

1-31-95

Meeting Regarding Hender #3 & Seminole Electric

Bruce Mitchell

FDEP/DARM/DAR/TITLE II

904-488-1344

Ken Kosky

KBA

904-336-5600

Ken Dalton

SECI

813-963-0974

JOE WIELBROW

SECI

813-963-0994

Tom O'Hanlon

Westinghouse

407-281-2564

RICK ANTOS

WESTINGHOUSE

407-281-3480

SYED ARIF

DEP

904-488-1344

Cleve Holladay

FDEP/DARM/DAR/NSR

904-488-1344

DOUG ROBERTS

HOPPING BOYD

904-222-7500

Memorandum

Florida Department of Environmental Protection

TO: Clair Fancy
Jim Pennington

FROM: Bruce Mitchell *RAM*

DATE: February 10, 1995

SUBJECT: Initiated Construction without Permit Authorization
Seminole Electric Cooperative Incorporated (SECI)
Hardee Unit 3: PSD-FL-214/PA89-25SA

Based on a direct question to the proposed facility's representative at a meeting held on January 31, 1995, and the application submitted, I feel that the applicant has begun construction without permit authorization. Specifically, I asked the following question during the meeting, "Have you already contracted with Westinghouse for this project"? Mr. Ken Bachor, representative of SECI at the meeting, said "Yes". Also, the application package only specifies the use of two Westinghouse Model 501F advanced combined cycle combustion turbines (CTs) and no alternatives. In addition, all of the consultant's and applicant's push that they have to have power augmentation is due to the vendor's inability to meet the NO_x BACT determination limitations/standards that we have proposed if in the power augmentation mode (note that these limitations/standards are exactly the same as those established for other like and kind CTs). Further, it also appears that the applicant has guaranteed someone (i.e., investors?) of a net 440 megawatts of continuous electricity to the grid, which can only be achieved through power augmentation during days of high temperatures and high humidity [there has been no proposal to use additional water injection and/or preconditioning of the inlet air (i.e., chilling) to keep the NO_x emissions low]. I explained to the attendees (list enclosed) that our Bureau Chief, Mr. Clair Fancy, had already instructed Mr. Peter Cunningham, in a previous meeting, to prepare an emergency order for the utility industry for the Secretary's signature to take care of such times that a power outage occurs and the need arises for increased power output. Mr. Doug Roberts, who was at the meeting representing SECI and was also in attendance at the meeting when Mr. Cunningham was instructed to prepare the order, is with Hopping Boyd Green & Sams, PA, as is Mr. Cunningham.

MEMO: Initiated Construction without Permit Authorization
Seminole Electric Cooperative Incorporated: Hardee Unit #3
PSD-FL-214/PA89-25SA
Page 2 of 2

It is important to note that the applicant has requested that these emission units be allowed to fire fuel oil for up to a total of 3,000 hours per year between the two CTs - this amount of time requested is not a short time issue and not typical of a back-up fuel (i.e., 400-500 hrs/yr).

BM/rbm

Enclosure

Florida Department of
Environmental Protection

Memorandum

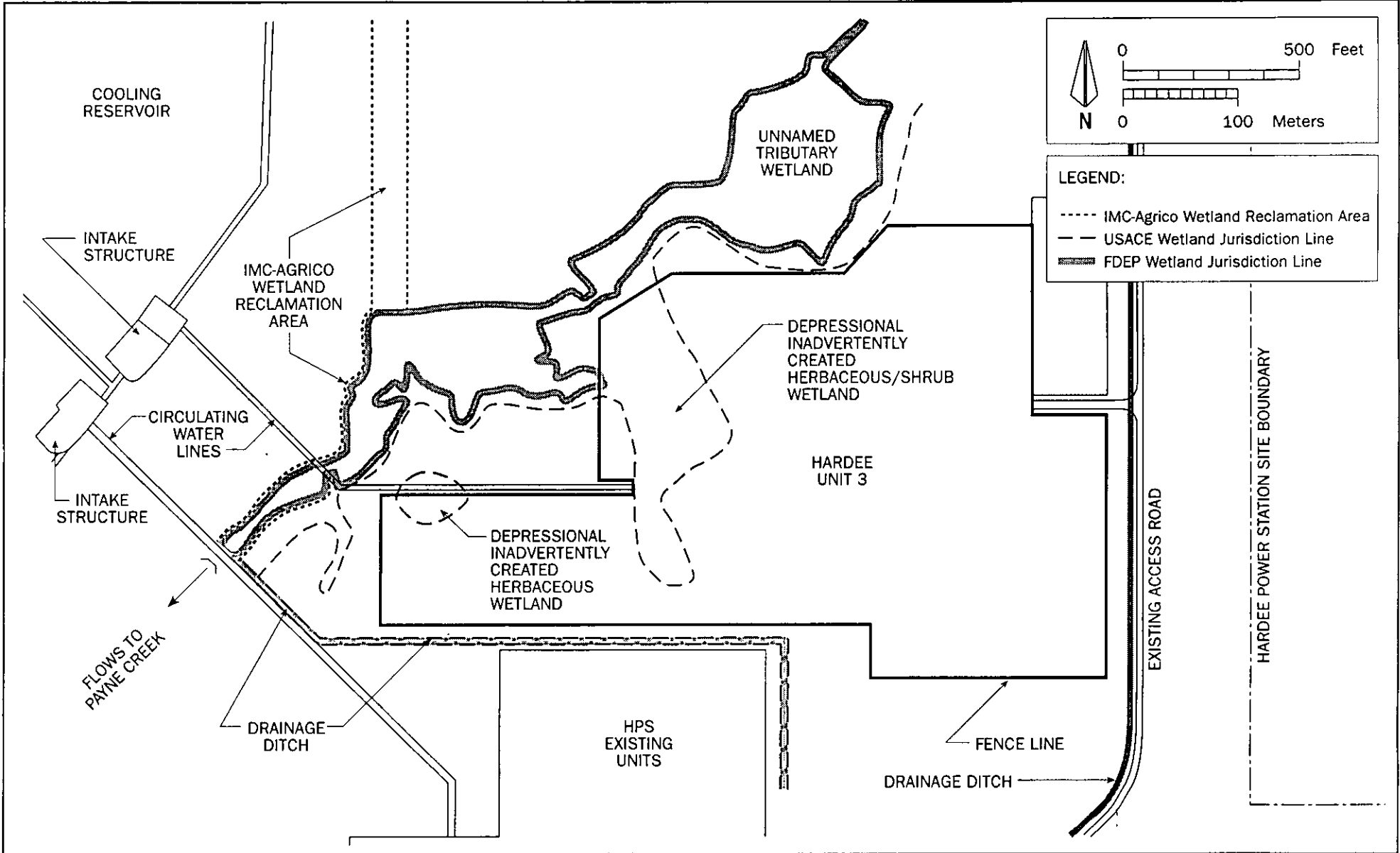
TO: Buck Oven, P.E. Administrator
FROM: *John Brown Jr*
John Brown, P.E. Administrator
DATE: November 16, 1994
SUBJECT: Seminole Electric Cooperative Incorporated (SECI)
Hardee Unit 3 - PA89-25SA, Mod 8035
PSD-FL-214

The Bureau of Air Regulation still finds the above referenced application package insufficient. Based on our review of the company's responses of October 1994, we have determined that Item No. 1 from our previously submitted sufficiency comments of September 21, 1994, has not been properly addressed. The sufficiency comment requested that the applicant provide test methods utilized in determining preliminary test data for the combustion turbine, and to indicate any deviations from EPA methods, if some other methods were used. If Westinghouse's internal test procedures were used, please describe those procedures, and their deviations from the EPA test methods.

The Bureau will determine sufficiency once the above response is received from the company. If there are any questions, please call Syed Arif at 488-1344.

Revised Pages for Replacement into Hardee Unit 3
Site Certification Application/Environmental Analysis

Site Certification Application/Environmental Analysis	
Volume I	
	Page 2.3.6-31
	Page 3.8.2-2
	Page 4.2.1-2
	Page 4.2.1-4
	Page 4.2.1-5
Volume II	
Appendix 10.1.4	Page 10.1.4-4
	Page 10.1.4-15
	Page 10.1.4-17
	Page 10.1.4-19
	Page 10.1.4-23
	Page 10.1.4-24
	Page 10.1.4-25
	Page 10.1.4-27
	Pages 10.1.4-33 through 10.1.4-46



2.3.6-31

Figure 2.3.6-3
Location of Jurisdictional Wetlands

Source: KBN, 1994.



Runoff from areas of the site not disturbed by construction activities or plant operations will be directed to the natural drainage systems within the area. Runoff from areas of the site disturbed by construction activities will be collected in the stormwater drainage system and routed to the stormwater detention pond. A sedimentation and erosion control plan for Hardee Unit 3 is included in Appendix 10.9.

As necessary, sediment collected during the construction phase will be removed to ensure adequate pond volume and disposed of onsite.

include clearing 0.02 ha (0.06 acre) of wetland, permanently filling 0.006 ha (0.015 acre) of wetland within the 0.024 ha (0.06 acre) clearing for pipe support structures, and temporarily filling 0.002 ha (0.006 acre) of wetland within the 0.024 ha (0.06 acre) clearing to construct two temporary pads for equipment work area (Table 4.2.1-1).

Clearing 0.024 ha (0.06 acre) of reclaimed wetland will consist of removing 41 planted trees. These trees are approximately 0.9 to 1.5 m (3 to 5 ft) tall and were planted 2 years ago by IMC/Agrico. Additionally, a few large oak trees and one black gum located along the upland/wetland boundary will also be removed for constructing the circulating water pipes. The only fill to remain in the reclaimed wetland upon construction of the circulating water pipes will be two concrete support structures each 0.9 m by 5.5 m (3 ft by 18 ft) in size. After the circulating water pipes are constructed, the original 0.024 ha (0.06 acre) cleared area will be returned to original grade, planted with native herbaceous species, and maintained as a herbaceous wetland.

Wetland impacts associated with a highly disturbed portion of the unnamed tributary wetland will occur southwest of the proposed construction laydown area (Area No. 2 in Figure 4.2.1-1). A total of only 0.012 ha (0.03 acre) will be filled and 0.004 ha (0.01 acre) will be excavated to construct a retainment berm. This proposed impact area is herbaceous in nature and has been extensively disturbed by feral hog activity.

An access road is proposed to be constructed in the southwest corner of the site and will cross an existing FDEP and USACE jurisdictional drainage ditch wetland (Area No. 5 in Figure 4.2.1-1). Two culverts will be placed in the drainage ditch to ensure passage of the 25-year storm peak. A second drainage ditch which forms the eastern boundary of the project site will be crossed by two culverts (Areas Nos. 6 and 7 in Figure 4.2.1-1). These crossings will provide access to the power plant from the existing access road. A total of 0.008 ha (0.02 acre) will be excavated and 0.117 ha (0.29 acre) will be filled to install these two culverts. These roadside drainage ditches will continue to be mowed and maintained. Therefore, ecological impacts to these ditches will be minor.

Table 4.2.1-1. Summary of Wetland Impacts for Each Jurisdictional Agency

Regulatory Jurisdiction	Permanent Clearing	Permanent Filling	Temporary Filling	Excavation
SWFWMD	0.06 acre across tributary wetland	0.015 acre for pipe support structures in tributary wetland	0.006 acre for temporary pads in the tributary wetland	0.015 acre for installation of support structure
		0.07 acre for culverts across west drainage ditch		0.015 acre for culverts across west drainage ditch
FDEP	0.06 acre across tributary wetland	0.015 acre for pipe support structures in tributary wetland	0.006 acre for temporary pads in the tributary wetland	0.015 acre for installation of support structure
		0.03 acre for retainment berm		0.01 acre for retainment berm
		0.014 acre for culverts across west drainage ditch		0.015 acre for culverts across west drainage ditch
		0.28 acre for culverts across east drainage ditch		0.010 acre for culverts across east drainage ditch
USACE	0.22 acre across tributary wetland	0.085 acre for pipe support structures in tributary wetland	0.006 acre for temporary pads in the tributary wetland	0.30 acre in stormwater detention basin
		4.69 acre in power block area		0.85 acre for installation of support structures
		0.01 acre for retainment berm		0.003 acre for retainment berm
		0.17 acre for stormwater detention basin		0.01 acre for culverts across drainage ditch
		0.07 acre for culverts across drainage ditch		

Note: acres x 0.4047 = hectares.

Source: KBN, 1994.

4.2.1-5

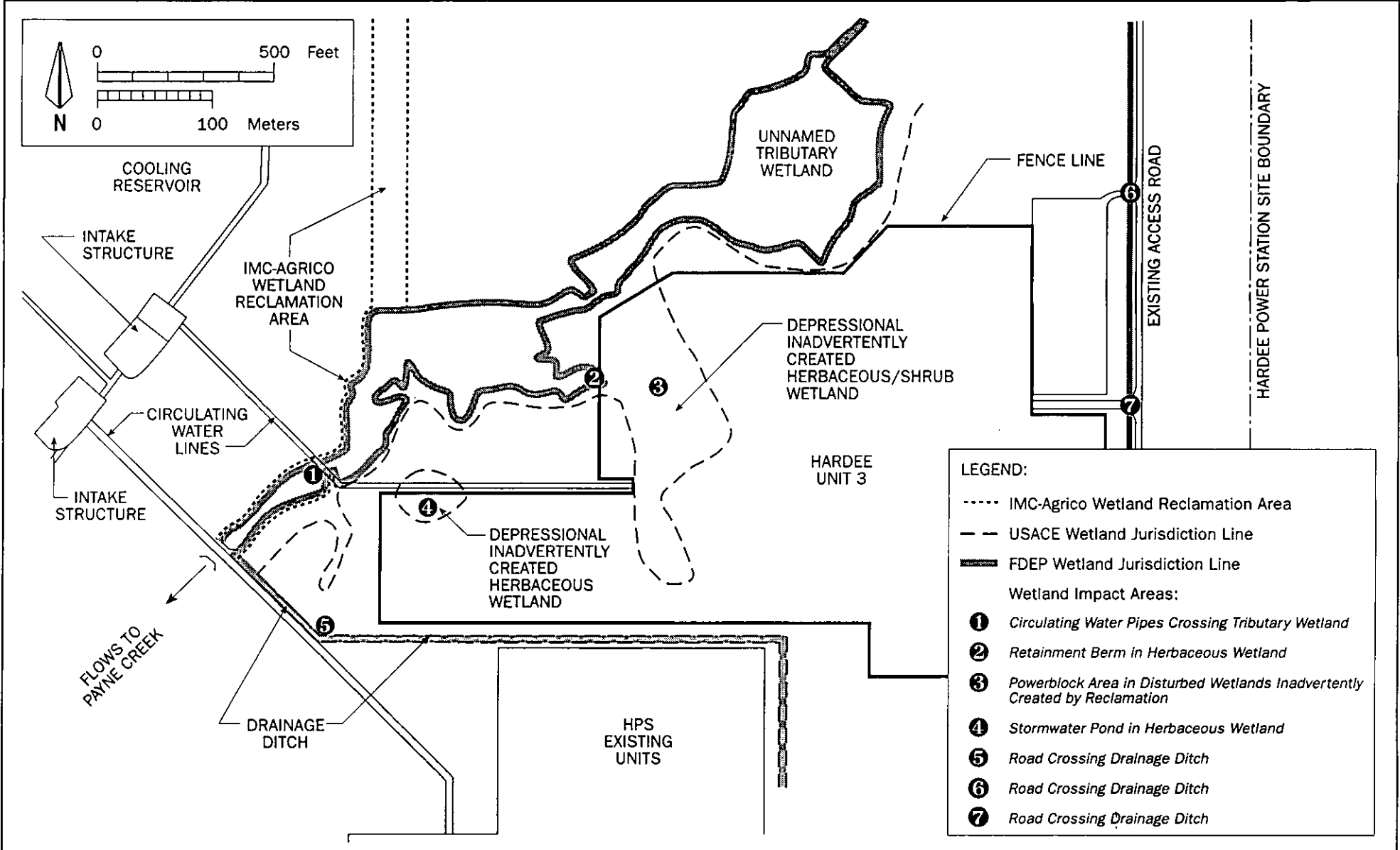
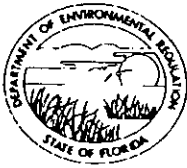


Figure 4.2.1-1
Location of Jurisdictional Wetlands in Relation to Hardee Unit 3 Site Plan

Source: KBN, 1994.





Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

DER Form # 17-312-800(1)

Form Title Joint Ap. for Works in the Waters of Florida

Effective Date October 30, 1991

DER Application No. _____

Joint Application for Works in the Waters of Florida

Department of the Army (Corps)/Florida Department of Environmental Regulation (DER)/
Department of Natural Resources (DNR)/Delegated Water Management District (Delegated WMD)

Corps Application Number (official use only)	DER Application Number (official use only)	
1. Applicant's Name and Address Name <u>Seminole Electric Cooperative Incorporated</u> <small>Last Name, First name if individual; Corporate Name; Name of Govt. Agency</small> Street <u>P.O. Box 27200</u> City <u>Tampa</u> State <u>Florida</u> Zip <u>33688-2000</u> Telephone (<u>813</u>) <u>963-0994</u> (Day) (<u>813</u>) <u>963-0994</u> (Night)		
2. Name, Address, Zip Code, Telephone Number and Title of Applicant's Authorized Agent Name <u>Opalinski, Mike</u> <small>Last Name, First Name</small> Corporate Name; Name of Govt. Agency <u>Seminole Electric Cooperative Incorporated</u> Street <u>P.O. Box 27200</u> City <u>Tampa</u> State <u>Florida</u> Zip <u>33688-2000</u> Telephone (<u>813</u>) <u>963-0994</u> (Day) (<u>813</u>) <u>963-0994</u> (Night)		
3. Name of Waterway at Work Site: <u>Unnamed tributary wetland that flows to Payne Creek, Hardee County.</u>		
4. Street, Road or Other Location of Work: <u>County Road 663 3.5 miles North of State Road 62</u> Incorporated City or Town <u>Hardee County</u> Section <u>1</u> Township <u>33S</u> Range <u>23E</u> Section _____ Township _____ Range _____ Section _____ Township _____ Range _____ County(ies) <u>Polk and Hardee</u> Coordinates in Center of Project: _____ Federal Projects Only: _____ x _____ y Latitude <u>27</u> ° <u>38</u> ' <u>43</u> " Longitude <u>81</u> ° <u>58</u> ' <u>10</u> " Lot _____ Block _____ Subd _____ Plat Bk _____ Pg _____ Directions to Locate Site: <u>Approximately 5 miles south of CR 630 on Fort Green Road. Turn west off of Fort Green Road at the entrance to the existing HPS facilities. Site is located on the north side of the existing facility (Figure 2).</u>		
5. Names, Addresses, and Zip Codes of Adjacent Property Owners Whose Property Also Adjoins the Water (Excluding Applicant). Show Numbers or Names of These Owners on Plan Views. If More Than Six (6) Owners Adjoin the Project, You May Be Required to Publish a Public Notice for the DER.		
1. <u>IMC-Agrico</u> <u>P.O. Box 2000</u> <u>Mulberry, FL 33860-1100</u>	2. <u>CF Industries</u> <u>P.O. Box 1549</u> <u>Wauchula, FL 33873</u>	3. _____ _____ _____
4. _____ _____ _____	5. _____ _____ _____	6. _____ _____ _____

Northwest District
160 Governmental Center
Pensacola, Florida 32501-6794
904-436-8300

Northeast District
Suite 8200, 7826 Baymeadows
Way
Jacksonville, Florida 32268-7677
904-448-4300

Central District
3319 Maguire Blvd., Suite 232
Orlando, Florida 32803-3767
407-894-7655

Southwest District
4620 Oak Fair Blvd.
Tampa, Florida 33610-
7347
813-623-6661

South District
2269 Bay St.
Fort Myers, Florida 33901-2896
813-332-8976

Southeast District
1800 S. Congress Ave., Suite A
West Palm Beach, Florida
33406
407-433-2660

DER Form # 17-312-800(1)

Form Title Joint Ap. for Works in the Waters of Florida

Effective Date October 30, 1981

DER Application No. _____

6. Proposed Use (Check one or more as applicable) Private Single Family Multi Family
 Public Commercial New Work Alteration of Existing Works Maintenance Other(Explain) Industrial

7. Desired Permit Duration (see Fee Schedule) Energy Facility
 5 Yr 10 Yr Other (Specify) _____

8. General Permit or Exemption Requested
 DER General Permit FAC Rule 17-312. _____ DER Exemption FAC Rule 17-312. _____ Section 403. _____ F.S.

9. Total Extent of Work in Jurisdictional Open Waters or Wetlands: (Use additional sheets and provide complete breakdown of each category if more space is needed). See Table 1 for breakdown of wetland impact.

a. Within Corps Jurisdiction:

Fill:	<u>218,840</u>	Sq. Ft.	<u>5.03</u>	Acres	<u>31,505</u>	Cu. Yds.
Excavation:	<u>17,340</u>	Sq. Ft.	<u>0.40</u>	Acres	<u>1,264</u>	Cu. Yds.

b. Within DER Jurisdiction:

Fill:	<u>3,411</u>	Sq. Ft.	<u>0.09</u>	Acres	<u>295</u>	Cu. Yds.
Excavation:	<u>1,950</u>	Sq. Ft.	<u>0.045</u>	Acres	<u>99</u>	Cu. Yds.

Excavation Waterward of MHW 1,950 cu. yds. (Information needed for DNR)

c. DER Jurisdictional Area Severed (Area Landward of Fill Structures which will be Severed):
0 Sq. Ft. 0 Acres

d. DER Jurisdictional Area Created (New Excavation from Uplands, Exclusive of Mitigation):
0 Sq. Ft. 0 Acres

e. Docks, Piers, and Over Water Structures: N/A

Total Number of Slips _____	Total Number of Mooring Pilings _____
Length _____ Width _____ Height above MHW _____	Length _____ Width _____ Height above MHW _____
Number of Finger Piers _____ Length _____ Width _____ Height _____	Number of Finger Piers _____ Length _____ Width _____ Height _____
Total area of structure over waters & wetlands _____ sq. ft.	
Use of structure _____	

Will the docking facility provide:	No	Yes	Number
Liveaboard Slips	<input type="checkbox"/>	<input type="checkbox"/>	_____
Fueling Facilities	<input type="checkbox"/>	<input type="checkbox"/>	_____
Sewage Pump-out Facilities	<input type="checkbox"/>	<input type="checkbox"/>	_____
Other Supplies or Services Required for Boating (Excluding refreshments, bait and tackle)	<input type="checkbox"/>	<input type="checkbox"/>	_____

f. Seawall length N/A ft. Seawall material _____

Riprap revetment length _____ ft.	Slope _____ H: _____ V _____	Toe width _____ ft.
Riprap at toe of seawall length _____ ft.	Slope _____ H: _____ V _____	Toe width _____ ft.

Size of riprap _____

Type of riprap or seawall material _____

g. Other (See Item 10). N/A

The wastewater piping will be constructed of 10-inch-diameter fiberglass reinforced pipe (FRP), "Bondstrand 2000" or equivalent. This material was specifically selected to eliminate the possibility of corrosion and is the same material used for the wastewater piping for the HPS existing units. The wastewater piping for the Hardee Unit 3 facility will be installed aboveground and will be provided with expansion joints at required intervals to account for thermal expansion. The aboveground placement of the wastewater pipes will allow visual inspection on a regular basis.

The selection of the noncorrosive FRP construction material for the wastewater piping, combined with the use of expansion joints and the ability for visual inspection of the pipe, effectively eliminates the potential for a significant impact to the onsite wetland crossing. All wastewater will be treated prior to being routed to the cooling reservoir. In the unlikely event a leak is detected in one of the circulating pipes or the low-volume wastewater pipe, appropriate measures will be taken to stop the leak and prevent damage to the tributary and its associated wetlands.

After the pipes are constructed, the cleared wetland area will be returned to original grade, planted, and maintained as a herbaceous wetland (more detail on restoration can be found in the attached wetland mitigation plan). Upon construction of the pipes, the only fill to remain in the reclaimed wetland will be concrete support structures, each 18 ft by 3 ft in size.

3.2 RETAINMENT BERM

A retainment berm will be constructed along the south side of the unnamed tributary wetland to prevent runoff from the power plant to the wetland. Most of the retainment berm will be outside FDEP-jurisdictional wetlands; however, a small portion of the berm will impact 0.04 acre of a highly disturbed portion of the unnamed tributary wetland (Area No. 2 in Figure 4). This proposed impact area is herbaceous in nature and has been extensively disturbed by feral hog activity.

The retainment berm will measure 2 ft high by 5 ft wide and contain 3:1 sideslopes (Figures 7 and 8). A total of 25 cubic yards to fill will be placed in jurisdictional wetlands for construction of the retainment berm. A small ditch, 1 ft deep by 4 ft wide with a 3:1 sideslope, will be constructed next to the retainment berm. This ditch will impact only 0.01 acre of wetland and require 18 cubic yards of excavation.

3.3 POWER BLOCK AREA

Construction of the power block area will impact 4.69 acres of USACE-jurisdictional wetlands (Area No. 3 in Figure 4). The wetlands to be impacted are low-lying areas that were to have been reclaimed to upland pasture, but were unintentionally graded as low pockets during reclamation. The soil in the reclaimed area contains a high clay content as a result of overburden material from the mining process. Thus, water retention is high and has resulted in colonization of weedy species such as cat-tail, primrose-willow, and Carolina willow. Impacting these wetlands is not expected to result in a loss of significant wildlife habitat.

The average existing grade elevation is 124.0 ft and the proposed elevation of the power block area is 128.0 ft. Therefore, the average fill height in the power block area is 4 ft. The total fill for the power block area is 30,300 cubic yards in USACE-jurisdictional wetlands (Figure 7).

3.4 DETENTION BASIN

A stormwater detention basin will be constructed on the west side of the proposed site. A portion of a small isolated wetland (0.47 acre of the 0.55-acre wetland) will be impacted (Area No. 4 in Figure 4). This wetland is USACE-jurisdictional, and, like the 4.69-acre wetland described above, this wetland was unintentionally created during the reclamation process. It is colonized by weedy wetland species.

The existing grade elevation in the area of the stormwater basin is approximately 120.5 ft. Fill in this area is required for the detention basin containment berm. A 180 ft long section of the berm cuts through the USACE wetland limits and will impact 0.17 acre of the wetland (Figures 9 and 10). The containment berm has a top elevation of 125.0 ft. The top of the berm is 10 ft wide with 4:1 sideslopes on the inside of the basin and 3:1 sideslopes on the outside. The total fill in this USACE-jurisdictional wetland is 780 cubic yards.

The excavation in this area is for detention basin capacity requirements. The average elevation inside the detention basin, within the wetland limits, is 118.5 ft. The area of the wetland located inside the actual detention basin is 0.30 acre. Therefore, the total excavation in this area will be 970 cubic yards.

The stormwater detention basin will serve as a wet detention pond in accordance with the requirement of SWFWMD. The basin will retain the first 1 inch of runoff from the plant site and will release it through a bleed down pipe. A sedimentation area is provided where the runoff enters the basin. The runoff will flow through a littoral zone for biological treatment and removal of pollutants before being discharged. Runoff from the basin will be discharged to the unnamed tributary wetland. An energy dissipation system will be designed and constructed in the uplands to minimize the possibility of erosion in the unnamed tributary wetland.

3.5 DITCH CROSSINGS

Two drainage ditches are proposed to be crossed. An access road is proposed to be constructed in the southwest corner of the site and will cross an existing FDEP and USACE jurisdictional drainage ditch (Area No. 5 in Figure 4). This drainage ditch is a roadside ditch that is frequently mowed and maintained. The road is necessary to assure access from the plant facilities to the cooling reservoir.

Two 24-inch culverts will be placed in the drainage ditch and will ensure passage of the 25-year storm peak (Figures 9 and 11). The access road will be an aggregate surfaced road. It will be 18 ft wide with 3 ft wide shoulders. The elevation of the road at the ditch is 119.0 ft. The invert of the two 24-inch diameter culverts is 115.75 ft. Therefore, the total fill in the FDEP jurisdictional area is 111 cubic yards. The only excavation required is under the culverts for pipe bedding. The total excavation is 15 cubic yards.

A second drainage ditch, which forms the east boundary of the project site, will be crossed by two entrance roads (Areas No. 6 and 7 in Figure 4). These crossings are necessary to provide access to the power plant from the existing entrance road. Two culverts will be placed in the drainage ditch (C-12 and C-13; Figure 12 and 13). To install both culverts will require excavating 0.01 acre of FDEP-jurisdictional wetland and filling 0.028 acre of wetland. The roads will be constructed in a manner similar to that described above for the first drainage ditch crossing.

3.6 SEDIMENTATION PLAN

Temporary measures will be used during construction to control erosion and sediment transfer from the site. Silt fences will be used to filter sediments washed from grading areas where the

ground slopes away from the site. Areas disturbed during grading operations will be seeded to establish a vegetative cover to reduce erosion on the site. A more detailed description of sedimentation measures is provided in the Erosion and Sedimentation Control Plan in Appendix 10.10 of the Site Certification Application.

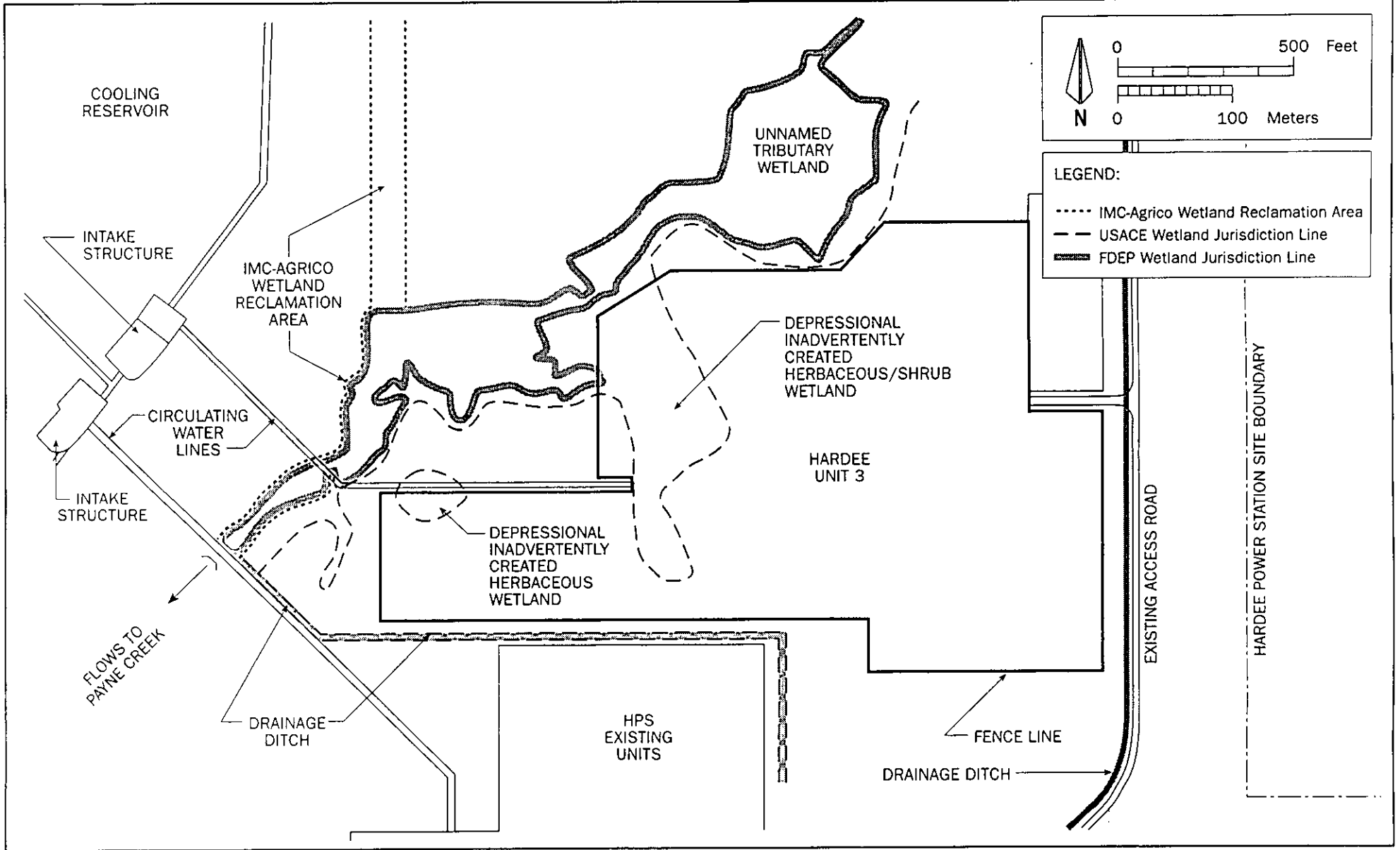
3.7 DEWATERING PLAN

Groundwater dewatering will be used primarily for excavation, installation, and backfill of underground utilities. Dewatering effects will be shallow and will not impact existing facilities or wetlands. A silt screen will be used to minimize the transport of suspended solids in the dewatering flow. Discharge from dewatering operations will be directed to the runoff detention basin where the filtration system will provide suspended solid sedimentation and removal.

Table 1. Summary of Wetland Impacts

Wetland Impact		Permanent Clearing		Permanent Filling		Temporary Filling		Excavation	
		FDEP	USACE	FDEP	USACE	FDEP	USACE	FDEP	USACE
Circulating Water Line	sf	2,600	9,400	650	3,720	255	255	650	3,720
	acre	0.06	0.22	0.015	0.085	0.006	0.006	0.015	0.085
	cyd	—	—	48	275	4.7	4.7	48	275
Retainment Berm	sf			1,500	450			450	150
	acre			0.03	0.01			0.01	0.003
	cyd			25	25			18	4
Power Block Area	sf				204,200				
	acre				4.69				
	cyd				30,300				
Stormwater Detention Basin	sf				7,470				13,070
	acre				0.17				0.30
	cyd				780				970
Road Across Drainage Ditch (C14)	sf			600	3,000			400	400
	acre			0.014	0.07			0.01	0.01
	cyd			111	125			15	15
Road Across Drainage Ditch (C12 and C13)	sf			1,200				450	
	acre			0.28				0.01	
	cyd			111				18	
Total	sf	2,600	9,400	3,411	218,840	255	255	1,950	17,340
	acre	0.06	0.22	0.09	5.03	0.006	0.006	0.045	0.40
	cyd			295	31,505	4.7	4.7	99	1,264

10.1.4-19



101423

Figure 3
Location of Jurisdictional Wetlands

Source: KBN, 1994.



