HARDEE
POWER
STATION

SITE CERTIFICATION APPLICATION/ ENVIRONMENTAL ASSESSMENT

CHAPTER 4

EFFECTS OF SITE PREPARATION, AND PLANT AND ASSOCIATED FACILITIES CONSTRUCTION

CHAPTER 4

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4.0 EFFECTS OF SITE PREPARATION AND PLANT AND ASSOCIATED FACILITIES CONSTRUCTION

4.1 LAND IMPACT

4.1.1 General Construction Impacts

As discussed in Section 2.3.5, the land in the immediate vicinity of the Hardee Power Station site is presently used for phosphate mining and most of the land already has been disturbed. Therefore, general site preparation construction will have no significant land impacts.

The generating plant and associated facilities will be constructed on land that has not been mined, while the 231 ha (570 acre) cooling reservoir will be constructed entirely on mined lands. An access road 7.9 m (26 ft) wide with a 6.1 m (20 ft) wide paved center section and a 0.9 m (3 ft) shoulder on either side will be constructed from CR 663 west to the plant site on reclaimed lands. Local site grading and leveling will be necessary. Impacts to terrain will be minor.

No impacts from construction wastes are anticipated. Combustible construction wastes (e.g., paper, wood, etc.) will be burned on-site in accordance with applicable regulations. Construction wastes will be removed from the site for disposal at an approved facility. Any garbage (food containers, papers, etc.) will be collected in appropriate waste collection containers and disposed in accordance with FDER Regulations.

During construction, the construction labor force will utilize portable chemical toilets. All sanitary sewage will be frequently pumped from the individual toilets for transportation to an approved disposal facility by a licensed contractor.

Fugitive dust and impacts on the human population are addressed in Sections 4.5 and 4.6, respectively.

4.1.2 Roads

The proposed access road will connect with CR 663 but will not connect to state roads. Information required by the Department of Transportation's (DOT) "Utility Accommodation Guide" is not applicable, however, the Applicant will consult with the County.

4.1.3 Flood Zones

As part of their mining/reclamation permit approval program, Agrico conducted a 100-year flood elevation study for Payne Creek. Based on this study, the 100-year flood elevation in the vicinity of the proposed plant/cooling reservoir site was estimated, generally corresponding with the limits of the forested floodplain and related wetlands vegetation. These flood elevation study results were submitted to and approved by the regulatory agencies as part of the approval of Agrico's mining and reclamation plan.

The facilities have been designed and located so that no structures will be placed in the Payne Creek floodplain at an elevation below that of the 100-year flood.

All plant facilities have been designed to comply with all applicable SWFWMD and FDNR requirements regarding flood protection and control. No structures or fill will be placed in the Payne Creek floodplain; therefore, no reduction in cross section flow-way or flood storage will occur. No adverse impact on the 100-year flood elevations or flood flows are anticipated. In addition, the proposed power plant and adjacent cooling reservoir will not be adversely impacted by Payne Creek flood elevations or flows and will not cause any adverse flooding or related impacts to offsite property.

4.1.4 Topography and Soils

Current topographic features at the site reflect past and ongoing mining activity. There are numerous spoil piles from the mining activity which are as high as 6 to 9 m (20 to 30 ft) above grade. Along the eastern border

of the site there are two existing settling ponds with perimeter berms which rise approximately 5 and 10 m (15 and 33 ft) above the general grade. When mining is completed, the mined area will be reclaimed in accordance with approved reclamation plans. General site grading will take place by matching of cuts and fills. It is not anticipated that import or export of soil materials will be required.

After reclamation, overall subsidence of the land is not expected. A slight settlement may take place in areas of construction, but this will be localized in extent. Major structures in the power block area will be supported on pile foundations and will experience negligible settlement. Other minor structures will be founded on undisturbed land.

Bearing strengths of the fine sands are sufficient that shearing failures are not expected for the foundations or for the embankments. Where compaction is necessary for construction, a densification program will be instituted. Structures will not be constructed on unstable soils, unless adequately supported by retaining structures.

