SITE CERTIFICATION APPLICATION
NEW HOPE POWER PARTNERSHIP
EXPANSION PROJECT

Submitted by:

New Hope Power Partnership
8001 U.S. Highway 27 South
South Bay, FL 33493

August 2004
0337594

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Submitted by:

New Hope Power Partnership
8001 U.S. Highway 27, South
South Bay, FL 33493

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August 2004
0337594

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APPLICANT INFORMATION

Please supply the following information:

Applicant's Official Name *New Hope Power Partnership*

Address *8001 U.S. Highway 27 South, South Bay, FL 33493*

Address of Official Headquarters *8001 U.S. Highway 27 South, South Bay, FL 33493*

Business Entity (corporation, partnership, co-operative) *Partnership*

Names, owners, etc. *New Hope Power Partnership (NHPP)*

Name and Title of Chief Executive Officer *Gustavo Cepero, Authorized Representative of NHPP*

Name, Address, and Phone Number of Official Representative responsible

for obtaining certification: *James Meriwether, Environmental and Safety Manager*

8001 U.S. Highway 27 South, South Bay, FL 33493 Phone: (561) 993-1003 Fax: (561) 996-6596

Site Location (county) *6 miles south of South Bay on U.S. 27, Palm Beach County, Fl 33496*

Nearest Incorporated City *South Bay, FL (about 6 miles)*

Latitude and Longitude *26°34' 59" N 80°45' 60" W*

UTM's Northerly *2,940.10 km N*

Easterly *524.90 km E, Zone 17*

Section, Township, Range *Portions of Section 16 of Township 45S, Range 36E*

Location of any directly associated transmission

facilities (counties) *N/A*

Name Plate Generating Capacity *New net 65 MW; Existing 74.9 MWnet (nominal)*

Capacity of Proposed Additions and Ultimate Site

Capacity (where applicable) *Capacity Addition is 65 MW nominal net; Total 140 MW nominal net*

Remarks (additional information that will help identify

the applicant): *Project Name: New Hope Power Partnership Expansion Project*

TABLE OF CONTENTS

1.0 NEED FOR POWER AND THE PROPOSED FACILITIES 1-1
1.1 INTRODUCTION 1-1
1.1.1 THE APPLICANT 1-1
1.1.2 OVERVIEW OF THE EXISTING FACILITY 1-1
1.1.3 OVERVIEW OF THE PROJECT 1-3
1.1.4 PURPOSE OF THE SITE CERTIFICATE APPLICATION 1-3
1.2 NEED FOR THE PROPOSED PROJECT 1-4
1.2.1 NEED FOR ELECTRIC SYSTEM RELIABILITY AND INTEGRITY 1-4
1.2.2 NEED FOR ADEQUATE ELECTRICITY AT A REASONABLE COST 1-6
1.2.3 STRATEGIC CONSIDERATIONS 1-6
1.2.4 COST-EFFECTIVENESS OF THE PROJECT 1-7
1.3 DESCRIPTION AND OVERVIEW OF THE PROJECT 1-9
1.3.1 INTRODUCTION 1-9
1.3.2 PROJECT DESCRIPTION 1-9
1.3.3 PROJECTED OPERATIONS 1-10
1.4 BENEFITS OF THE PROJECT 1-10
2.0 SITE AND VICINITY CHARACTERIZATION 2-1
2.1 SITE AND ASSOCIATED FACILITIES DELINEATION 2-1
2.1.1 SITE LOCATION 2-1
2.1.2 EXISTING SITE USES 2-1
2.1.3 ADJACENT PROPERTIES 2-1
2.1.4 PLANNED SITE USES 2-1
2.1.5 100-YEAR FLOOD ZONE 2-2
2.2 SOCIO-POLITICAL ENVIRONMENT 2-2
2.2.1 GOVERNMENTAL JURISDICTIONS 2-2
2.2.2 ZONING AND LAND USE PLANS 2-2
2.2.3 DEMOGRAPHY AND ONGOING LAND USE 2-4
2.2.4 EASEMENTS, TITLE, AGENCY WORKS 2-5
2.2.5 REGIONAL SCENIC, CULTURAL AND NATURAL LANDMARKS 2-5
2.2.6 ARCHAEOLOGICAL AND HISTORIC SITES 2-5
2.2.7 SOCIOECONOMICS AND PUBLIC SERVICES 2-6
2.2.8 AREA PUBLIC SERVICE AND UTILITIES 2-8