10.1.4-24

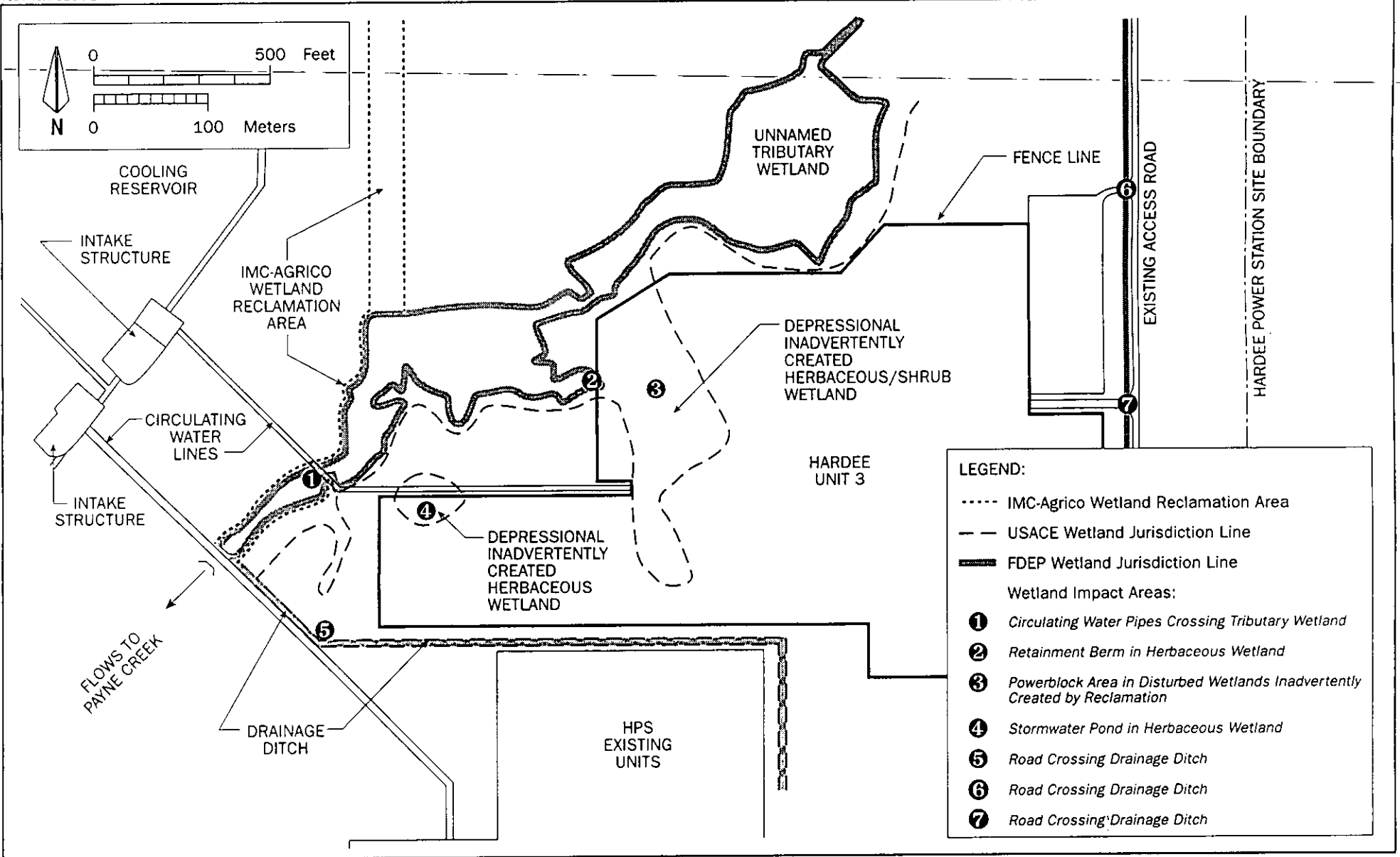


Figure 4
Location of Jurisdictional Wetlands in Relation to Hardee Unit 3 Site Plan

Source: KBN



10.1.4-25

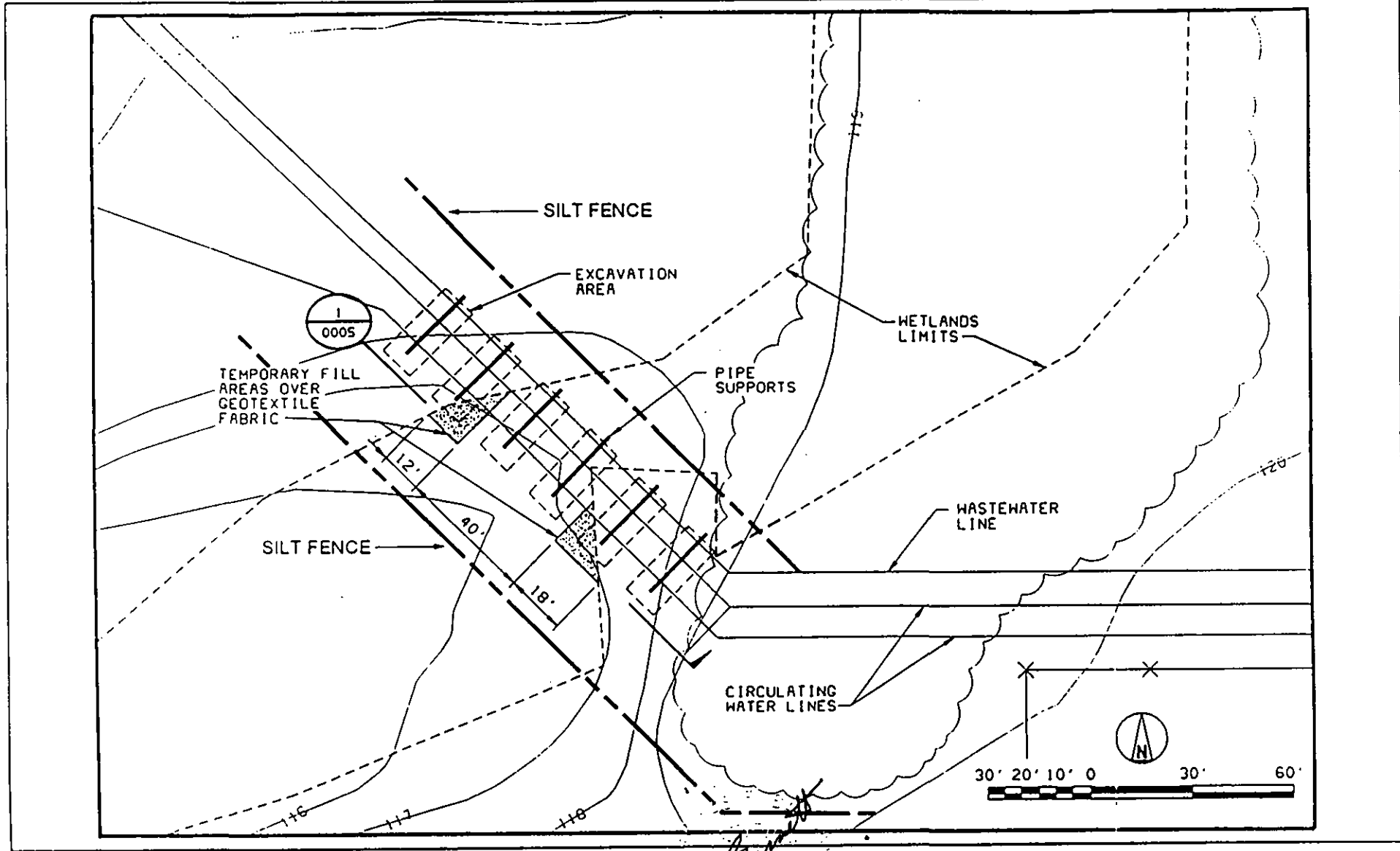


Figure 5
 Plan View of the Circulating Water Pipes Crossing the Wetland
 (Revised 10/12/94)

Thomas [Signature]



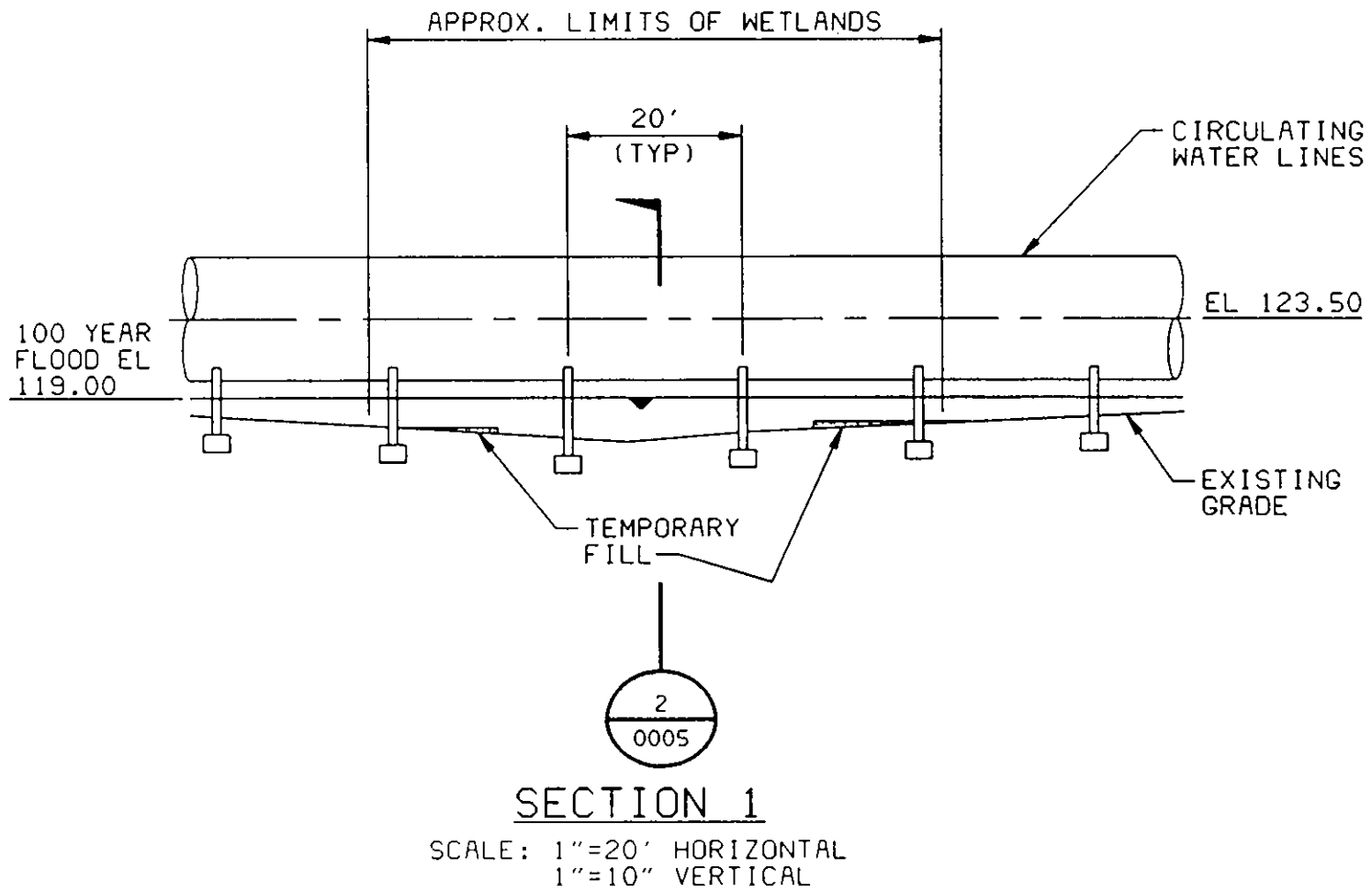
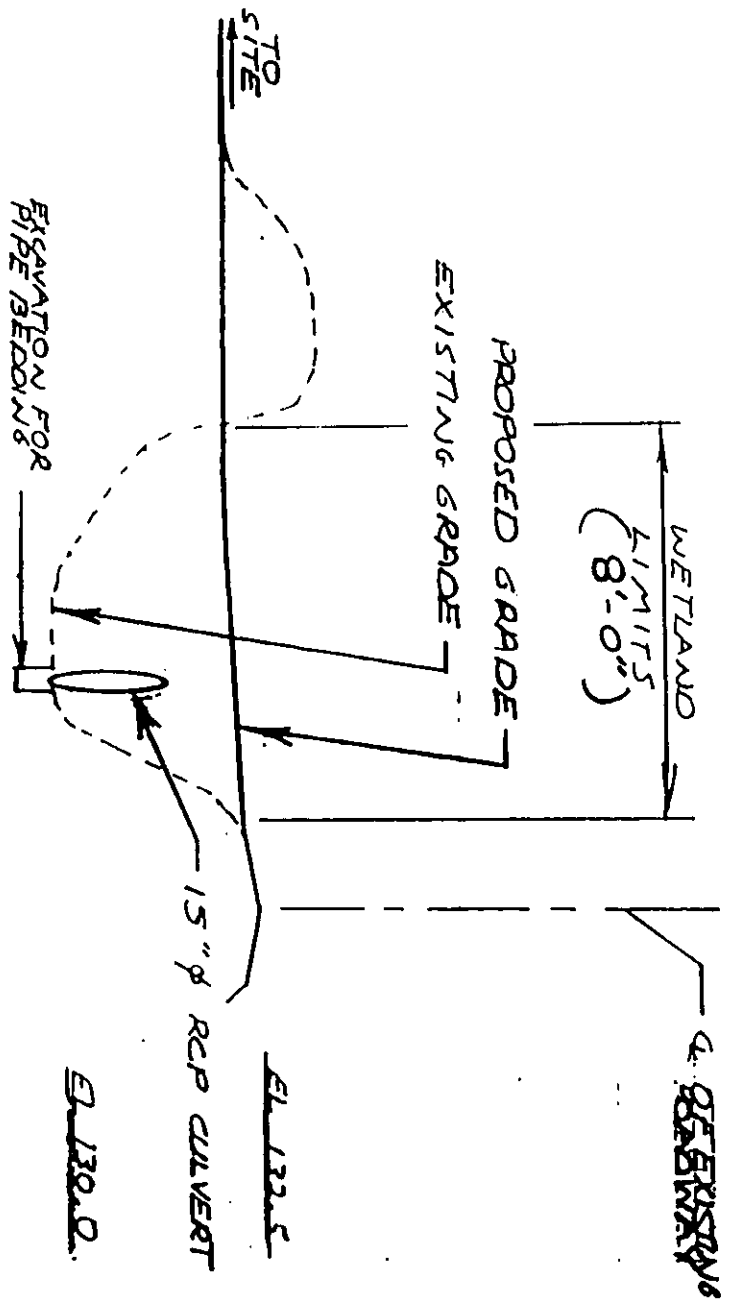


Figure 6
Cross-Section of the Circulating Water Pipes Crossing the Wetland





CULVERT LENGTH = 75 LF

PROFILE
CULVERTS C-12 & C-13

[Handwritten signature]

Figure 13
 Cross-Section of the Drainage Ditch Crossing at
 Culverts C-12 and C-13
 (Revised 10/12/94)



WETLAND MITIGATION PLAN

1.0 INTRODUCTION

Seminole Electric Cooperative Incorporated (SECI) plans to build a 440-MW (net capacity) combined cycle unit on a 1,300-acre site in Hardee and Polk counties (Figure 1). The plant will be built adjacent to the existing Hardee Power Plant (Figure 2). The project site is located in an area that was recently mined and disturbed. The mined areas have been reclaimed predominately to upland pasture by Agrico Chemical Company under the provisions of their phosphate mine reclamation plan.

Wetland impacts are limited to five construction activities. Wetland impact acreages for both the Florida Department of Environmental Protection (FDEP) and U.S. Army Corps of Engineers (USACE) are summarized on Table 1. SECI has designed the Hardee Unit 3 facility to avoid and minimize wetland impacts to the greatest extent possible.

2.0 WETLAND IMPACTS

The circulating water pipes will be constructed across IMC-Agrico's wetland reclamation area (Area No. 1 in Figure 3), and will clear a total of 0.06 acre of FDEP-jurisdictional wetlands and 0.22 acre of USACE-jurisdictional wetlands. Within the cleared area, excavation will occur to install concrete pipe support structures. The only remaining fill in the wetland will be the actual structures, which will be embedded approximately 2 feet (ft) below ground surface. The circulating water pipes will be supported above the 100-year flood elevation and, therefore, will not obstruct or hinder the hydrologic flow of the wetland.

In its current state, the proposed wetland impact area is primarily herbaceous, but has been recently planted with wetland trees as part of Agrico's wetland reclamation program for the Payne Creek Mine. To construct the circulating water pipes across the reclaimed wetland will require permanently removing 41 planted trees and 1 mature blackgum tree. After construction of the circulation pipes, the cleared wetland area will be returned to original grade (except for the remaining concrete pipe support structures), planted with native herbaceous wetland species, and maintained as a herbaceous wetland (see section 3.2 for restoration plan).

As compensation for the wetland impact associated with constructing the circulating water pipes, SECI proposes to create 0.22 acre of forested wetland on the north side of the tributary wetland (Figure 4). This compensation will provide a 3.7:1 ratio for impacting 0.06 acre of FDEP-jurisdictional wetland, and a 1:1 ratio for impacting 0.22 acre of USACE-jurisdictional wetland.

Construction of a retainment berm will fill 0.03 acre and excavate 0.01 acre of FDEP- and USACE-jurisdictional wetlands (Area No. 2 in Figure 3). The wetland impact site is a herbaceous portion of the unnamed tributary wetland that has been extensively disturbed by feral hog activity. Vegetation at the impact site is sparse due to considerable ground disturbance. SECI proposes to compensate for this wetland impact by creating an additional 0.04 acre of forested wetland on the north side of the tributary wetland, for a total of 0.26 acre of created forested wetland (Figure 4). A mitigation ratio of 1:1 for this impact is warranted due to the extensive disturbance at the impact site, and because forested wetland will be created to compensate for disturbance of a herbaceous wetland.