Construction runoff from the site will be collected in a detention pond up-gradient of the wetlands area. Areas not covered by the power block structures and roads will be left in a natural state so that rainfall will percolate into the surficial aquifer.

The cooling reservoir will be constructed on the western half of the site. The design of the cooling reservoir is described in Chapter 3. An impounding berm will be constructed with an average elevation of 39.3 m (129 ft) and it will impound water at an average elevation of 37.8 m (124 ft). The cooling reservoir will impound rainfall and runoff that would otherwise have flowed directly to Payne Creek. Evaporation and seepage into the groundwater will increase, as discussed in Section 5.2.1.2. Berms will be gentle slopes and will therefore be structurally stable as embankments. The design interior slopes are 4:1 (horizontal to vertical) and the exterior slopes will be at 20:1.

Roads will be constructed with primary access off CR 663 and emergency access through the CFI property located between the two existing settling ponds.

During construction, a soil erosion and sedimentation plan will be implemented to prevent discharge of sediment from the site. This plan will include a detention pond, silt nets, straw baling, and other techniques to retain sediments on site. As each area is final graded, revegetation will be established to the extent possible. Areas near switchyards and permanent ditches will be protected with coarse stone.

Construction-related changes in site topography or soils should have no adverse effect on aesthetics or viewshed. The major factor in evaluating the facility viewshed are the berms east of the site around CFI phosphate ponds. These represent a major screen for the facility, and they will not be altered by construction for the Hardee Power Station.

4.2 IMPACT ON SURFACE WATER BODIES AND USES

4.2.1 Impact Assessment

4.2.1.1 Surface Hydrology - Physical and Chemical

The primary potential impacts to Payne Creek from site preparation and plant construction are erosion and sedimentation impacts due to earthmoving and material placement associated with the plant and reservoir construction. Potential discharges associated with construction dewatering may also impact Payne Creek surface waters. These impacts will be controlled and minimized through proper design and placement of runoff control features.

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, including material laydown areas, and dewatering flows, will be collected in pipes, an open channel system, and/or catch basin and directed to the permanent site stormwater detention pond. This pond will be located in the southwest portion of the property and will be built early during

construction to serve as a construction runoff detention pond. Sediments which are trapped by and accumulate in the stormwater detention pond will be removed as necessary. A system of temporary construction ditches and piping will direct the stormwater runoff or dewatering flows to the detention pond. The construction drainage system will follow the layout of the permanent ditch system where possible.

The cooling reservoir will be constructed from mined-out lands. Reclamation and construction of the cooling reservoir will be performed by Agrico in accordance with the erosion control program specified in Agrico's approved reclamation plan.

The cooling reservoir overflow/discharge structure will consist of a concrete swale constructed at the same downstream slope (20:1). This structure will connect the reservoir with Payne Creek floodplain/wetlands. As necessary, the outer edges of this swale will be protected with rip-rap to minimize soil erosion. At the upland edge of the Payne Creek floodplain/wetlands, the swale will be widened to a spreader swale used to carry the cooling reservoir overflow/discharge by sheet flow into Payne Creek. This technique, will avoid adverse physical impacts to Payne Creek (see Sections 5.1, 5.5 and 5.8).

4.2.1.2 Ecological Systems

No direct impacts to aquatic systems of Payne Creek from such activities are anticipated, as no structures will be constructed in the flowing creek or in the floodplain. In addition, floodplain wetlands will not be affected since construction of the cooling reservoir will occur outside this area. Several small wetlands (Section 2.3.6) on site will be excavated as part of the cooling reservoir construction. Two of these wetlands are isolated marshes that are each less than 2.6 ha (6.4 acres). A larger wetland [2.4 ha (5.9 acres)] has areas of both forest and marsh drains to Payne Creek. Agrico has submitted dredge and fill applications for the mining of these wetlands. In addition, this application includes a permit application for the dredging of these wetlands as part of this project (see Appendix 11.1.3). No significant wildlife habitat will be lost onsite.

