSMENT BY ENVIRONMENTAL
CONSULTING AND TECHNOLOGY, INC.

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U.S. DEPT. OF
INTERIOR

APR 11 1991

**TAMPA ELECTRIC COMPANY
HARDEE POWER STATION TO
PEBBLEDALE SUBSTATION
230-kV TRANSMISSION LINE
RIGHT-OF-WAY ENDANGERED
SPECIES ASSESSMENT**

SUBMITTED TO:



A TECO ENERGY COMPANY

SUBMITTED BY:



Environmental Consulting & Technology, Inc.

5405 Cypress Center Drive, Suite 200
Tampa, Florida 33609
(813) 289-9338

JANUARY 2, 1991

TAMPA ELECTRIC COMPANY HARDEE POWER
STATION TO PEBBLEDAL SUBSTATION
230-kV TRANSMISSION LINE RIGHT-OF-WAY
ENDANGERED SPECIES ASSESSMENT

INTRODUCTION

On November 27, 1990, Tampa Electric Company received the Final Certification Order for its 230-kilovolt (kV), approximately 15 mile long Hardee Power Station to Pebbledale Substation transmission line corridor. As a condition of corridor certification, the State of Florida requested an ecological survey be conducted prior to clearing activities to identify the presence of threatened or endangered plant and animal species likely to occur in the selected right-of-way (ROW) of the certified corridor based on range and habitat as defined in the Site Certification Application.

As further described in the Conditions of Certification, "This survey shall also identify the location of any wading bird colonies. Results of this survey shall be submitted to the DER and the Florida Game and Freshwater Fish Commission (FGFWFC) and the United States Fish and Wildlife Service (USFWS). If any clearing activity will take place in or otherwise adversely affect jurisdictional wetlands, survey results will also be submitted to the appropriate Water Management District. If it is determined that any of these species will be affected by the construction of any of the linear facilities, the permittee shall consult with DER and FGFWFC to determine the appropriate steps to be taken to avoid, minimize, mitigate, or otherwise appropriately deal with, any adverse impacts within each agency's respective jurisdiction."

The Environmental Consulting & Technology, Inc. (ECT) project team, including a wildlife biologist and plant ecologist, conducted an ecological assessment of the proposed Hardee Power Station to Pebbledale Substation transmission line ROW. The assessment was based upon a literature review to verify the accuracy of the

existing data base and field surveys (November 29 and December 20, 1990) to identify the potential for occurrence of species listed as endangered, threatened, species of special concern or under review for federal listing by the Florida Department of Agriculture and Consumer Service (FDACS), USFWS, and/or FGFWFC. The potential for occurrence of these listed species, nest sites, and habitats within the ROW was determined by either direct sighting or other physical evidence of occurrence (e.g., burrows, nests, etc.), or an assessment of habitat suitability and comparison with known areas of occurrence. Tables 6.1.6-3 and 6.1.6-4 of the Application list the protected plant and animal species that potentially occur within five miles of the transmission line corridor between the Hardee Power Station and the Pebbledale Substation (see Appendix A). The species listed in Tables 6.1.6-3 and 6.1.6-4 are those plant and animal species officially designated as endangered, threatened, species of special concern, or under review for federal listing by USFWS, FGFWFC, and/or FDACS. These listed species were selected for study in consultation with FGFWFC and the Florida Natural Areas Inventory (FNAI).

The probability of occurrence for these listed species was based on: 1) known locations, 2) recent and historical reports, and 3) information provided by current, available literature and discussions with agency biologists familiar with the region. This report summarizes previous protected species studies within the corridor and the results from recent field investigations of the entire transmission line ROW.

BACKGROUND INFORMATION

VEGETATION

Nineteen plant species considered to be of local and/or regional importance were evaluated in the projects' Certification Application through agency contacts, literature reviews, and aerial and ground surveys. Of the 19 species evaluated, none were identified as occurring within the corridor. However, ten species of plants (i.e., scrub holly, scrub buckwheat, sand butterfly pea, Florida beach grass, banded wild-pine, Curtiss' milkweed, Ashes' savory, scrub milkwort,

nodding pinweed, and wild coco) were expected to occur within the open xeric habitats of the corridor. Edison's ascyrum, hartwrightia, rain lily, water spider orchid, thick-leaved water willow, and spoon-leaved sundew were also determined to be possible inhabitants of wet depressions or seepage areas of the corridor. Finally, the remaining epiphyte species (serpent's fern, red needleleaf airplant and shoestring fern) were considered to be likely inhabitants of trees within swamp or hammock communities in the corridor.

WILDLIFE

Through agency contacts, literature reviews, and ground and aerial surveys, a thorough investigation was conducted for the potential of occurrence of nineteen vertebrate species. These include two mammals, twelve birds, and five reptiles considered to be important species occurring or possibly occurring within five miles of the proposed transmission line corridor (see Table 6.1.6-4 in Appendix A). Of the two listed mammal species, Sherman's fox squirrel and round-tailed muskrat were expected to occur within the corridor in suitable habitats. No red-cockaded woodpecker colonies, wading bird/wood stork rookeries, sandhill crane nests, or scrub jay habitat were identified within or five miles from the corridor.