Two culverts and associated fill will be placed in a FDEP and USACE-jurisdictional drainage ditch wetland to facilitate road access to the cooling reservoir (Area No. 5 in Figure 3). This road and associated wetland crossing is necessary to assure access to the cooling reservoir. A total of 0.014 of drainage ditch wetland will be filled. The drainage ditch receives drainage from the proposed Hardee Unit 3 Project area and adjacent existing power facilities, and conveys water to Payne Creek via the unnamed tributary wetland. In its current state, the drainage ditch is regularly mowed and maintained. Mitigation is not proposed for this wetland impact because the wetland impact is minor and will not disrupt the conveyance capacity of the drainage ditch, and because the ecological value of the drainage ditch is low.

Two additional culverts will be placed in a drainage ditch which forms the eastern boundary of the property (Areas No. 6 and 7 in Figure 3). This ditch crossing is necessary to provide access to the power plant from the existing access road. A total of 0.28 acre of wetland will be filled to install the two culverts. Like the above described drainage ditch, this ditch is regularly mowed and maintained. Mitigation is not proposed for this wetland impact.

Other construction activities that will impact wetlands include filling a 4.69-acre USACE-jurisdictional wetland to construct the power block facilities, and excavating and filling 0.47 acre

of a 0.55-acre USACE-jurisdictional wetland for constructing a stormwater detention basin (Areas No. 3 and 4 in Figure 3). The wetlands proposed to be impacted by the power block facilities (4.69 acres) and stormwater detention basin (0.47 acre) were to have been reclaimed as upland pasture, but were inadvertently created as low pockets during post-mine reclamation. These areas are slight depressions within the reclaimed upland pasture that support weedy, early colonizing wetland species such as cattail, Carolina willow, and primrose willow. The overburden material used for reclamation contains a high clay content, and has contributed to the high water retention of these depressional areas. Because these two wetlands were historical uplands and inadvertently created during reclamation, and because they provide low ecological value, mitigation is not warranted for these two USACE-jurisdictional wetlands.

3.0 MITIGATION DESIGN

3.1 WETLAND CREATION

A total of 0.26 acre of forested wetland is proposed to be created on the north side of the unnamed tributary wetland (Figure 4). The mitigation site will be approximately 35 ft wide and extend approximately 324 ft along the tributary wetland. It will be situated between the tributary wetland and an upland reclamation area created by IMC-Agrico. Construction of the wetland will commence with the construction of the Hardee Unit 3 facility which is scheduled to begin in January 1997.

Initial land grading will include lowering the land surface in the area above seasonal high water (SHW) to the seasonal high water elevation (121.99 ft NGVD). All excavated material will be removed to the Hardee Unit 3 construction site. Figure 5 depicts the proposed grading and planting zones to be construction on the site. The soils in the proposed mitigation site contain a high clay content as a result of mining and reclamation and will be used as the primary substrate. No mulch is available from the site or nearby areas since areas to be excavated have been previously mined and reclaimed. The reclaimed soils have been shown to be adequate for forested wetland creation by numerous examples in the mining industry.

The list of plants to be planted at the mitigation site (Table 2) has been developed by identifying tree species growing in the adjacent floodplain forest and by determining which tree species are likely to be found in floodplain forest in the Polk/Hardee County area. The purpose of the

planting will be to increase wetland functions in the area, augment natural recruitment of tree and herbaceous species, and increase the density and diversity of tree species in the area.

All tree species will be obtained from nursery grown stock. Trees will be planted at a maximum of 10-ft centers to provide a density of at least 436 trees per acre. Herbaceous species will be planted on 3-ft centers to provide a density of 4,840 plants per acre.

Wetland monitoring will occur quarterly for the first year and semi-annually thereafter. The semi-annual monitoring will occur in March and September and will continue until a determination of success has been made. The mitigation project will be considered successful when the density of trees growing above the herbaceous stratum is equivalent to at least 400 trees per acre. Tree survival, health and vigor assessment, percent cover of desirable species, and percent cover of exotic and nuisance species will be determined during each monitoring event. Photographs from permanent photographic stations will be taken for each report and water level elevations will be measured on a monthly basis.

Monitoring methodology will include monitoring the planted tree species using two 10-ft-wide permanently marked belt transects (Figure 7). Herbaceous species will be monitored using 1 m² plots located every 10 meters on the permanent transects.

Maintenance of the mitigation area will include routine removal of nuisance and exotic species with the intent of reducing these species to approximately 0 percent following each maintenance event. At no time will the exotic and nuisance species coverage be allowed to exceed 10 percent. Any maintenance activities associated with monitoring events will be conducted after monitoring has occurred.

3.2 WETLAND RESTORATION

Wetland restoration will be conducted to mitigate for crossing the IMC-Agrico wetland reclamation area by the water circulating pipes. Construction of the circulation pipes will result in clearing 0.06 acre of FDEP-jurisdictional wetlands and 0.22 acre of USACE-jurisdictional wetlands (see Page 1). The only permanent fill remaining in this wetland will be concrete support structures. After construction is complete, the 0.22-acre site will be graded to the original elevation and planted with native herbaceous species. Figure 6 depicts a cross-section of the

wetland restoration site. The wetland will be maintained as a herbaceous wetland. The following species will be planted at the restoration site on 3-ft centers.

<i>Juncus effusus</i>	Soft rush
<i>Spartina bakeri</i>	Baker's cordgrass
<i>Scirpus validus</i>	Bulrush
<i>Panicum hemitomon</i>	Maidencane
<i>Thalia geniculata</i>	Fireflag
<i>Pontederia cordata</i>	Pickernelweed
<i>Sagittaria lancifolia</i>	Arrowhead

Wetland monitoring for the restoration area will occur semiannually (in March and September to correspond with the dry and wet season) until a determination of success has been made. The restoration project will be considered successful when percent cover of desirable species can be maintained at 80 percent or higher for three consecutive monitoring events. Plant survival, health and vigor assessment, percent cover of desirable species, and percent cover of undesirable species will be determined during each monitoring event. Photographs will also be taken and the water level measured at the restoration site.

Table 1. Wetland Impacts and Proposed Mitigation			
Wetland Impact	Type of Impact	Mitigation Ratio	Mitigation Plan
Circulating Water Line	FDEP - Clear 0.06 acre of reclamation wetland. Within the cleared area, excavate 0.015 acre and fill 0.015 acre in the form of concrete pipe support structures.	3.7:1	Create 0.22 acre of forested wetland on the north side of the tributary wetland.
	USACE - Clear 0.22 acre of reclamation wetland. Within the cleared area, excavate 0.085 acre and fill 0.085 acre in the form of concrete pipe support structures.	1:1	Restore the 0.22 acre cleared area as a herbaceous marsh.
Retainment Berm	FDEP and USACE - Fill 0.03 acre and excavate 0.003 acre of disturbed herbaceous wetland.	1:1	Create 0.04 acre of forested wetland on the north side of the tributary wetland.
Culverts	West and South Ditch: FDEP and USACE - 0.014 acre of drainage ditch wetland will be filled to install two culverts.	N/A	No mitigation is proposed for these wetland impacts due to the poor ecological quality and because the impact areas will continue to function as ditches and convey water after the culverts are installed.
	East Ditch: FDEP - 0.28 acre of drainage ditch wetland will be filled to install two culverts.		
Power Block Area	USACE - Fill 4.69 acre of disturbed herbaceous/shrub wetland.	N/A	No mitigation is proposed for this wetland impact due to its poor ecological quality and because this wetland was historically an upland that was inadvertently created during mine reclamation.
Detention Basin	USACE - 0.47 acre of disturbed herbaceous wetland will be excavated and filled.	N/A	No mitigation is proposed for this wetland impact due to its poor ecological quality and because this wetland was historically an upland that was inadvertently created during mine reclamation.

Note: N/A = Not Applicable.

Table 2. Wetland Species Planting Details in the Mitigation Area			
Species	Size	Quantity	Zone
<i>Acer rubrum</i>	3 gallon	25	High Swamp
<i>Liquidambar styraciflua</i>	3 gallon	25	High Swamp
<i>Fraxinus caroliniana</i>	3 gallon	25	High Swamp
<i>Taxodium ascendens</i>	3 gallon	20	Low Swamp
<i>Nyssa sylvatica var. biflora</i>	3 gallon	19	Low Swamp
<i>Spartina bakeri</i>	2 inch container	411	High Swamp
<i>Panicum hemitomon</i>	2 inch container	218	Low Swamp
<i>Juncus effusus</i>	2 inch container	412	High Swamp
<i>Sagittaria lancifolia</i>	2 inch container	218	Low Swamp

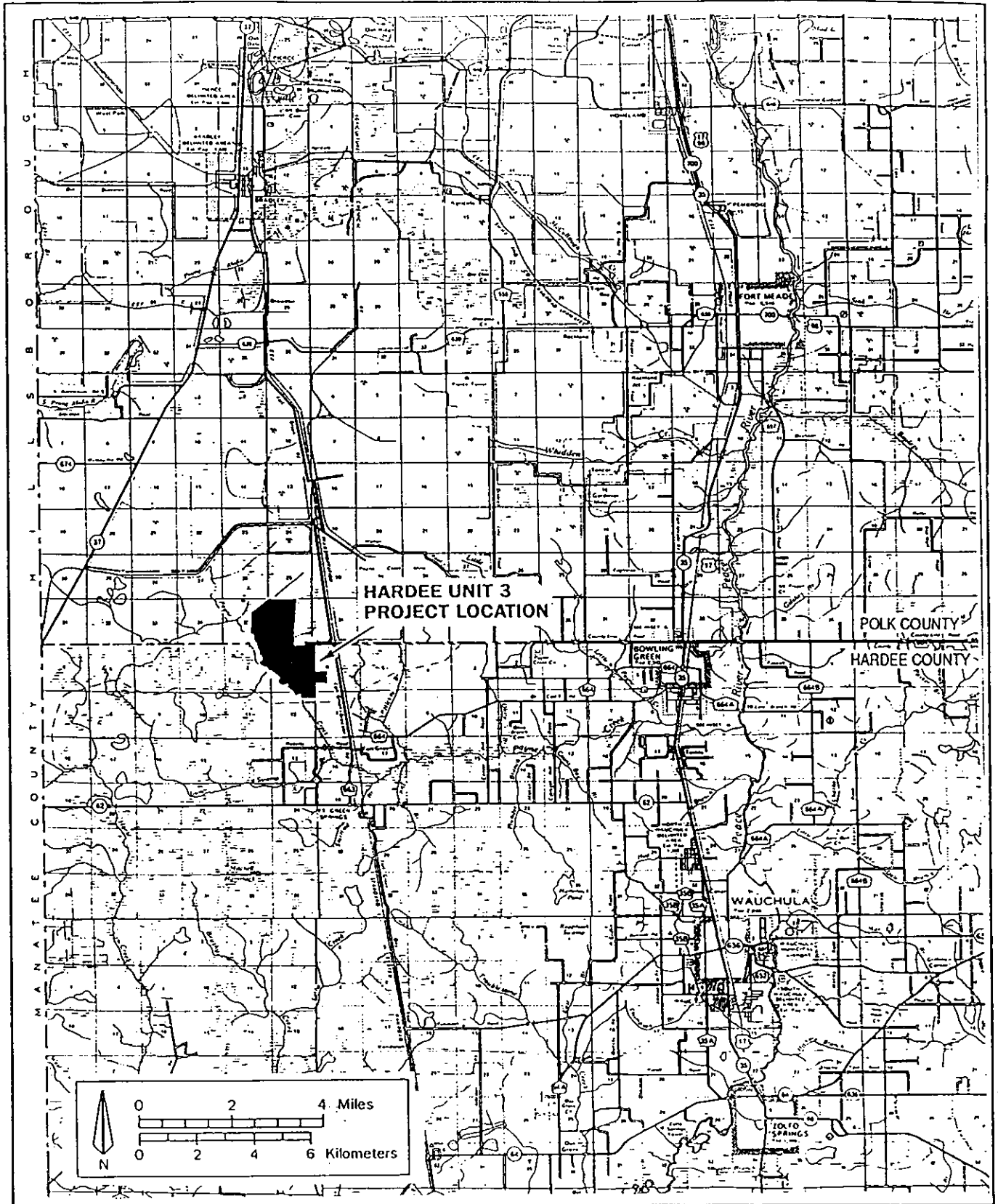


Figure 1
Location of Hardee Unit 3 Project

Sources: FDOT, 1990; 1992; KBN, 1994.



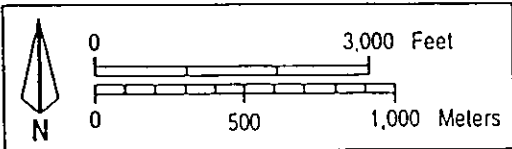
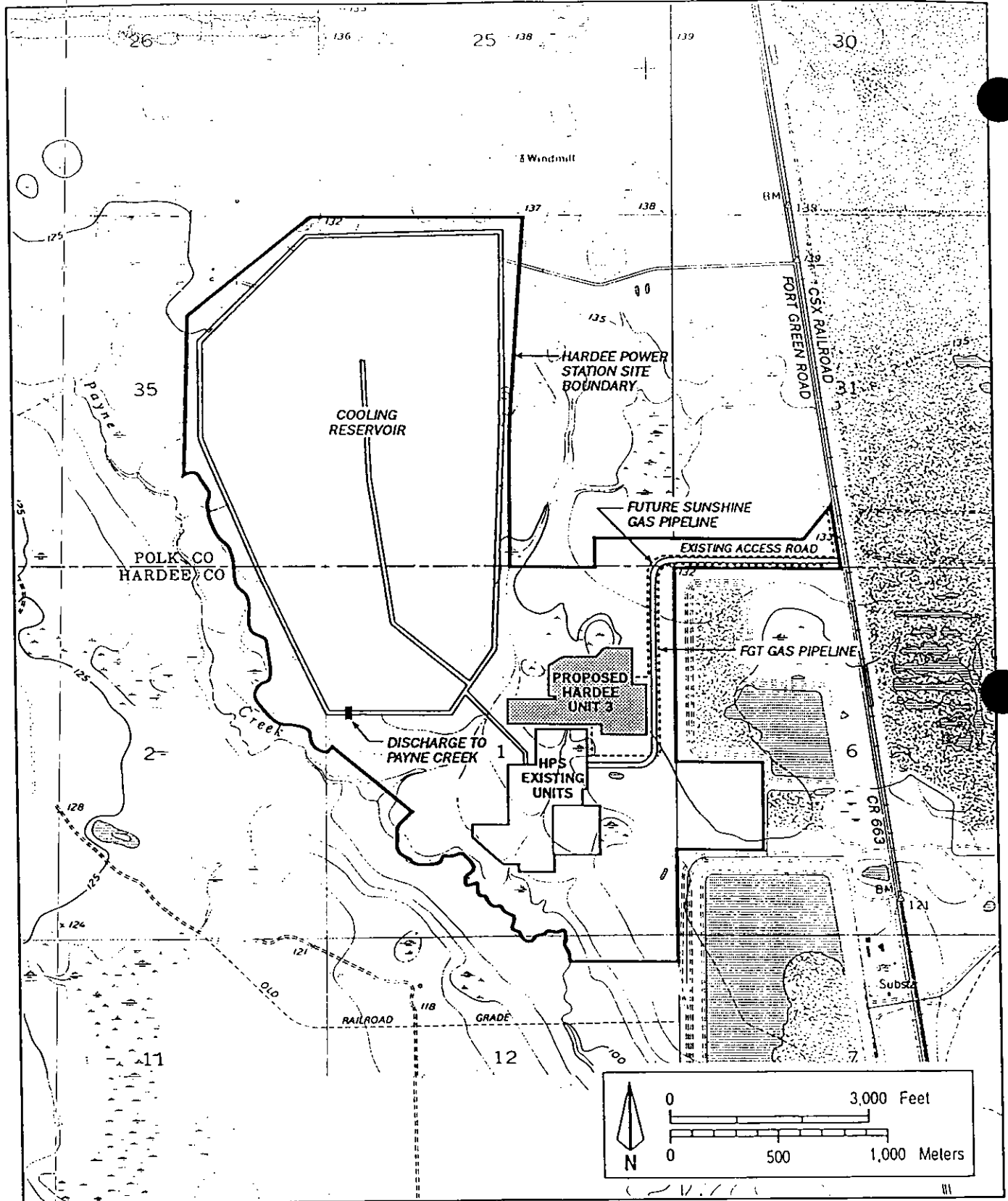
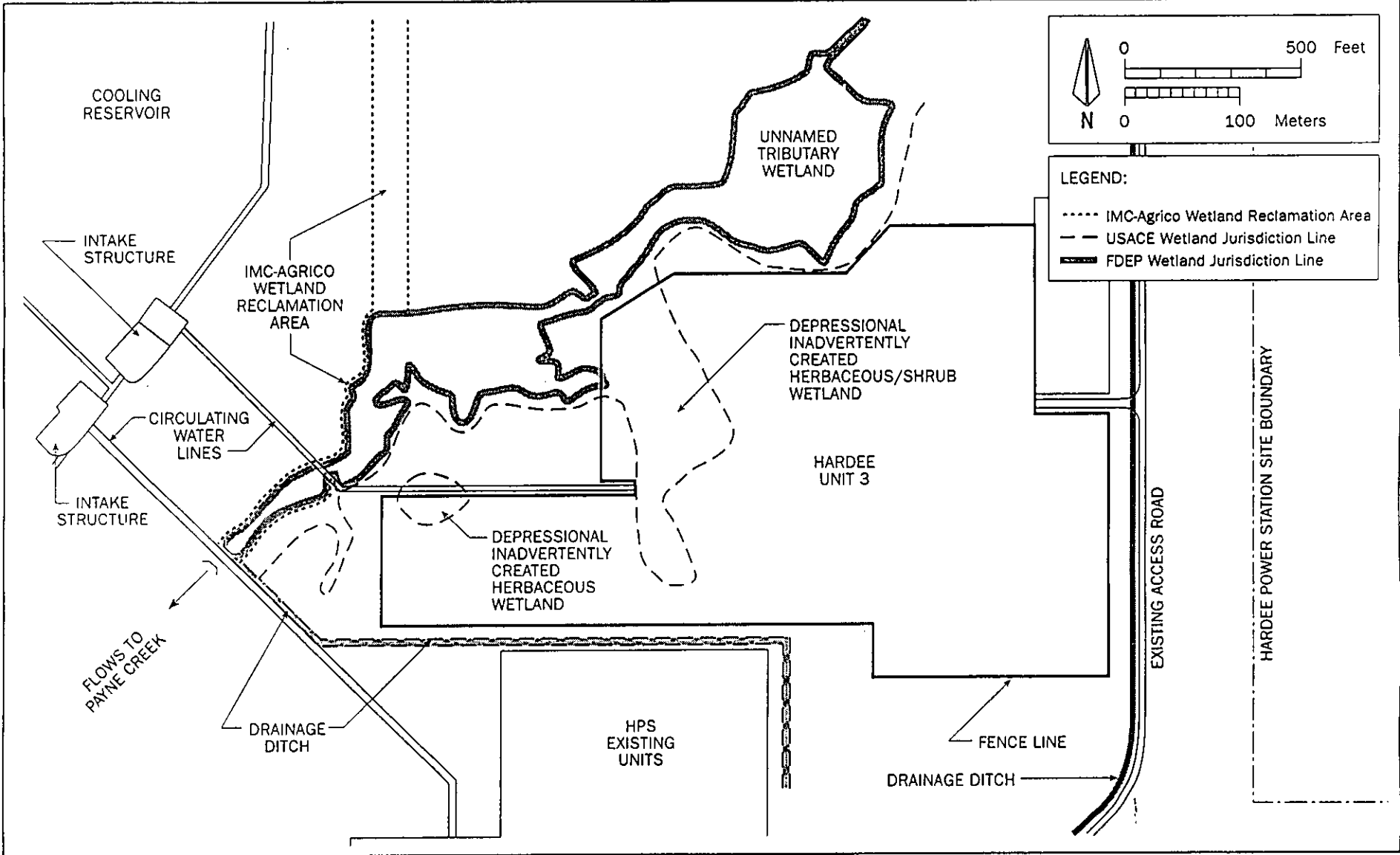