4.2.2 Measuring and Monitoring Programs

Because of the proposed erosion control measures, no anticipated water quality impacts to Payne Creek are expected. Therefore, no water quality monitoring is proposed during construction.

4.3 GROUNDWATER IMPACTS

4.3.1 Physical and Chemical Effects of Dewatering

Some dewatering will be required during excavation for construction of plant structures. The site facilities requiring dewatering include:

- Circulating water piping - approximately 1,128 m (3,700 linear ft) of 152 cm (60 inch) for one combined cycle module diameter pipe and 610 m (2,000 linear ft) of 122 cm (48 inch) diameter pipe,
- Circulating water pump structure (intake structure), and
- Miscellaneous underground utilities.

The circulating water piping system will require the most extensive dewatering. The dewatering flow is estimated to be 201 liters (L) per minute [53 gallons per minute (gpm)] per 30 m (100 linear ft) of pipe, regardless of pipe size. Assuming 152 m (500 linear ft) of pipe is excavated and dewatered at a time, a dewatering flow of 1,005 L per minute (265 gpm) would be anticipated, with a radius of influence of approximately 44 m (145 ft). The corresponding estimates for the 102 cm (40 inch) diameter pipe are 1,005 L per minute (265 gpm) and a radius of 29 m (95 ft). These flows would exist during the construction period, which will last approximately 6 months. After construction, granular backfill will be used in the circulating water trench so that natural groundwater flow is not disrupted.

The intake structure will be constructed within a sheetpile enclosure which will minimize dewatering. The dewatering flow for the system is estimated to be approximately 1,900 L per minute (500 gpm) for a period of 6 months.

The underground utilities will be installed in shallow trenches. The shallow groundwater table will require open trench sumping to control groundwater. Based on the anticipated length of open trench, the quantity of dewatering is estimated to be on the order of 380 L per minute (100 gpm).

The amount and rates of groundwater inflow to the excavation/dewatering system are far less than the disturbance caused by adjacent strip mining activity. The primary impact of dewatering is that groundwater from the surficial aquifer will be withdrawn and the aquifer phreatic line will be depressed locally. In order to minimize the impact of dewatering, the pumpage from wellpoints will be directed to the detention pond, which provides for natural infiltration and replenishment of the surficial aquifer. Thus, the dewatering flows removing groundwater are balanced a short distance away by recharge from the detention pond. Due to the location of dewatering areas and the pond, seepage into the southern end of the Payne Creek wetlands will be shifted, temporarily, to the northwest.

Dewatering can cause increases in vertical stresses. In this case the increase will not be large enough to cause settlement or depressions. Foundations in the power block area will not be at risk because they are supported on piles.

Chemical effects of dewatering will result primarily from oxidation of the groundwaters. The sands of the surficial aquifer are predominantly quartzitic, although soluble calcite and phosphate are present within the strata. Dissociation of calcite will liberate calcium ions and bi-carbonate anions, which will increase the hardness of the water. Oxidation reactions in the predominantly siliceous system are practically insignificant.

No impacts to the intermediate aquifer are predicted since the excavation/dewatering will be limited to the surficial aquifer groundwater regime.

4.3.2 Measuring and Monitoring Program

During construction dewatering, all local, state and federal requirements will be met for on-site discharge of groundwater.

4.4 ECOLOGICAL IMPACTS

4.4.1 Impact Assessment

4.4.1.1 Aquatic Systems

No structures are planned in Payne Creek or its floodplain. Construction surface runoff will be routed into a detention pond and erosion prevention measures will be used (Section 4.2.1.2), thus no adverse ecological impacts to aquatic systems are anticipated.

Infrequent stormwater discharges from the detention pond are the only anticipated inputs into Payne Creek during construction. These discharges are not expected to have adverse impacts on Payne Creek.