If present, burrowing owls would be expected to occur in open upland habitats of the corridor, while swallow-tailed kites could be present as occasional transients throughout. Appropriate habitat for crested caracara and southeastern kestrel exists along the corridor. Three active eagle nests were identified in the vicinity of the corridor. One is located approximately 5 miles south of Bradley Junction and 0.5 miles west of the corridor centerline. The second nest is near the center of Section 25 approximately 2 miles west of Pebbledale and 0.5 miles east of the corridor centerline. The third nest was located within the corridor, 4 miles south of Bradley Junction in Section 1. This nest was constructed in 1989 after the initial siting of the preferred corridor. All of the listed reptile species were also expected to occur within appropriate habitats of the corridor.

ENDANGERED SPECIES SURVEY

VEGETATION

To augment earlier investigations, ECT plant ecologists employed the following methodology:

1. Update literature review to reflect possible new data;
2. Conduct a ground inspection of possible habitat sites within the proposed ROW and an area of 50 feet adjacent to the ROW to determine the presence of listed plant species identified in the Application;
3. Map all records of significant listed species occurrence on a current blue-line aerial photograph (1"=200' scale); and
4. If significant listed plant species are discovered, conduct a preliminary census by estimating numbers of individuals within each separate population center and identifying a representative sample of each listed species population by photography, mapping, and flagging.

Due to the disturbed condition of the majority of the proposed ROW, only likely habitat areas were searched for listed species (i.e., forested locations, mostly around Bradley Junction). Of the nineteen species of listed plants which might occur in habitats along the corridor, water spider orchid, serpent's fern, red needleleaf airplant, and shoestring fern were expected within the ROW. Of these, serpent's fern and red needleleaf airplant were identified or suspected within or immediately adjacent to the ROW in two separate hammock areas in Bradley Junction and at the Crossing of the South Prong of the Alafia River.

Even though only red needleleaf airplant and serpent's fern were observed during the survey, it must be understood that some of the listed plant species under review may have been unrecognizable due to the survey season (winter dieback or senescence) or simply missed during the walkover due to either physical or logistical restrictions (e.g., epiphytes obscured by limbs/branches and height locations, heavy vegetation growth impeding maneuverability, etc.).

If present, rain lily and water spider orchid population would not be adversely impacted by the maintained transmission line ROW. The three epiphytes would be expected to be affected by clearing and maintenance of the ROW or construction of the transmission line. However, even if the epiphytic species should be destroyed during ROW clearing, no significant impacts to local or regional species populations should occur due to the following reasons:

- 1) These epiphytes are listed as "threatened" only by FDACS. These species were designated by FDACS as "threatened" to limit their destruction through commercial exploitation. Therefore, these species are not truly threatened with extinction as would normally be indicated by the threatened designation;
- 2) These species are widespread and common throughout the State of Florida; and
- 3) The loss of some individuals will not significantly affect local or regional population levels.

As stated above, since serpent's fern and red needleleaf airplant are common and widespread in the State of Florida, potential impacts to these species would most likely be local and restricted to individual plants. The potential cumulative losses of individual plants would be minor based upon the limited number of individuals and paucity of prime habitat crossed by the transmission line.

Since, no significant impacts would result from transmission line clearing/construction to these two epiphytes, no further investigation or mitigative action should be required.

WILDLIFE

Of the 19 species of animals listed in Appendix A, only 3 birds are officially designated as endangered (i.e., woodstork, red-cockaded woodpecker, and bald eagle).

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RE
MET. AGT

Of these, no suitable habitat exists along the ROW for woodstorks or red-cockaded woodpeckers. In addition, the locations of woodstork rookeries and red-cockaded woodpecker colonies are well documented and monitored by the FGFWFC and FWS. These two agencies do not document nesting records for the above bird species within or immediately adjacent to the ROW. Since, the preferred corridor encompassed a recently-constructed eagle's nest, the ROW was specially aligned to avoid the nest location (approximately 750 feet distant). The nest was not occupied during the time of survey, but it appeared to be in good condition and capable of supporting large raptors. Another large raptor nest was located along the ROW on an existing transmission line structure situated just north of Agricola Road, approximately 2,400 feet west of the transmission line patrol road/Agricola Road intersection (i.e., on the fifth struction pad west of the road intersection). This nest was occupied by ospreys during the time of survey.

Review of the agency files and a field survey of the ROW indicates that no nesting colonies of wading birds, particularly woodstorks, are located within or in the vicinity of the ROW. Along one area of the ROW, several aquatic bird species were observed feeding within a mine pond at the northwestern corner of Agricola Road and the existing transmission line patrol road (white pelican, great egret, black-necked stilts, coot, anhinga, lesser scaup). However, no suitable nesting sites occur within this area.

No other bird species listed in the Application are known to nest along the ROW. The two listed mammals, Sherman's fox squirrel and round-tailed muskrat, were not observed within the ROW.