Figure 2
Hardee Unit 3 Site in Relation to Existing Facilities

Sources: USGS, 1987; KBN, 1994.





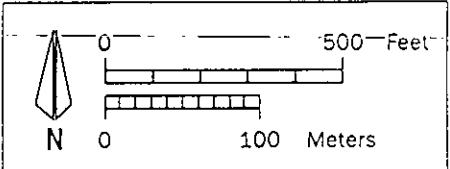
10.1.4.43

Figure 3
Location of Jurisdictional Wetlands

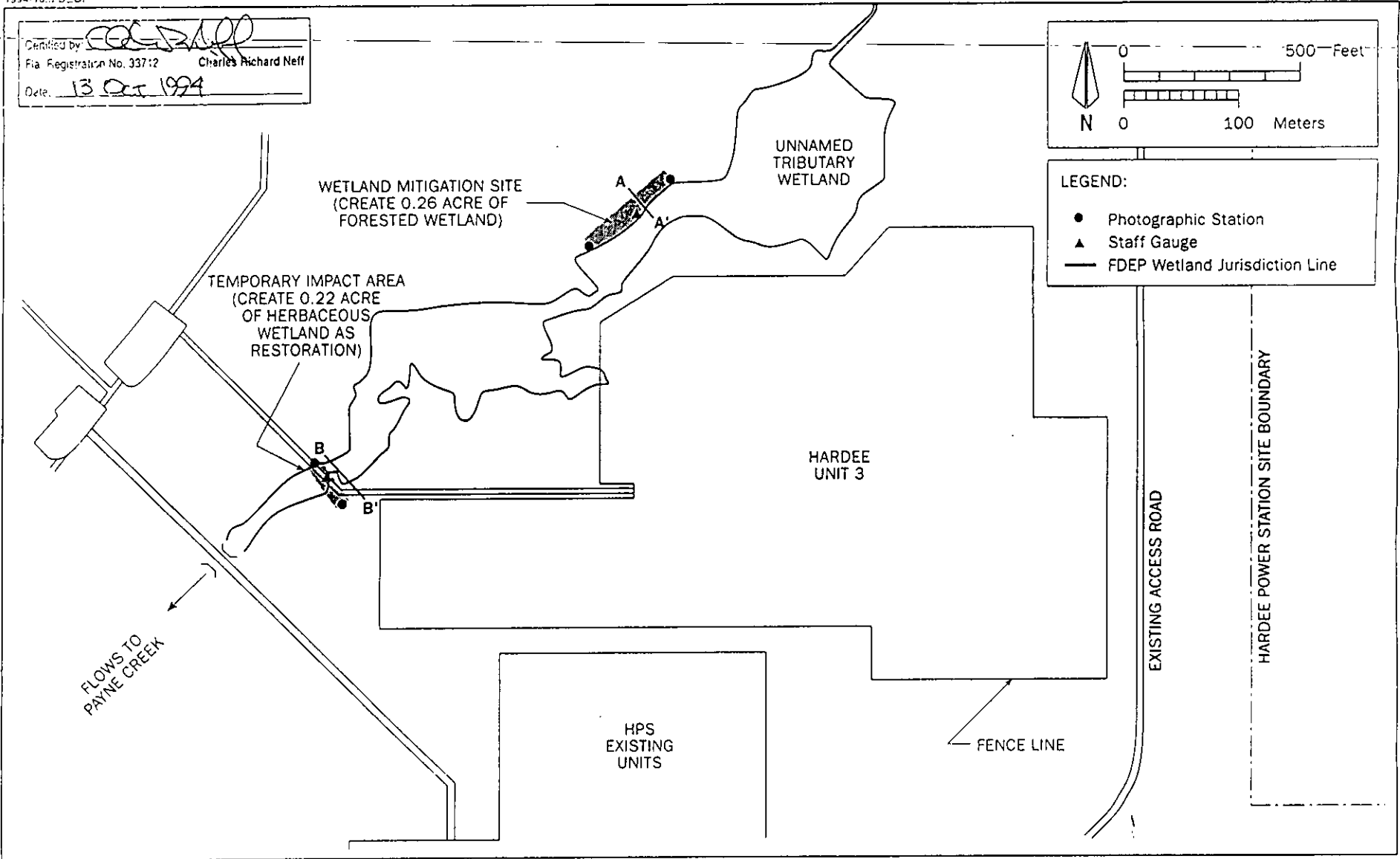
Source: KBN, 1994.



Certified by: *COLDRUP*
 Fla. Registration No. 33712 Charles Richard Neff
 Date: 13 OCT 1994



LEGEND:
 ● Photographic Station
 ▲ Staff Gauge
 — FDEP Wetland Jurisdiction Line

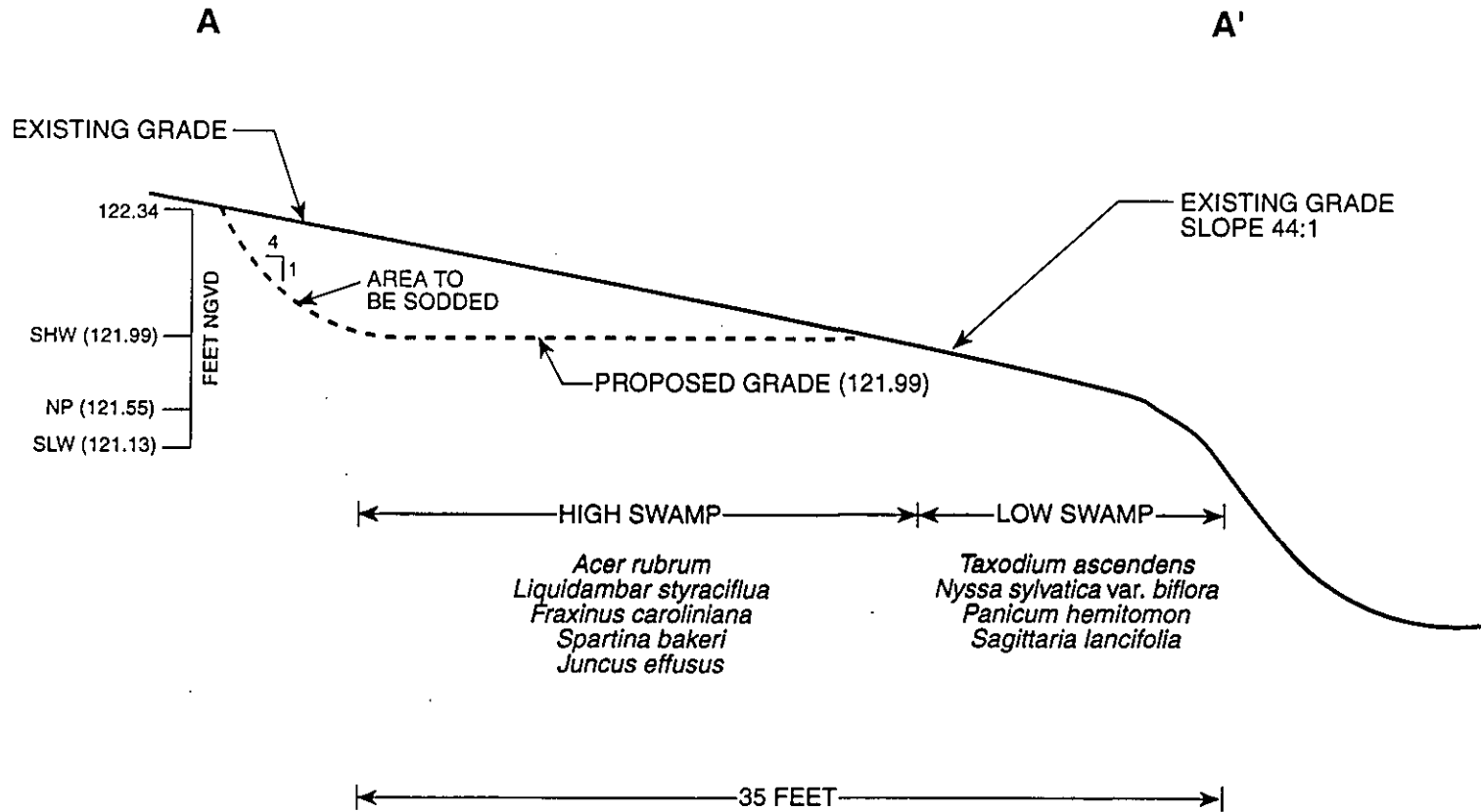


10.1.4.44

Figure 4
 Plan View of Mitigation Sites
 (Revised 10/12/94)

Source: KDN, 1994.





EXPLANATION

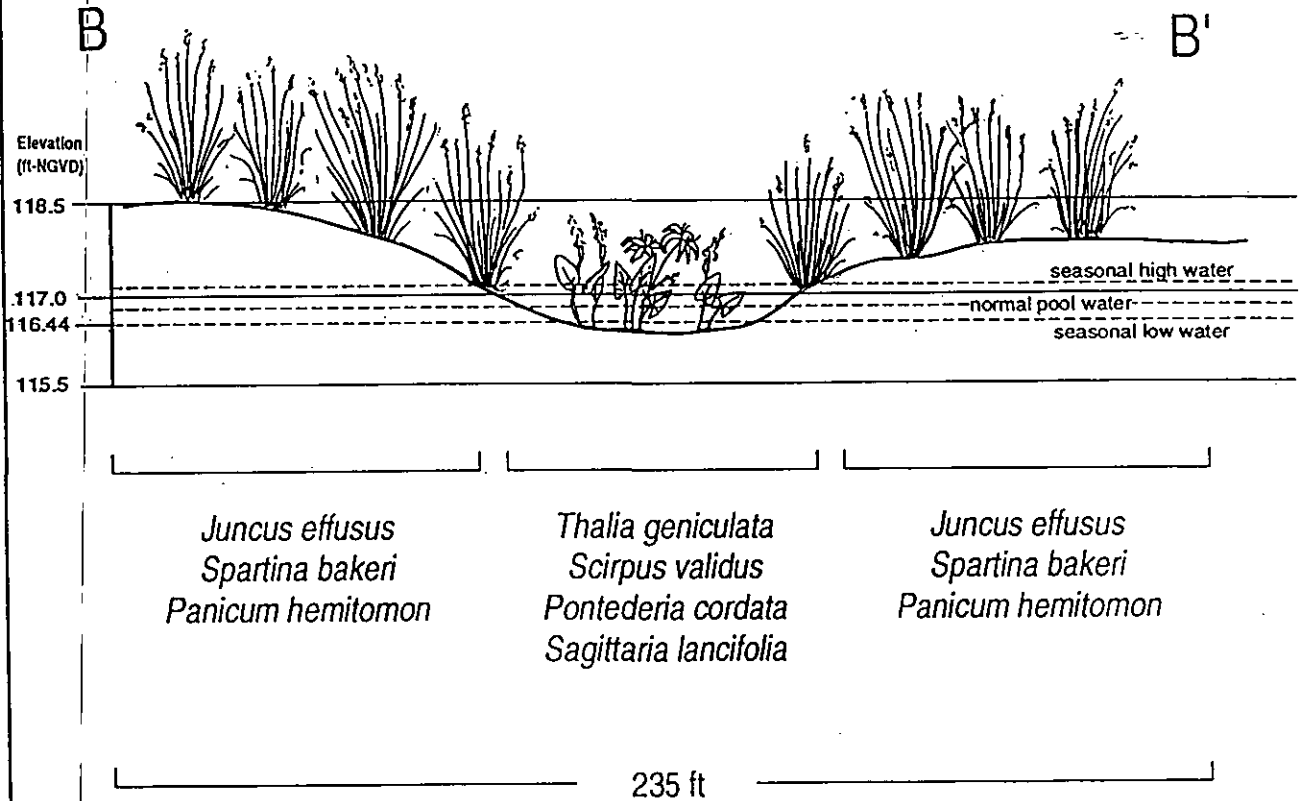
- SHW = SEASONAL HIGH WATER
- NP = NORMAL POOL
- SLW = SEASONAL LOW WATER

10.1.4-45

Figure 5
 Cross Section of the Wetland Creation Site
 (Revised 10/12/94)



Certified by Charles Richard Neff
 Fla. Registration No. 33712 Charles Richard Neff
 Date: 24 Aug 1994

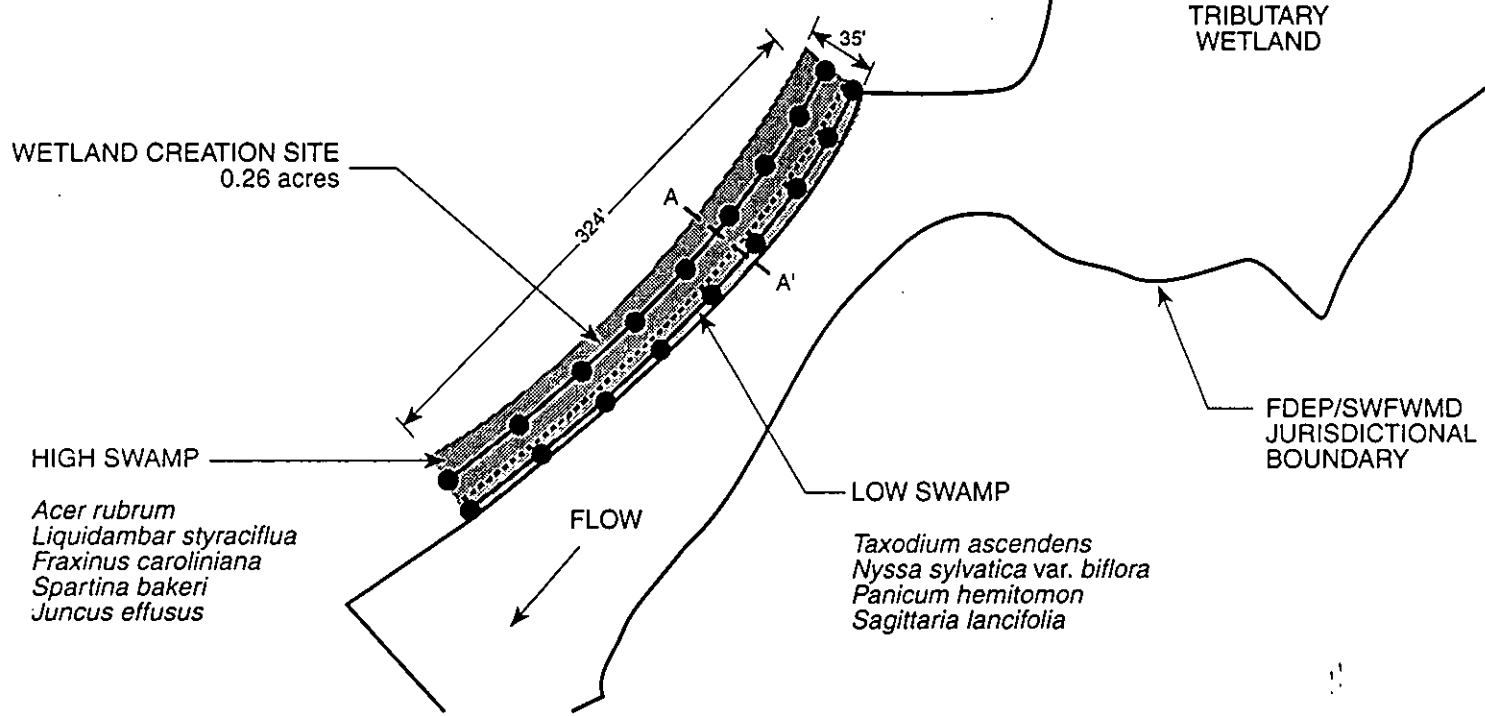
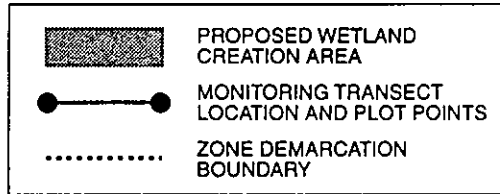
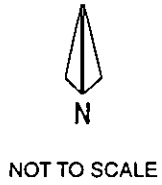


Notes: Wetland restoration area above seasonal high water corresponds with CORP-jurisdictional areas.