4.4.1.2 Terrestrial Systems

The power plant, cooling reservoir, and associated onsite facilities such as parking lots, detention ponds and roads will occupy over 283 ha (700 acres) of land. Over 90% of this area will be located on recently mined land and will not replace existing vegetation communities. Approximately 8 ha (20 acres) of abandoned improved pasture will be permanently replaced. The natural vegetation communities onsite will be preserved. These include the forested wetland tributary to Payne Creek and the flatwoods/wet hardwood forest that comprises the Payne Creek floodplain. Therefore, the construction of the Hardee Power Station will have very little impact on local or regional natural vegetation communities.

Potential impacts to the preserved vegetation communities onsite due to construction activities typically include the following:

- Sedimentation and pollution of Payne Creek due to stormwater runoff into the tributary and floodplain from laydown areas, roads, and areas under construction;

- o Damage to vegetation due to fugitive dust from roads and other areas that are being cleared; and
- o Damage to preserved areas due to human intrusion and litter.

Stormwater runoff into Payne Creek and site wetlands will be prevented by the implementation of temporary and permanent measures (Section 4.2.1.1). Erosion and sediment control measures during construction will include seeding and mulching exposed areas, minimizing unnecessary clearing of vegetation, and redirecting stormwater runoff by using dikes, basins, and sediment curtains. Detention basins will be used for permanent redirection of stormwater.

The Payne Creek floodplain will be identified and construction workers will not be working in that area.

Potential impacts to wildlife communities due to construction activities include the following:

- o Vegetation removal and loss of habitat,
- o Noise,
- o Increased access to wildlife areas,
- o Road traffic and road kills, and
- o Change in drainage.

Most of the wildlife habitat area has been altered by mining operations. Some wildlife habitats, including mesic hardwood forest, open pine pasture, and upland oak-palmetto still remain on site. The most productive of these habitats are the mesic hardwood forest along the Payne Creek tributary and the forest in the Payne Creek floodplain. Since these habitats will not be mined or used for construction and be preserved, the construction of the Hardee Power Plant will have no significant impact on local or regional wildlife habitats.

A loss of habitat in the areas of open pine-pasture and upland-oak palmetto will occur. The more mobile animals (birds, snakes and most mammals) will

escape to surrounding habitats. These habitats are neither important nor significant compared to similar habitats in the project area.

The increased noise from construction equipment may cause a temporary avoidance behavior in area wildlife. This behavior is expected to be minimal since existing wildlife is probably accustomed to the noise generated by existing mining operations.

Wildlife habitats are presently accessible by existing roads so that any additional roads to the site will not affect wildlife conditions in these habitats.

A temporary increase in road kills may be expected from construction and traffic. Some small mammals (e.g., opossums) and reptiles (e.g., snakes) may be killed. No important wildlife species are expected to be affected.

Runoff and subsurface seepage from areas upstream and to the west of the creek will not be affected and will continue to provide enough water so that wildlife use of the creek will be unchanged.

The three state-listed plant species (i.e., water spider orchid, wild pine and shoestring fern) that occur or potentially occur in the forested wetland tributary that will be preserved on site will not be adversely affected by construction. This area will be protected by the measures described above.

The wildlife species present on the site are considered typical of the region. No unique species or habitats, or significant populations of recreationally and commercially important species will be lost during construction.

4.4.2 Measuring and Monitoring Programs

Because of the lack of anticipated ecological impacts no biological monitoring is proposed during the construction period.

4.5 AIR IMPACT

4.5.1 Estimated Emissions

Air quality impacts during the construction phase of the project are primarily due to the land clearing and site preparation activities which include the generation of fugitive dust and exhaust emissions from construction equipment. These air quality impacts will vary substantially from day to day during each phase of construction depending on the level of activity, the specific operations, and prevailing weather conditions. Building and road construction will have the highest potential for fugitive dust emissions and impacts. Emissions during the construction of buildings or roads will be associated with land clearing, ground excavation, cut and fill operations and actual construction of the facility when approximately 13 ha (32 acres) of the facility site will be exposed. A large portion of the fugitive emissions will result from vehicular traffic over roads at the construction site. The plant site arrangements are shown in Figure 3.2-1 with the specific acreage requirements discussed in Section 3.2.