The Eastern indigo snake, blue-tailed mole skink or the Florida pine snake were not observed during ROW investigation. The American alligator are likely to occur along the permanent water areas of the ROW. However none were observed during the field survey. If present, American alligators should not be adversely impacted by project construction.

Surveys of gopher tortoises were conducted along the ROW, especially at foundation and new access road locations within suitable habitat locations. No gopher tortoise burrows were located during the field effort.

In summary, no endangered wildlife species listed in the Application nor unique wildlife habitats were located within the ROW. Since corridor selection methodologies considered such important resources and avoided potentially sensitive habitats or important species, no significant impacts to listed species were expected nor observed.

Table 6.1.6-3. Protected Rare Plant Species Potentially Present within Five Miles of Proposed Transmission Line Corridor Between the Hardee Power Station and the Pebbledale Substation

Common Name	Scientific Name	Status	
		USFWS*	FDA+
Curtiss' milkweed	<u>Asclepias curtissii</u>		T
Ashe's savory	<u>Calamintha ashei</u>	UR1	T
Spoon-leaved sundew	<u>Drosera intermedia</u>		T
Florida beardgrass	<u>Gymnopogon floridanus</u>	UR2	
Water spider orchid	<u>Habenaria repens</u>		T
Hartwrightia	<u>Hartwrightia floridana</u>	UR2	T
Edison's ascyrum	<u>Hypericum edsonianum</u>	UR1	T
Scrub holly	<u>Ilex opaca</u> var. <u>arenicola</u>	UR5	
Thick-leaved water-willow	<u>Justicia crassifolia</u>	UR2	
Nodding pinweed	<u>Lechea cernua</u>	UR2	
Serpent fern	<u>Phlebodium aureum</u>		T
Scrub milkwort	<u>Polygala lewtonii</u>	UR1	E
Wild coco	<u>Pteroglossapis ecristata</u>	UR2	T
Banded wild-pine	<u>Tillandsia flexuosa</u>		T
Red needleleaf airplant	<u>Tillandsia setacea</u>		T
Shoestring fern	<u>Vittaria lineata</u>		T
Rain lily	<u>Zephyranthes simpsonii</u>	UR5	E
Scrub buckwheat	<u>Eriogonum floridanum</u>		T
Sand butterfly pea	<u>Centrosema arenicola</u>	UR5	

Note: E - Endangered

T - Threatened

UR1 - Under review for listing, with substantial evidence indicating some degree of biological vulnerability and/or threat

UR2 - Under review for listing, but substantial evidence of biological vulnerability and/or threat is lacking

UR5 - Still formally under review, but no longer considered a likely candidate for listing because recent information indicates species is more widespread or abundant than previously believed

* USFWS - U.S. Fish and Wildlife Service

+ FDA - Florida Department of Agriculture

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Table 6.1.6-4. Protected Animal Species Potentially Present within Five Miles of Proposed Transmission Line Corridor Between the Hardee Power Station and the Pebbledale Substation

Common Name	Scientific Name	Status	
		FGFWFC*	USFWS+
<u>MAMMALS</u>			
Sherman's fox squirrel	<u>Sciurus niger shermani</u>	SSC	UR2
Round-tailed muskrat	<u>Neofiber alleni</u>		UR2
<u>BIRDS</u>			
Bald eagle	<u>Haliaeetus leucocephalus</u>	T	E
Red-cockaded woodpecker	<u>Picoides borealis</u>	T	E
Little blue heron	<u>Egretta caerulea</u>	SSC	
Crested caracara	<u>Polyborus plancus auduboni</u>	T	
Southeastern American kestrel	<u>Falco sparverius paulus</u>	T	UR2
Swallow-tailed kite	<u>Elanoides forficatus</u>		UR2
Sandhill crane	<u>Grus canadensis pratensis</u>	T	
Florida scrub jay	<u>Aphelocoma coerulescens</u>	T	T
	<u>coerulescens</u>		
Snowy egret	<u>Egretta thula</u>	SSC	
Tricolored heron	<u>Egretta tricolor</u>	SSC	
Wood stork	<u>Mycteria americana</u>	E	E
Florida burrowing owl	<u>Athene cunicularia floridana</u>	SSC	
<u>REPTILES</u>			
Gopher tortoise	<u>Gopherus polyphemus</u>	SSC	UR2
Eastern indigo snake	<u>Drymarchon corais couperi</u>	T	T
Blue-tailed mole skink	<u>Eumeces egregius lividus</u>	T	T
Florida pine snake	<u>Pituophis melanoleucus mugitus</u>	SSC	UR2
American alligator	<u>Alligator mississippiensis</u>	SSC	T(S/A)

Note: E - Endangered

T - Threatened

T(S/A) - Threatened due to similarity of appearance

SSC - Species of special concern

UR2 - Under review for listing, but substantial evidence of biological vulnerability and/or threat is lacking.

* Florida Game and Fresh Water Fish Commission

† U.S. Fish and Wildlife Service

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