Plants will be bare root seedlings planted on 3-ft centers.
 Area of wetland mitigation site is 40 ft wide by 235 ft long (0.22 acre).
 Seasonal high water = 117.16 ft-NGVD
 Normal pool water = 116.80 ft-NGVD
 Seasonal low water = 116.44 ft-NGVD

Figure 6
 Cross Section of the Wetland Restoration Site
 (Revised 08/23/94)





10.1.4.47

Figure 7
Detailed Plan View of Wetland Creation Area



HARDEE UNIT 3

Site Certification Application/Environmental Analysis

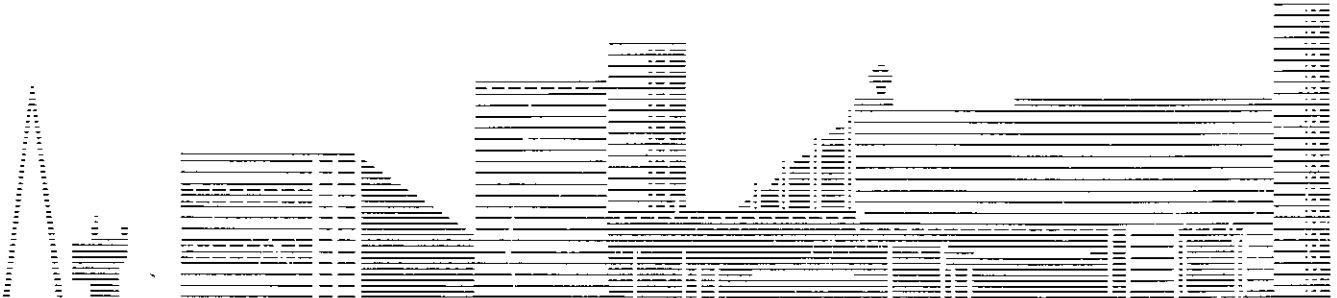
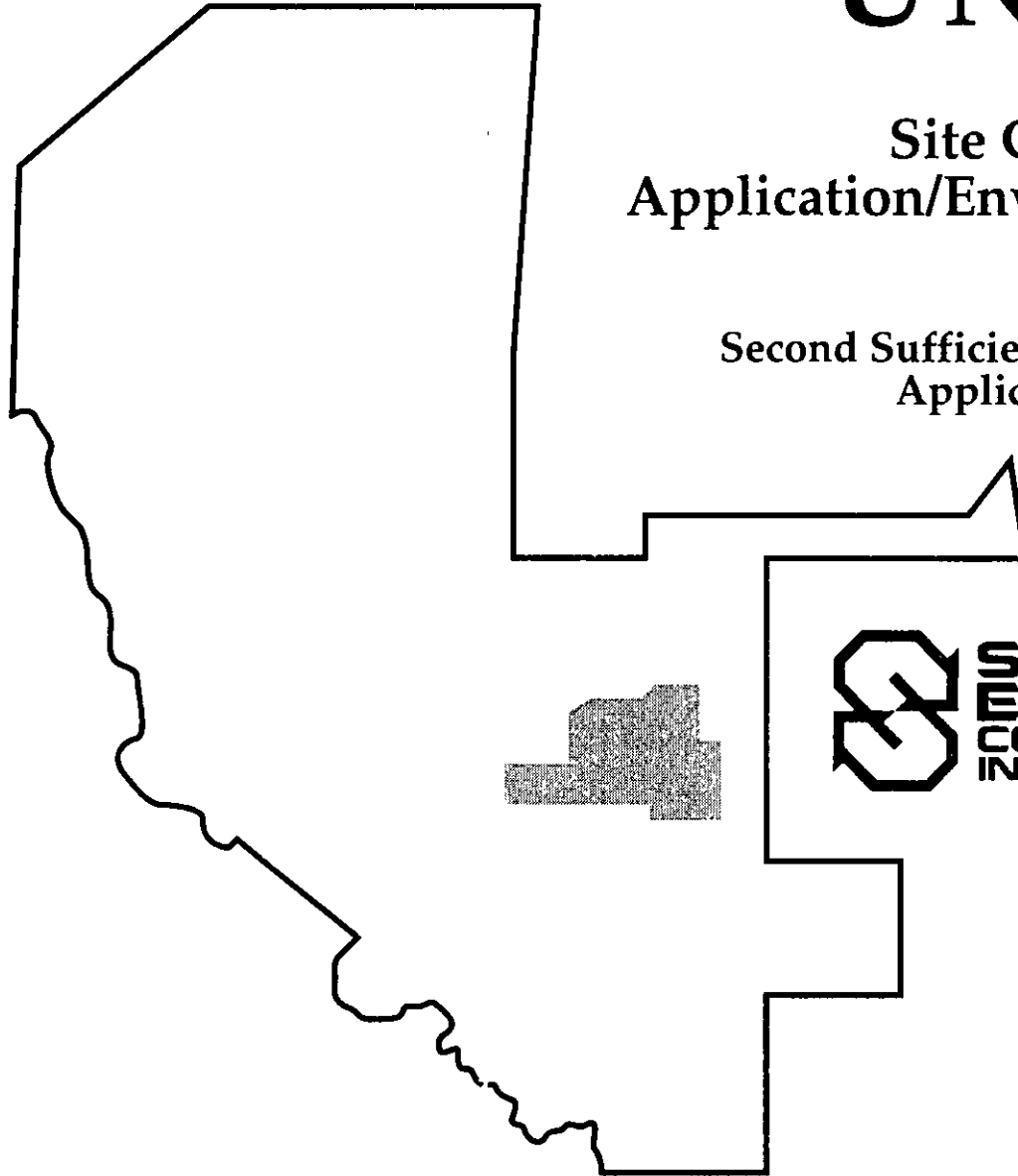
Second Sufficiency Comments/
Applicants Responses

SUBMITTED BY



**SEMINOLE
ELECTRIC
COOPERATIVE
INCORPORATED**

October 1994



CONTENTS

FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION	
BUREAU OF AIR REGULATION	FDEP.BAR
BUREAU OF SUBMERGED LANDS AND ENVIRONMENTAL RESOURCES	FDEP.BSL
DIVISION OF WATER FACILITIES	FDEP.DWF
INDUSTRIAL WASTEWATER SECTION	FDEP.IWW
POINT SOURCE EVALUATION SECTION	FDEP.PSE
SOUTHWEST DISTRICT	FDEP.SWD
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT	SWFWMD

TO: Buck Oven, P.E. Administrator
FROM: John Brown, P.E. Administrator
DATE: September 21, 1994
SUBJECT: Seminole Electric Cooperative Incorporated (SECI)
Hardee Unit 3 - PA89-25SA, Mod 8035
PSD-FL-214

The Bureau of Air Regulation finds the above referenced application package still insufficient. Based on our review of the company's responses to sufficiency comments, dated August 26, 1994, we have determined that the following additional information is needed in order to process the application:

1. Provide test methods (EPA or otherwise) utilized in determining preliminary laboratory data for the proposed Westinghouse Model 501F combustion turbine. If EPA methods were used, specify which ones. If some other emission methods were utilized, describe their deviations from the EPA methods. FDEP.BAR-1
2. Provide bench scale test results or any other testing that Westinghouse might have performed for determining NO_x emissions during the power augmentation mode. The test data that was submitted was for routine operation of the combustion turbine and did not provide indications of increased NO_x emissions during power augmentation mode. FDEP.BAR-2

JB/SA/bjb

Florida Department of
Environmental Protection

Memorandum

TO: Steve Palmer
FROM: Trudie D. Bell *TDB*
DATE: September 14, 1994
SUBJECT: PA89-25SA, Seminole Electric Cooperative, Inc.
Hardee Unit 3

The Bureau of Submerged Lands and Environmental Resources staff has reviewed the additional information received on August 26 and August 31 in regards to the site certification application for the above referenced project. The Bureau has determined that the additional information is insufficient. Please provide the following information to allow the Bureau to fully evaluate the impacts of the proposed project.

1. Figure 9 shows a road crossing a jurisdictional drainage ditch southwest of the detention basin. This ditch crossing is not shown on Figure FDEP.BWRM-8. Please revise the appropriate drawing to resolve this conflict and submit the revised drawing to the Bureau. FDEP.BSL-1
2. Please revised Figure 4 to label the wetland restoration area as a temporary impact area. The current labeling indicates that the pipeline crossing is a mitigation area rather than an area of temporary impact that will be restored. FDEP.BSL-2

I N T E R O F F I C E M E M O R A N D U M

Date: 12-Sep-1994 08:18am EST
From: Jan Mandrup-Poulsen TAL
MANDRUP_J
Dept: Division Water Facilities
Tel No: 904/488-4520
SUNCOM: 278-4520

To: Al Rushanan TAL

(RUSHANAN_A)

Subject: Seminole Electric/Hardee Unit 3

1,

Upon review of the Hardee Unit 3 Sufficiency Comments and responses, I noted that my (see attached) comments were either not transmitted to the applicant or were ignored, as they are not part of the response package.

Could you check your records on this? I know Richard Drew received my comments, as he called to check on the first item.

Thanks.

Jan

TO: Richard D. Drew
FROM: Jan Mandrup-Poulsen
DATE: June 27, 1994
SUBJECT: Seminole Electric Cooperative/Hardee Unit #3
Site Certification Application
Sufficiency Comments

I have completed my review of the Site Certification application submitted by the Seminole Electric Cooperative on behalf of the proposed Hardee Unit 3 power plant. My requests for additional information follow:

- 1) Include in the report the range of expected values for pH and dissolved oxygen in the cooling pond over the course of a day and of a year. FDEP.DWF-1
- 2) Are the iron concentrations correctly reported as mg/L in Tables 2.3.2-2 and 2.3.2-3? FDEP.DWF-2
- 3) Explain why Table 2-3 in Appendix 10.10 shows no value for Surficial Aquifer seepage. Also explain why Table 2-4 does not report any values for Surface Runoff or Surficial Aquifer Seepage. FDEP.DWF-3
- 4) Identify the location of the design calculations for the storm water detention pond reported to be in Appendix 10.12 (which is the Highway Capacity System). Appendix 10.9 (Erosion and Sedimentation Control Plan) contains no such calculations. (Note: Page 3.8.2-2 makes reference to this Plan being in Appendix 10.10.) Verify that the only treatment in the stormwater detention pond will be through settling and retention/detention. FDEP.DWF-4

Please contact me if you have any questions regarding this review.

wfr/jmp

cc: Kevin Petrus
Craig Diltz
Daryll Joyner

TO: Richard Drew, Chief
Bureau of Water Facilities Planning and Regulation

THROUGH: Phil Coram, P.E., Administrator
Industrial Wastewater Section

FROM: Craig Diltz, P.E., Engineer
Industrial Wastewater Section

DATE: September 12, 1994

SUBJECT: SECI Hardee Unit 3 Sufficiency Response

The Industrial Wastewater Section has reviewed the subject document FDEP.IWW-1
transmitted by August 26, 1994 letter from SECI. The response
adequately addresses the questions posed in our June 22 memo. We
have no further comment at this time.

If you have any questions please contact me at 904/488-4522.

PC/cd/ss

TO: Richard D. Drew, Chief
Bureau of Water Facilities Planning and Regulation

THROUGH: Al Bishop, P.E. Administrator
Point Source Evaluation Section

FROM: Greg Knecht
Point Source Evaluation Section

DATE: September 12, 1994

SUBJECT: Seminole Electric Cooperation, Inc. - Hardee Unit 3
Response to Insufficiency Comments

We have reviewed Seminole Electric Cooperative Incorporated (SECI) responses to the finding of insufficiency of their siting certification application for the proposed Hardee Unit 3. The responses provided by SECI are sufficient.

FDEP.PSE-1

If you have any questions or comments, please contact Greg Knecht at 488-0780.

GK

Memorandum

Florida Department of
Environmental Protection

TO: Richard Garrity, Ph.D.
Hamilton Oven, P.E.

FROM: Michael S. Hickey, P.E. *MHS*

DATE: September 14, 1994

SUBJECT: SECI Hardee Unit 3
SCA Insufficiency Response

The Southwest District has the following comments on the above subject.

WATER FACILITIES COMMENTS:

INDUSTRIAL WASTEWATER COMMENTS by Lynne Milanian:

I have reviewed the response from SECI provided to address each of Al McLaurin's five comments (copy attached). The information submitted by SECI has adequately satisfied each outstanding issue.

FDEP.SWD-1

DRINKING WATER PROGRAM COMMENTS by Yanisa Angulo:

I have reviewed the Seminole Electric Cooperative Incorporated (SECI) Site Certification Sufficient Comments/Applicant Responses for the proposed Hardee Power Plant Expansion (Unit 3). No information regarding construction of the drinking water system was provided. Therefore, this section does not have any further comments. The information necessary to comply with Sections 62-550, 62-551, 62-555 and 62-560, F.A.C. will be required in the conditions of certification.

FDEP.SWD-2

TECHNICAL SERVICES PROGRAM COMMENTS:

Geological Comments by Joe May:

I have reviewed the Technical Services insufficiency responses and have the following comments with regard to ground water protection:

FDEP.SWD-8: Response acknowledged. It is my understanding that ground-truthing of surficially expressed karst features was accomplished by visual inspections. FDEP.SWD-3

FDEP.SWD.9: Response acknowledged. It is my understanding that the depth of loose sands in the area where boring's B-14 and B-15 is a reclaimed area. FDEP.SWD-4

FDEP.SWD.10: Insufficient response. The recent occurrence (5/92) of arsenic in ground water monitoring well HPS-1 has not been adequately explained. It is noted that lead and chromium have not been detected in HPS-1 3/92 and 1/93, respectively. However, contaminants may be drawn onto the site from the upgradient mining area (as inferred by the response) at differing velocities since each metal ion has different diffusion behavior and ionic coefficients. It should be noted that arsenic is generally considered to be substantially less mobile than either lead or chromium and, therefore, would be expected to pass a specific point (while in transit) at a later time. The SECI should elaborate on the effects of the potential scenario of mobilizing offsite contamination onto its facility as well as possible risks to its potable water supply. Gross alpha activity levels should also be addressed in this response. FDEP.SWD-5

FDEP.SWD.11: Response acknowledged. Once final design of the Wastewater Collection and Treatment System has been finalized the sampling points for wastestream analyses will then be discussed. FDEP.SWD-6

FDEP.SWD.12: Response acknowledged. Sampling of the wastestreams may be accomplished in accordance with the NPDES permit. However, it should be noted that this sampling is required in order to determine the appropriate ground water monitoring parameters in the ground water monitoring system. Therefore, parameters not verified to be absent from the collective wastewater stream may be required in the Site Certification. FDEP.SWD-7

FDEP.SWD.13: Insufficient response. The 2-D finite element model should be identified by title. It is my understanding that the input and output files are not available at this time. Further comment in this regard is dependent upon the identification of the model. FDEP.SWD-8

Memorandum to Richard Garrity and Hamilton Oven
RE: SECI Hardee Unit 3 - SCA Insufficiency Response
Page 3

FDEP.SWD.14: Response acknowledged. The CompQAP will include a provision for measuring static ground water levels in the monitoring wells prior to purging.

FDEP.SWD-9

FDEP.SWD.15: Insufficient response. The water quality analysis parameters should be updated. Specific parameters may be deleted dependent upon wastestream analysis results as well as four consecutive quarters of downward trending or (non-trending) water quality results.

FDEP.SWD-10

Biological Comments by Stefan Schulze:

I have found Seminole Electric Cooperative's (SECI) sufficiency response to be adequate with regards to surface water concerns. It is proposed that SECI and the TECO Polk Power Station (TPS) shall share a common outfall from the cooling reservoir to Payne Creek as described in the NPDES permit application (Appendix 10.1.2 of the SCA). Will the NPDES permits for the two facilities be identical?

FDEP.SWD-11

The current NPDES permit (FL0041751) for the cooling reservoir outfall is issued to TPS and requires monitoring for a variety of parameters at the point of discharge during a discharge event. In the event that there is a discharge, the results of these analyses must be submitted to the Southwest District for review.