The highest potential impacts from vehicular exhaust emissions will occur during the facility construction phase when the amount of on-site equipment is greatest for concrete placement, structural and major equipment installation.

4.5.2 Control Measures

For the emissions described in the previous section, the local air quality impact from fugitive dust will be minimized by the application of appropriate dust suppression control methods, such as spraying or paving roads. The impacts will cease when construction activities are terminated and the facilities are ready for operation.

The site will be revegetated after completion of construction. The construction process will disturb the site only temporarily. Much of the site will be covered by the cooling reservoir water surface area by the end of the construction period.

The major roads surrounding and leading to the plant site are paved, and new roads on the plant site will be paved at the end of the construction period. Dust suppressors, water and water-based sprays will be applied to the roads as required to control fugitive dust emissions during construction. Spilled or tracked dirt or other materials will be promptly removed from roads and paved areas.

4.5.3 Potential Impacts

As discussed in Section 4.5.1, the air quality impacts due to the construction activities will vary substantially from day to day depending on the level of activity, the specific operations, and prevailing weather conditions. Because of the type and nature of potential emission sources at the facility site, the maximum impacts are expected to occur near the construction activities in areas on or near plant property. Based on the proposed controls presented in Section 4.5.2, the air quality impacts are expected to be minimized by the control measures implemented during construction.

4.6 IMPACT ON HUMAN POPULATIONS

4.6.1 Noise Impacts

The nearest human population to the proposed facility is CFI's Hardee Phosphate Complex, which is a phosphate processing plant located approximately 1,830 m (6,000 ft) to the southeast. The nearest residential (non-commercial) population, relative to the proposed facility, are the homes located 2.4 km (1.5 miles) south on Roberts Road (Figure 2.3.8-1). Noise from the operation of construction equipment during the construction phase of the project will not adversely impact the surrounding area due to the already existing noise from the ongoing mining and phosphate processing operations. Also, most of the construction and associated major noise producing activities are intermittent in nature and take place during normal daylight working hours. The various construction contractors will be requested to make use of low noise level equipment and utilize noise attenuating devices (e.g., mufflers) whenever possible as well as compliance with vehicle noise regulations.

4.6.2 Transportation Impacts

The movement of construction workers, equipment and materials to and from the site may cause some short-term inconvenience to residents in the area. Because the area has a long history of movement of construction workers associated with past and present mining activities the impacts of this movement are not considered significant. An average of 225 workers will be required during the approximate 26-month construction period with a peak not expected to exceed 400 workers on-site over a 3 month period.

The primary mode of access to the plant site during the construction phase is expected to be workers driving their own vehicles over the rural highway network of Polk and Hardee Counties (See Section 2.2.7.2). The location of the plant site on the northwest Hardee/southwest Polk County border limits the number of potential access routes to the site from nearby population centers and the available construction labor supply.

It is anticipated that a majority of the workers who will be employed in the construction of the plant will come from within 96.5 km (60 miles) of the plant site and will primarily reside in Polk and Hardee counties. For the purposes of this analysis, it is assumed that up to 80% of the construction workers will come from the large population centers of Lakeland, Winter Haven, and Plant City which are located within about 40-60 km (25-35 miles) north and northeast of the site: this also includes the smaller communities of Bartow and Mulberry, as well as Bradley Junction, and Ft. Meade. It is expected that the balance of other workers will be split about evenly (10%-10%) between those that come from the south and southeast in Hardee and DeSoto counties and the more distant coastal population centers of Hillsborough, Sarasota, and Manatee counties. These assumptions are based on population distribution in the area (refer to Table 2.2.3-1) and labor availability.

Due to the sparse development and roadway system in the area of the Hardee Power Station site, construction workers will have a limited selection of access routes from which to choose. Recent discussions with Florida DOT

(Bartow Office), and Polk and Hardee County traffic and public works personnel, indicate that while limited in number, all access roads are two lane facilities, in good to very good structural condition, and are generally carrying low volumes of traffic at acceptable speed and safety levels.

IMPACT OF CONSTRUCTION

An average of 225 workers, and a peak of approximately 400 workers, will be commuting to the site during the 26-month construction period. While some workers may carpool to the site, a one person-one car traffic scenario has been assumed for this analysis. Since major equipment deliveries to the site are expected to be by rail, truck traffic should be limited and should not conflict with car traffic.

Based on regional population distribution and workforce availability, it is anticipated that approximately 80% of the workforce will come from Polk County, and 20% from Hillsborough, Hardee, DeSoto, Manatee and Sarasota Counties. In addition, while traffic volume in some parts of Florida vary 20 to 25% above and below the ADT due to seasonal travel, it is assumed that the access roadways to the plant site will not be affected by such variations. It is also assumed that peak hour traffic was a maximum of 10% of the ADT (peak hour traffic data was not available for roads in the approach network to the plant site).

An operational capacity of about 2,000 vehicles per hour (both directions) has been assumed for the two-lane highways providing access to the site. This represents about 70% of the ideal capacity of 2,800 for two lane highways (Transportation Research Bureau Highway Capacity Manual, 1985). The adjustment to 2,000 vehicles per hour takes into account varying conditions of roadway alignment, shoulder areas, and truck traffic along the access roads.

A capacity assumption of 1,500 vehicles per lane was made for the 4-lane segment of US 17/SR 35, due to slower speeds associated with travel conditions in developed areas (Bartow and Ft. Meade).

Table 4.6.2-1 lists each of the elements of the access roadway network, along with current and projected peak hour traffic conditions, volume to capacity ratios, and projected Level of Service. Based on the assumptions used for this analysis and a comparison of anticipated traffic with current traffic volumes and road capacities, the traffic generated by the site construction workers should not have any significant adverse affect on either roadway capacity or Level of Service conditions on any of the segments of the access roadway network.

While the proposed construction effort is anticipated to have a minimal impact on local transportation networks, based on the segment analysis (Table 4.6.2-1) it was judged that the large number of construction workers anticipated to be commuting from communities to the north of the site could create minor congestion during peak hours at the following four intersections:

1. Plant site entrance and CR 663,
2. SR 37 and CR 630,
3. CR 663 and CR 630, and
4. US 17/SR 35 and CR 630 in Ft. Meade.

Some delays may occur during the evening "peak hour" at these locations as workers leave the site at one time and turn onto the primary commuting roads. These delays may cause a minor short-term nuisance. Should problems occur, however, county traffic control personnel will be utilized to keep traffic flowing smoothly and to minimize delays.

4.6.3 Housing Impacts

According to the FDLES over 75,000 construction workers reside within 96.5 km (60 miles) of the proposed site. Since a more than adequate labor supply exists within commuting distance, it is anticipated that workers will

Table 4.6.2-1. Existing and Projected Peak Hour Traffic Conditions on Site Access Roads in Polk and Hardee Counties

Roadway	Segment	EXPK	Cap	%AT	Avg	Peak	CAP	LOS
SR 37	SR 60 to CR 630	400	.20	40	490	560	.28	A
	SR 674 to CR 630	370	.19	05	380	390	.20	A
US 17/SR 35	SR 60 to CR 630 (4 LN)	1390	.23	30	1460	1510	.25	B
CR 555	SR 60 to CR 630	250	.13	05	262	270	.14	A
CR 630	SR 37 to Ft.Green	190	.10	45	290	370	.19	A
	Ft Green to CR 555	210	.11	40	310	370	.19	A
	CR 555 to US 17/SR 35	290	.15	35	370	430	.22	A
SR 674	Hills. Co. to SR 37	145	.07	05	155	165	.08	A
CR 663	CR 630 to Site	45	.02	85	240	390	.20	A
	CR 664 to Site	45	.02	15	80	105	.05	A
CR 663	CR 62 to CR 664	45	.02	10	70	85	.04	A
SR 62	Manatee Co.to CR 663	250	.13	05	262	270	.14	A
	US 17/SR 35 to CR 663	260	.13	05	272	280	.14	A
US 17/SR 35	DeSoto Co. to SR 62	1100	.55	.05	1120	1140	.57	B