DOMESTIC WASTEWATER PROGRAM COMMENTS by William Washburn:

My comments on the SECI Sufficiency comments/applicant responses follow. Comments are confined to the section labeled "FDEP.SWD"

FDEP.SWD-1, page FDEP.SWD-1: The response indicates that applicant will design and operate the WWTP in compliance with the "substantive requirements of Chapter 17-600 and -601, F.A.C." "substantive" means to me that they may comply with the spirit but not necessarily the letter of the rules. This is not adequate. They must comply with all the technical requirements, and not only of Chapter 62(17)-600 and 601, but also any parts of 604, 610, 640, and 699 which may apply to their design and operation.

FDEP.SWD-12

FDEP.SWD-2, page FDEP.SWD-1 My previous comment still stands. I will use the FPC site certification language as a starting model and provide a draft to Tallahassee for this project as the minimum acceptable requirements for the construction and operation of the wastewater treatment facility.

FDEP.SWD-13

Memorandum to Richard Garrity and Hamilton Oven
RE: SECI Hardee Unit 3 - SCA Insufficiency Response
Page 4

FDEP.SWD-6, page FDEP.SWD-3, paragraph 1: I concur with the bulk of the SECI reply. However, submission of the construction permit application form, when the time to build arrives, may be appropriate as the simplest way of conveying information since all of the technical information normally contained on the form will be required one way or another. A separate permit to construct and to operate will not be issued. That authority is implicit in the site certification approval. But separate department approval of design, placement into service, and operating procedures is required unless all that is accomplished prior to site certification approval. Finally, of high importance to the department is inclusion of the requirement of Florida Statute 403.511(5)(a) which imposes new or changed rule requirements on the construction or operation of a WWTP as a part of a power plant facility. This is especially important with the rule changes imminent in Chapters 62-610, 62-620, 62-640, F.A.C.

FDEP.SWD-14

FDEP.SWD-6, page FDEP.SWD-4, paragraph 2: I concur that nitrate monitoring will very likely not be a monitoring requirement in the effluent from the WWTP. The decision to include it or not in the groundwater monitoring rests with the Technical Support Division personnel, however, I believe it premature to make a statement that nitrates "will not have a measurable impact on the water quality of the ... adjacent ground water" until sufficient monitoring is conducted to assure that is true.

FDEP.SWD-15

WATER MANAGEMENT COMMENTS by Greg Colianni:

Responses to sufficiency questions have adequately addressed issues concerning wetland mitigation design, hydrology, maintenance and responsibility for meeting success criteria. Conditions of Certification should be tailored to ensure SECI will adhere to established BMP's during construction and that they will properly execute their proposed mitigation plan. No further sufficiency comments are offered at this time.

FDEP.SWD-16

WASTE MANAGEMENT COMMENTS by Allison Amram:

The Solid Waste section does not have any comments on this submittal, as they will not be disposing solid wastes on-site.

FDEP.SWD-17

AIR QUALITY COMMENTS by David Zell:

This program did not have any comments.

FDEP.SWD-18

/sgl

cc: Al Rushanan

SEP 23 1994



Southwest Florida Water Management District

2379 Broad Street • Brooksville, Florida 34609-6899 • 1-800-423-1476 (Florida Only) or (904) 796-7211 • SUNCOM 628-4150 • T.D.D. Number Only (Florida Only): 1-800-231-6188

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(813) 534-1446 SUNCOM 572-6200

111 Corporation Way
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Treasurer, St. Petersburg
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Brandon
- James L. Cox
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- Rebecca M. Eger
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- Mary J. Figg
Tampa
- John T. Hamner
Bradenton
- Curtis L. Law
Land O' Lakes

- Peter G. Hubbell
Executive Director
- Mark D. Farrell
Assistant Executive Director
- Edward B. Halvenston
General Counsel

September 21, 1994

VIA FACSIMILE AND U.S. MAIL

Mr. Hamilton S. Oven
Siting Coordination Office
Department of Environmental Protection
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Mr. Richard T. Donelan
Assistant General Counsel
Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: Sufficiency Comments
Seminole Electric Cooperative, Inc.
Application No. 89-25SA
DOAH Case No. 94-2765EPP

Dear Messrs. Oven and Donelan:

The District believes that the above-referenced application is still insufficient. The District's sufficiency comments, all relating to wetlands issues, are listed below.

1. Grading details for the proposed mitigation area are needed. Seminole Electric Cooperative, Inc. should be advised that mitigation credit can only be granted for the area below the seasonal high water level (SHWL) elevation. SWFWMD-1

2. Based upon the presence of nuisance and upland species in the mitigation area, the existing ground cover will not be acceptable as part of the mitigation proposal. Mulching and/or planting details are needed for the mitigation area. Details should include plan and cross-sectional views showing limits of each distinct zone in reference to proposed control elevations, mulching, proposed plantings (species, sizes, densities and relative composition) within each zone, proposed water elevations (SHWL and NP), bottom elevations, and slopes. SWFWMD-2

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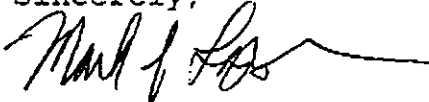
Mr. Hamilton S. Owen
Mr. Richard T. Donelan
September 21, 1994
Page 2

3. A detailed planview of the mitigation area is needed. Details should include views showing limits of each distinct zone in reference to proposed control elevations, proposed plantings (species, sizes, densities and relative composition) within each zone, and mulching details.

SWFWMD-3

If you have any technical questions, please contact Mark Hurst at the District's Bartow office. If you have any general or procedural questions, please contact me at the District's Brooksville office.

Sincerely,



Mark F. Lapp
Assistant General Counsel

MFL:jl

cc: Jan R. Burke, Jr.
P. Scott Laidlaw
Mark K. Hurst
Dawn G. Turner
File of Record

FDEP.BAR-1

Comment: Provide test methods (EPA or otherwise) utilized in determining preliminary laboratory data for the proposed Westinghouse Model 501F combustion turbine. If EPA methods were used, specify which ones. If some other emission methods were utilized, describe their deviations from the EPA methods.

Response: Westinghouse has not yet tested the 501F gas turbine to demonstrate the emission levels presented in the SCA and the PSD permit application. The following are Westinghouse's achievements to date in the area of dry low NO_x technologies:

- Operating experiences at the Mitsubishi Heavy Industries K Point Plant have demonstrated dry NO_x emission levels of 18 ppm without steam power augmentation.
- Westinghouse and its alliance partners have seven additional units with dry low NO_x combustors without steam power augmentation in service as of the third quarter of this year (1994). These units have achieved NO_x levels as low as 25 ppm.
- Testing of a single dry ultra low NO_x technology combustor without steam power augmentation has demonstrated levels lower than 10 ppm NO_x. These tests were performed using Westinghouse's internal proprietary single-combustion test procedures which are different than EPA full plant testing procedures.

Westinghouse has confidence that the proposed dry low NO_x emission levels will be achieved by the CTs for the Hardee Unit 3 Project.

FDEP.BAR-2

Comment: Provide bench scale test results or any other testing that Westinghouse might have performed for determining NO_x emissions during the power augmentation mode. The test data that was submitted was for routine operation of the combustion turbine and did not provide indications of increased NO_x emissions during power augmentation mode.

Response: There is no existing published data on the effects of steam power augmentation on NO_x output levels in operating combustion turbines utilizing dry low NO_x combustors. Westinghouse anticipates performing testing of this nature in the near future. These test data will be provided to FDEP when they are published.

Westinghouse expects NO_x emission levels of 25 ppm for a dry low NO_x combustor operating in a steam power augmentation mode. This NO_x emission level has been demonstrated on operating combustion turbines using existing diffusion burner technology with steam power augmentation. The pilot stage of a dry low NO_x combustor operates as a diffusion burner. As steam for power augmentation is introduced into the combustion turbine, the percentage of fuel for the pilot stage must be increased, thus causing NO_x emission levels to increase above those levels produced by the dry low NO_x combustor.

FDEP.BSL-1

Comment: Figure 9 shows a road crossing a jurisdictional drainage ditch southwest of the detention basin. This ditch crossing is not shown on Figure FDEP.BWRM-8. Please revise the appropriate drawing to resolve this conflict and submit the revised drawing to the Bureau.

Response: Figure FDEP.BWRM-8 has been revised and is attached.

FDEP.BSL-2

Comment: Please revised Figure 4 to label the wetland restoration area as a temporary impact area. The current labeling indicates that the pipeline crossing is a mitigation area rather than an area of temporary impact that will be restored.

Response: Figure 4 has been revised and is attached.

Certified by: *Charles Richard Neff*
 Fla. Registration No. 33712 Charles Richard Neff
 Date: 13 Oct 1994

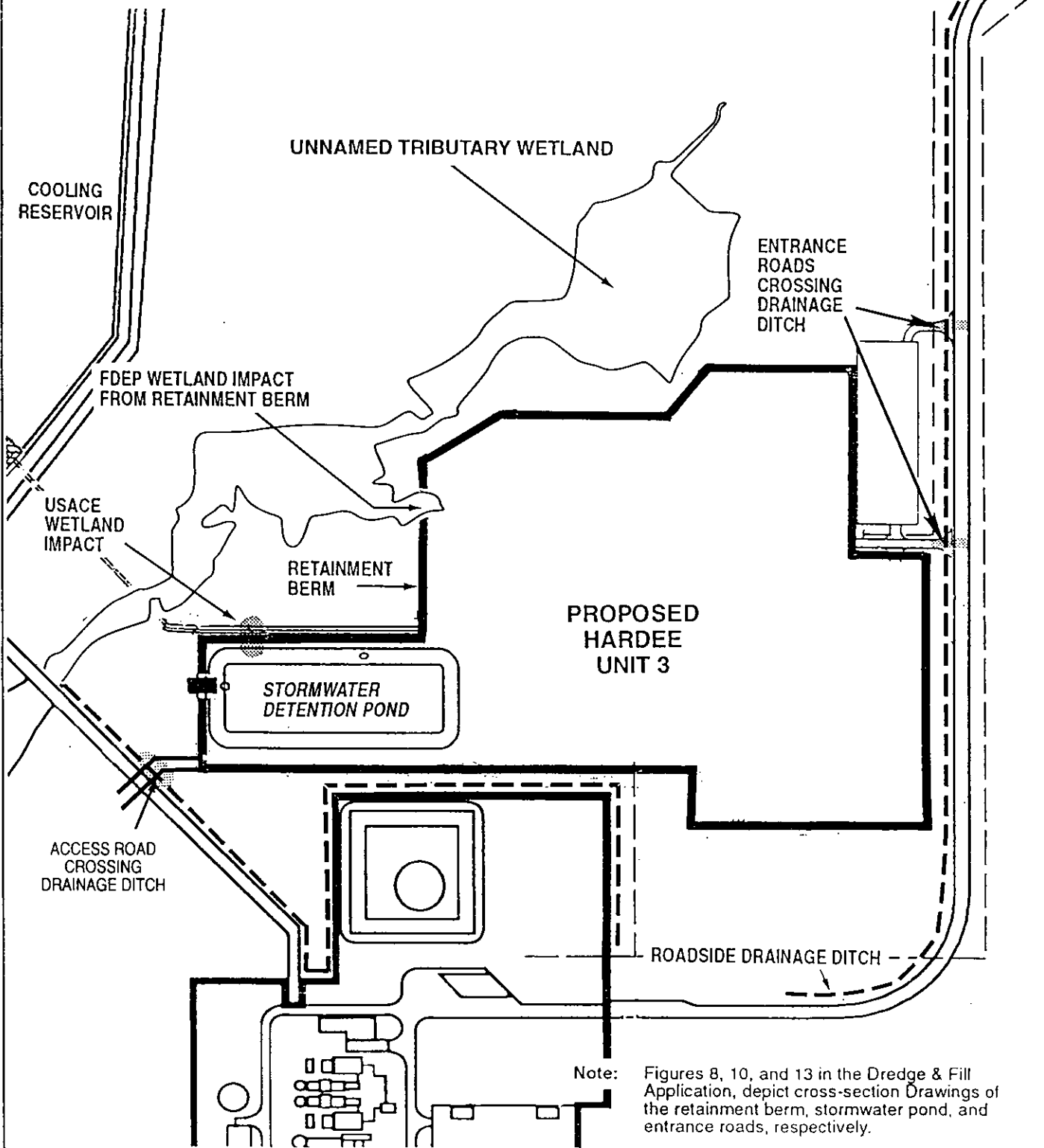
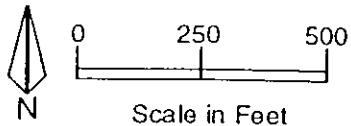
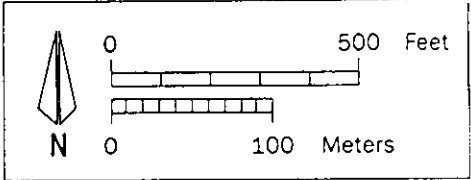


Figure FDEP.BWRM-8
 Plan View of Retainment Berm, Stormwater Pond, Entrance
 Roads, and Access Road Where Wetland Impacts Will Occur
 (Revised 10/06/94)



Certified by: Charles Richard Neff
 Fla. Registration No 33712 Charles Richard Neff
 Date 13 Oct 1994



LEGEND:
 ● Photographic Station
 ▲ Staff Gauge
 — FDEP Wetland Jurisdiction Line

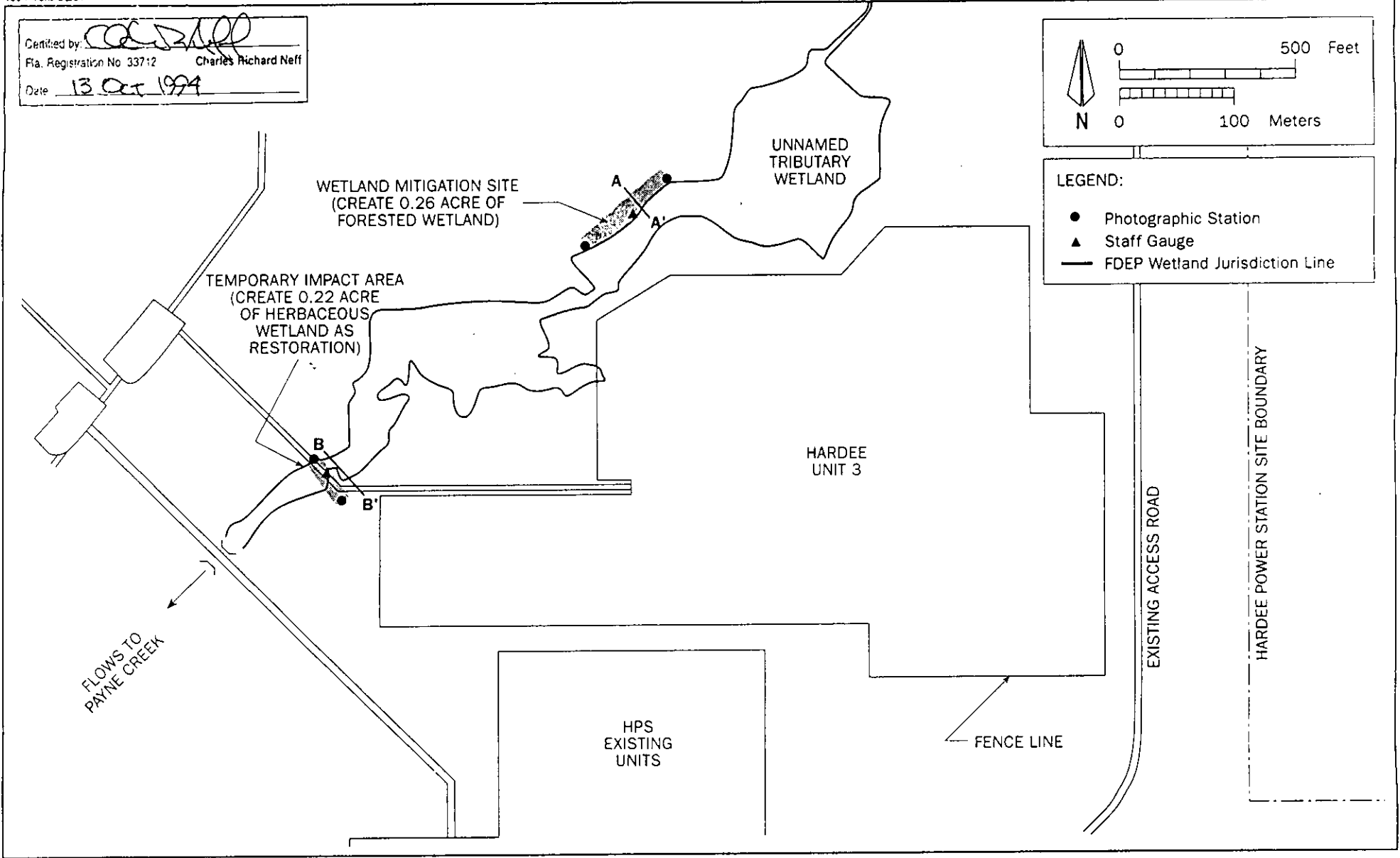


Figure 4
 Plan View of Mitigation Sites
 (Revised 10/12/94)

Source: KBN, 1994.



FDEP.DWF-1

Comment: Include in the report the range of expected values for pH and dissolved oxygen in the cooling pond over the course of a day and of a year.

Response: Both pH and dissolved oxygen (DO) in the cooling reservoir are expected to follow typical diurnal patterns for Florida surface waters. Diurnal studies of these parameters have not been performed and therefore specific ranges are not available.