Column Heading Abbreviations:

EXPK: Existing 1988 Peak Hour Traffic, based on 10% of current ADT.
Cap: Existing ratio of peak hour volume to capacity of the roadway segment (2-lane capacity = 2000 total, both ways: 4-lane = 1500 per lane).
%AT: Percentage of construction worker access traffic.
Avg: Peak hour volume on segment with traffic for average of 225 workers added.
Peak: Peak hour volume on segment with peak of 400 construction workers added.
CAP: Peak hour volume to capacity ratio at 400 worker peak traffic added.
LOS: Projected Level of Service at 400 worker traffic level.
A = Free flow traffic conditions
B = Traffic flow at 75-90% of that attainable of free flow.
LN = Lanes

Source: Transportation Research Board, Highway Capacity Manual. Special Report 209, 1985.

be hired from within the region with minimal relocation required. Consequently construction should have no effect on permanent housing within the region. As is typical with longer construction projects, some workers commuting from the longer distances may choose to drive a recreational vehicle (RV) to the area and camp near the site on a weekly basis, returning to their permanent homes and families on weekends. Several campgrounds providing various amenities and over 1,000 full hook-ups for RVs are located within the region which could serve these weekly commuters. Since commuting is not anticipated to be a problem, the number of workers who utilize the campground facilities is not expected to be sufficient to cause a change in usage patterns of normal users of these facilities.

With the exception of the occasional use of campgrounds, no new impacts are expected on community services and facilities within the region as a result of the construction effort. Those workers hired from the area will have already established usage patterns and will probably continue to frequent the same facilities and establishments which they used prior to employment on this project. Consequently, any new demands will be dispersed throughout the region and should not create any noticeable change in the availability of area resources.

4.7 IMPACT ON LANDMARKS AND SENSITIVE AREAS

No Federal, state, regional or local scenic, cultural or natural landmarks are located within the vicinity of the proposed facility. Consequently, the construction of the Hardee Power Station will have no effect on any such resources.

4.8 IMPACT ON ARCHAEOLOGICAL AND HISTORIC SITES

No significant archaeological and historic sites or sites recommended for preservation occur on the Hardee Power Station property (see Section 2.2.6). Therefore, no impact mitigation is required. If any site or sites are found during construction, the Applicant will implement a "chance/find" procedure where a certified archaeologist will evaluate the site and in consultation with the Division of Historical Resources (DHR) will determine the

significance of the find. If the site is considered significant by the DHR, measures will be taken by the Applicant to preserve or mitigate the impact to the site.

4.9 SPECIAL FEATURES

There will be no unusual products, raw materials, garbage disposal services, incinerator effluents and residues produced during construction that will have an influence on the environment and ecological systems of the plant site and the adjacent areas.

4.10 BENEFITS FROM CONSTRUCTION

Numerous benefits will directly result from site preparation and construction activities.

Site preparation and construction will create job opportunities within Hardee and Polk counties, a region which is currently suffering from high unemployment. In addition, the state of Florida will benefit from sales taxes paid on the construction materials. A detailed description of the socioeconomic benefits associated with construction of the Hardee Power Station is presented in Section 7.

4.11 VARIANCES

A variance is sought from Section 16C-16.0051(1), F.A.C., and Section 16C-16.0051(5), F.A.C., FDNR Reclamation Standards for construction of the cooling reservoir (see Appendix 11.10 for discussion of variance). No significant or adverse impacts will result from granting this variance. No other variances from applicable standards due to construction will be sought as part of the state certification procedures.

REFERENCES - Chapter 4

Transportation Research Board. 1985. Highway Capacity Manual. Special Report 209.