The addition of the Hardee Unit 3 facility to the Hardee Power Station will not significantly affect the diurnal cycling of pH and DO in the cooling reservoir. It is important to note that the existing cooling reservoir is not a water of the state and is therefore not subject to State of Florida water quality standards.

FDEP.DWF-2

Comment: Are the iron concentrations correctly reported as mg/L in Tables 2.3.2-2 and 2.3.2-3?

Response: Iron concentrations presented in Tables 2.3.2-2 and 2.3.2-3 were obtained from original data sheets reported as mg/L. The iron concentrations reported in the groundwater are the result of naturally occurring iron compounds in the soils, such as the onsite clays, and the reducing environment of the groundwater. The iron concentrations reported for the groundwater are not indicative of contamination

FDEP.DWF-3

Comment: Explain why Table 2-3 in Appendix 10.10 shows no value for Surficial Aquifer seepage. Also explain why Table 2-4 does not report any values for Surface Runoff or Surficial Aquifer Seepage.

Response: The upland area that can potentially contribute surficial aquifer flow is small in extent (i.e., approximately 195 acres) and has soils with a high clay content. Given these factors, surface water runoff will be high (annual average rate of 311,500 gpd, or 19.3 inches/year) when calculated using the SCS Method. The estimated annual average evapotranspiration for the site is 37.9 inches/year (see SCA Table 2.3.3-2). These two values give a total average annual water loss from the upland area of 57.2 inches/year. Since the average annual rainfall for the site is 53.3 inches/year, there will likely be minimal or no recharge of the surficial aquifer, and measured evapotranspiration will be

less than estimated. Based on these calculations, the surficial aquifer seepage to the cooling reservoir was assumed to be zero. Because of these conditions, it was considered prudent to take a conservative approach and assign a surficial aquifer seepage rate of zero.

Surficial aquifer seepage was considered to be zero in Table 2-4 in Appendix 10.10 for the same reason. Table 2-4 presents the overall water budget for the maximum load condition for 880 MW. This table presents the maximum water use conditions for the Hardee Power Station. This analysis assumed the worst-case meteorological conditions that would result in the maximum groundwater withdrawal. The condition of zero rainfall and therefore zero surface runoff was assumed in this analysis, thereby maximizing the amount of groundwater withdrawn.

FDEP.DWF-4

Comment: Identify the location of the design calculations for the storm water detention pond reported to be in Appendix 10.12 (which is the Highway Capacity System). Appendix 10.9 (Erosion and Sedimentation Control Plan) contains no such calculations. (Note: Page 3.8.2-2 makes reference to this Plan being in Appendix 10.10.) Verify that the only treatment in the stormwater detention pond will be through settling and retention/detention.

Response: The design calculations for the stormwater detention pond are located in the third volume of the SCA labeled Storm Water Management Plan. The pond calculations are in Appendix B, Part 2. This volume was supplied to Steve Palmer of FDEP for review by FDEP personnel. Page 3.8.2-2 of the SCA has been revised and is included in this response.

The stormwater detention pond design is discussed in the Plan. Included in this design is a vegetated littoral zone covering 35 percent of the surface of the pond. This littoral zone will provide biological treatment of runoff. Treatment of the stormwater will be through settling, retention/detention, and biological treatment in the littoral zone.

FDEP.IWW-1

Comment: The Industrial Wastewater Section has reviewed the subject document transmitted by August 26, 1994 letter from SECI. The response adequately addresses the questions posed in our June 22 memo. We have no further comment at this time.

Response: Comment acknowledged.

FDEP.PSE-1

Comment: We have reviewed Seminole Electric Cooperative Incorporated (SECI) responses to the finding of insufficiency of their siting certification application for the proposed Hardee Unit 3. The responses provided by SECI are sufficient.

Response: Comment acknowledged.

FDEP.SWD-1

Comment: I have reviewed the response from SECI provided to address each of Al McLaurin's five comments (copy attached). The information submitted by SECI has adequately satisfied each outstanding issue.

Response: Comment acknowledged.

FDEP.SWD-2

Comment: I have reviewed the Seminole Electric Cooperative Incorporated (SECI) Site Certification Sufficient Comments/Applicant Responses for the proposed Hardee Power Plant Expansion (Unit 3). No information regarding construction of the drinking water system was provided. Therefore, this section does not have any further comments. The information necessary to comply with Sections 62-550, 62-551, 62-555 and 62-560, F.A.C. will be required in the conditions of the certification.

Response: Comment acknowledged.

FDEP.SWD-3

Comment: FDEP.SWD-8: Response acknowledged. It is my understanding that ground-truthing of surficially expressed karst features was accomplished by visual inspections.

Response: Comment acknowledged.

FDEP.SWD-4

Comment: FDEP.SWD-9: Response acknowledged. It is my understanding that the depth of loose sands in the area where boring's B-14 and B-15 is a reclaimed area.

Response: Comment acknowledged.

FDEP.SWD-5

Comment: FDEP.SWD-10: Insufficient response. The recent occurrence (5/92) of arsenic in ground water monitoring well HPS-1 has not been adequately explained. It is noted that lead and chromium have not been detected in HPS-1 3/92 and 1/93, respectively. However, contaminants may be drawn onto the site from the upgradient mining area (as inferred by the response) at differing velocities since each metal ion has different diffusion behavior and ionic coefficients. It should be noted that arsenic is generally considered to be substantially less mobile than either lead or chromium and, therefore, would be expected to pass a specific point (while in transit) at a later time. The SECI should elaborate on the effects of the potential scenario of mobilizing offsite contamination onto its facility as well as possible risks to its potable water supply. Gross alpha activity levels should also be addressed in this response.

Response: As previously indicated in the August 1994 sufficiency response, reclamation activities of offsite mined areas located to the north of Well HPS-1 were ongoing at the time of SCA preparation. It was indicated that the reclamation activities were not anticipated to have impacted the concentration of arsenic in the surficial aquifer, however the occurrence of gross alpha may have been affected by the phosphate mining and reclamation activities.

There are no known operations of the existing Hardee Power Station or proposed Hardee Unit 3 facilities that are anticipated to impact ambient concentrations of arsenic or gross alpha in the surficial aquifer. The proposed development and operation of the Hardee Unit 3 facilities are not anticipated to increase the mobilization of potential offsite contamination in the surficial aquifer. No continuous withdrawals are planned from the surficial aquifer. Dewatering during construction will be of limited duration and scope and should not affect offsite areas.

Groundwater quality trends noted for arsenic and gross alpha in the surficial aquifer are not anticipated to impact the potable water supply that is obtained from the production wells that are completed in the Floridan aquifer. The laterally extensive upper and lower confining units that are present at the site act to retard the vertical movement of groundwater between the surficial, intermediate, and Floridan aquifers. As indicated in Section 2.3.2.1.4 of the SCA, recharge to the intermediate and Floridan aquifers is characterized as very low and estimated at less than 2 inches per year.

Groundwater monitoring will continue to be conducted on a periodic basis for the existing well locations, including the analysis of arsenic and gross alpha for samples collected from Well HPS-1. Groundwater monitoring locations proposed for Hardee Unit 3 include two upgradient and two downgradient wells completed in the surficial aquifer to characterize potential water quality impacts from operation of the planned facilities. Arsenic and gross alpha are included in the list of analytical parameters for the proposed groundwater monitoring plan.

Review of the laboratory reports of analyses prepared by Pace Incorporated for the collected groundwater samples indicated that Table FDEP.SWD-10 incorrectly summarized

the results reported for arsenic during the period from October 1991 to March 1992. The attached table presents the revisions as shaded areas to highlight the modifications. The method detection limit for arsenic during the period from October 1991 to March 1992 was reported at 50 micrograms per liter ($\mu\text{g/L}$). The method detection level reported for groundwater samples collected during the period from April 1992 to July 1993 ranged from 4 to 10 $\mu\text{g/L}$. Although the concentration of arsenic at Well HPS-1 exceeds that reported for the balance of the monitor wells at the site, it appears that the concentration at this location has remained relatively stable during the period of record. It is noted that the detected concentrations of arsenic reported for the existing groundwater monitoring network have remained below the drinking water standard of 50 $\mu\text{g/L}$.

Therefore, the proposed monitoring program is considered to be appropriate and will address the reviewer's concerns about groundwater quality trends. Continuation of groundwater monitoring at existing Hardee Power Station facilities will provide supplemental data to further characterize the occurrence of arsenic and gross alpha at Well HPS-1. Implementation of the monitoring program proposed for the Hardee Unit 3 facilities will provide data to characterize background conditions and potential impacts from the detention pond and operations at the power block. The groundwater monitoring program for the proposed Hardee Unit 3 facilities includes laboratory analysis for the parameters currently being conducted for the Hardee Power Station existing facilities, including arsenic and gross alpha.

FDEP.SWD-6

Comment: FDEP.SWD.11: Response acknowledged. Once final design of the Wastewater Collection and Treatment System has been finalized the sampling points for wastestream analyses will then be discussed.

Response: Comment acknowledged.

FDEP.SWD-7

Comment: FDEP.SWD.12: Response acknowledged. Sampling of the wastestreams may be accomplished in accordance with the NPDES permit. However, it should be noted that this sampling is required in order to determine the appropriate ground water monitoring

parameters in the ground water monitoring system. Therefore, parameters not verified to be absent from the collective wastewater stream may be required in the Site Certification.

Response: Comment acknowledged.

FDEP.SWD-8

Comment: FDEP.SWD.13: Insufficient response. The 2-D finite element model should be identified by title. It is my understanding that the input and output files are not available at this time. Further comment in this regard is dependent upon the identification of the model.

Response: As noted in the earlier response, the 2-D finite element modeling results were those developed by Stone & Webster for the 1989 SCA. Stone & Webster was contacted regarding this matter and is currently researching its archives to obtain the necessary documentation. The information, expected during the week of October 17, will be forwarded to FDEP under separate cover as soon as it becomes available.

FDEP.SWD-9

Comment: FDEP.SWD.14: Response acknowledged. The CompQAP will include a provision for measuring static ground water levels in the monitoring wells prior to purging.

Response: Comment acknowledged.

FDEP.SWD-10

Comment: FDEP.SWD.15: Insufficient response. The water quality analysis parameters should be updated. Specific parameters may be deleted dependent upon wastestream analysis results as well as four consecutive quarters of downward trending or (non-trending) water quality results.

Response: The proposed groundwater monitoring parameters for the Hardee Unit 3 facility presented in Appendix 10.5.2 are based on the existing groundwater monitoring requirements at the Hardee Power Station. SECI believes these parameters to be sufficient since a baseline water quality monitoring program has been carried out previously at the Hardee Power Station site. These baseline groundwater quality data should be sufficient to establish groundwater quality conditions at the proposed Hardee Unit 3 site. The situation at the Hardee Power Station is in contrast to the development of greenfield sites where there is no existing groundwater monitoring baseline data available.

FDEP.SWD-11

Comment: I have found Seminole Electric Cooperative's (SECI) sufficiency response to be adequate with regards to surface water concerns. It is proposed that SECI and the TECO Polk Power Station (TPS) shall share a common outfall from the cooling reservoir to Payne Creek as described in the NPDES permit application (Appendix 10.1.2 of the SCA). Will the NPDES permits for the two facilities be identical?

The current NPDES permit (FL0041751) for the cooling reservoir outfall is issued to TPS and requires monitoring for a variety of parameters at the point of discharge during a discharge event. In the event that there is a discharge, the results of these analyses must be submitted to the Southwest District for review.

Response: SECI has applied for a separate NPDES permit for its new unit, for discharges via the existing outfall from the cooling reservoir. SECI expects that its permit will be identical in substantive provisions to the TPS units, particularly as to discharges and effluent limitations at the outfall from the reservoir. Since the TPS and SECI units will be comparable in design and operation, but will be totally separate units, consistent permit conditions would be appropriate. SECI will submit any discharge monitoring reports to FDEP as required under the final permit conditions.

FDEP.SWD-12

Comment: FDEP.SWD-1, page FDEP.SWD-1: The response indicates that applicant will design and operate the WWTP in compliance with the "substantive requirements of Chapter 17-600 and -601, F.A.C." "substantive" means to me that they may comply with the spirit but not necessarily the letter of the rules. This is not adequate. They must comply with all the technical requirements, and not only of Chapter 62(17)-600 and 601, but also any parts of 604, 610, 640, and 699 which may apply to their design and operation.

Response: SECI concurs with the comment in that SECI will comply with the technical requirements of the Department's rules that apply to the new domestic wastewater treatment facility. It will be designed, constructed, and operated in accordance with the applicable non-procedural rules and technical criteria of the Department and the final conditions of certification. While a separate permit approval is not required to be obtained under the certification process, this compliance will be demonstrated by the submittal of appropriate information and design details at the time this facility is designed. This will occur after certification of the project is obtained. SECI therefore will work with the Department to develop appropriate conditions of certification for this submittal to ensure that the Department receives the information it requires. SECI understands such an approach has already been taken with recently certified power plant facilities.

FDEP.SWD-13

Comment: FDEP.SWD-2, page FDEP.SWD-1: My previous comment still stands. I will use the FDEP site certification language as a starting model and provide a draft to Tallahassee for this project as the minimum acceptable requirements for the construction and operation of the wastewater treatment facility.

Response: Comment acknowledged.

FDEP.SWD-14

Comment: FDEP.SWD-6, page FDEP.SWD-3, paragraph 1: I concur with the bulk of the SECI reply. However, submission of the construction permit application form, when the time to build arrives, may be appropriate as the simplest way of conveying information since all of the technical information normally contained on the form will be required in one way or another. A separate permit to construct and to operate will not be issued. That authority is implicit in the site certification approval. But separate department approval of design, placement into service, and operating procedures is required unless all that is accomplished prior to site certification approval. Finally, of high importance to the department is inclusion of the requirement of Florida Statute 403.511(5)(a) which imposes new or changed rule requirements on the construction or operation of a WWTP as a part of a power plant facility. This is especially important with the rule changes imminent in Chapters 62-610, 62-620, 62-640, F.A.C.

Response: SECI acknowledges this comment. SECI will comply with the Department's applicable substantive technical requirements for such facilities, as indicated in the response to FDEP.SWD-12 above. To the extent later adopted standards apply to the facility under Section 403.511(5)(a), F.S., they will be compiled with as well.

FDEP.SWD-15

Comment: FDEP.SWD-6, page FDEP.SWD-4, paragraph 2: I concur that nitrate monitoring will very likely not be a monitoring requirement in the effluent from the WWTP. The decision to include it or not in the groundwater monitoring rests with the Technical Support Division personnel, however, I believe it premature to make a statement that nitrates "will not have a measurable impact on the water quality of the . . . adjacent ground water" until sufficient monitoring is conducted to assure that is true.

Response: Comment acknowledged.

FDEP.SWD-16

Comment: Responses to sufficiency questions have adequately addressed issues concerning wetland mitigation design, hydrology, maintenance and responsibility for meeting success criteria. Conditions of Certification should be tailored to ensure SECI will adhere to

established BMP's during construction and that they will properly execute their proposed mitigation plan. No further sufficiency comments are offered at this time.

Response: Comment acknowledged.

FDEP.SWD-17

Comment: The Solid Waste section does not have any comments on this submittal, as they will not be disposing solid wastes on-site.

Response: Comment acknowledged.

FDEP.SWD-18

Comment: This program did not have any comments.

Response: Comment acknowledged.

Table FDEP.SWD-10. (REVISED) Summary of Selected Groundwater Monitoring Results Reported for Well HPS-1.

Parameter	Standard	Sampling Event												
		7/93	1/93	10/92	9/92	7/92	6/92	5/92	4/92	3/92	1/92	12/91	11/91	10/91
Arsenic ($\mu\text{g/L}$)	50	15	15	16	16	20	14	16	<10	<50	<50	<50	<50	<50
Chromium (mg/L)	0.10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.10	0.42	0.16
Lead ($\mu\text{g/L}$)	15	<5	<5	<5	<5	<5	<5	<5	<5	<5	11	<5	36	14
Gross Alpha, total (pCi/L)	15	12.8	12	20	25	19	23.2	13.2	13.2	104	350	756	424	884
Gross Alpha, dissolved (pCi/L)	N/A	11.4	4	13	14.2	14.3	15.4	7.5	7.5	6.4	3.5	--	--	--

SWFWMD-1

Comment: 1. Grading details for the proposed mitigation area are needed. Seminole Electric Cooperative, Inc. should be advised that mitigation credit can only be granted for the area below the seasonal high water level (SHWL) elevation.

Response: Detailed grading plans have been prepared and are depicted in the attached revised wetland mitigation plan (see Figure 5). The entire mitigation area is at or below the seasonal high water level elevation.

SWFWMD-2

Comment: Based upon the presence of nuisance and upland species in the mitigation area, the existing ground cover will not be acceptable as part of the mitigation proposal. Mulching and/or planting details are needed for the mitigation area. Details should include plan and cross-sectional views showing limits of each distinct zone in reference to proposed control elevations, mulching, proposed plants (species, sizes, densities and relative composition) within each zone, proposed water elevations (SHWL and NP), bottom elevations, and slopes.

Response: The wetland mitigation plan has been revised to include the information requested above. The revised plan is attached.

SWFWMD-3

Comment: A detailed planview of the mitigation area is needed. Details should include views showing limits of the each distinct zone in reference to proposed control elevations, proposed plantings (species, sizes, densities and relative composition) within each zone, and mulching details.

Response: A revised planview of the mitigation area has been prepared and is included as Figure 7 in the attached revised wetland mitigation plan.