TABLE OF CONTENTS

2.3 BIO-PHYSICAL ENVIRONMENT 2-11
2.3.1 GEOHYDROLOGY 2-11
2.3.2 SUBSURFACE HYDROLOGY 2-14
2.3.3 SITE WATER BUDGET AND AREA USERS 2-15
2.3.4 SURFICIAL HYDROLOGY 2-16
2.3.5 VEGETATION AND LAND USE 2-17
2.3.6 ECOLOGY 2-17
2.3.7 METEOROLOGICAL AND AMBIENT AIR QUALITY 2-18
2.3.8 NOISE 2-24
3.0 THE PLANT AND DIRECTLY ASSOCIATED FACILITIES 3-1
3.1 BACKGROUND 3-1
3.2 SITE LAYOUT 3-2
3.3 FUEL 3-3
3.4 AIR EMISSIONS CONTROLS 3-4
3.4.1 AIR EMISSIONS TYPES AND SOURCES 3-4
3.4.2 AIR EMISSION CONTROLS 3-5
3.4.3 CONTROL TECHNOLOGY DESCRIPTION AND BEST AVAILABLE CONTROL TECHNOLOGY (BACT) 3-5
3.4.4 DESIGN DATA FOR CONTROL EQUIPMENT 3-8
3.4.5 DESIGN PHILOSOPHY 3-9
3.5 PLANT WATER USE 3-10
3.5.1 CIRCULATING WATER HEAT REJECTION SYSTEM 3-10
3.5.2 DOMESTIC/SANITARY WASTEWATER 3-11
3.5.3 POTABLE WATER SYSTEMS 3-12
3.5.4 PROCESS WATER SYSTEMS 3-12
3.5.5 WATER USE VARIATIONS 3-12
3.6 CHEMICAL AND BIOCIDE WASTE 3-13
3.6.1 COOLING SYSTEM WATER CHEMICAL TREATMENT 3-13
3.6.2 STEAM CYCLE WATER TREATMENT 3-14
3.6.3 SANITARY WASTEWATER TREATMENT 3-14
3.6.4 MAKEUP WATER DEMINERALIZATION 3-14
3.6.5 CHEMICAL CLEANING 3-14

TABLE OF CONTENTS

3.6.6 MISCELLANEOUS CHEMICAL DRAINS 3-15
3.6.7 NEUTRALIZATION SYSTEM 3-15
3.6.8 MISCELLANEOUS EQUIPMENT AND FLOOR DRAINS 3-15
3.7 SOLID AND HAZARDOUS WASTE 3-16
3.7.1 SOLID WASTE 3-16
3.7.2 HAZARDOUS WASTE 3-16
3.8 ONSITE DRAINAGE SYSTEM 3-16
3.8.1 STORMWATER DETENTION PONDS 3-16
3.8.2 STORMWATER RUNOFF CONTROL DURING CONSTRUCTION 3-17
3.9 MATERIALS HANDLING 3-17
3.9.1 BIOMASS FUEL AND BYPRODUCTS 3-17
3.9.2 CONSTRUCTION MATERIALS AND EQUIPMENT 3-17
3.9.3 ROADS 3-18
4.0 ENVIRONMENTAL EFFECTS OF SITE PREPARATION AND PLANT AND ASSOCIATED FACILITIES CONSTRUCTION 4-1
4.1 LAND IMPACTS 4-1
4.1.1 GENERAL CONSTRUCTION IMPACTS 4-1
4.1.2 ROADS 4-2
4.1.3 FLOOD ZONES 4-3
4.1.4 TOPOGRAPHY AND SOILS 4-3
4.2 IMPACT ON SURFACE WATER BODIES AND USES 4-4
4.2.1 IMPACT ASSESSMENT 4-4
4.2.2 MEASURING AND MONITORING PROGRAMS 4-5
4.3 GROUNDWATER IMPACTS 4-5
4.3.1 PHYSICAL AND CHEMICAL IMPACTS 4-5
4.3.2 MEASURING AND MONITORING PROGRAM 4-6
4.4 ECOLOGICAL IMPACTS 4-6
4.4.1 IMPACT ASSESSMENT 4-6
4.4.2 MEASURING AND MONITORING PROGRAMS 4-7
4.5 AIR IMPACTS 4-7
4.5.1 AIR EMISSIONS 4-7
4.5.2 CONTROL MEASURES 4-8

TABLE OF CONTENTS

4.6 IMPACT ON HUMAN POPULATIONS 4-8
4.6.1 TRANSPORTATION 4-8
4.6.2 CONSTRUCTION NOISE IMPACTS 4-9
4.6.3 CONSTRUCTION EMPLOYMENT 4-10
4.7 IMPACTS ON LANDMARKS AND SENSITIVE AREAS 4-11
4.8 IMPACT ON ARCHAEOLOGICAL AND HISTORIC SITES 4-12
4.9 SPECIAL FEATURES 4-12
4.10 BENEFITS OF CONSTRUCTION 4-12
4.11 VARIANCES 4-12
5.0 EFFECTS OF PLANT OPERATION 5-1
5.1 EFFECTS OF THE OPERATION OF THE HEAT DISSIPATION SYSTEM 5-1
5.1.1 TEMPERATURE EFFECT ON RECEIVING BODY OF WATER 5-1
5.1.2 EFFECTS ON AQUATIC LIFE 5-1
5.1.3 BIOLOGICAL EFFECTS OF MODIFIED CIRCULATION 5-1
5.1.4 EFFECTS OF OFFSTREAM COOLING 5-1
5.1.5 MEASUREMENT PROGRAM 5-6
5.2 EFFECTS OF CHEMICAL AND BIOCIDE DISCHARGES 5-6
5.2.1 INDUSTRIAL WASTEWATER DISCHARGES 5-6
5.2.2 COOLING TOWER BLOWDOWN 5-8
5.2.3 MEASUREMENT PROGRAMS 5-8
5.3 IMPACTS ON WATER SUPPLIES 5-8
5.3.1 SURFACE WATER 5-9
5.3.2 GROUNDWATER 5-9
5.3.3 DRINKING WATER 5-9
5.3.4 RUNOFF AND LEACHATE 5-9
5.4 IMPACTS FROM DISPOSAL OF BYPRODUCTS AND SOLID AND HAZARDOUS WASTES 5-10
5.4.1 SOLID WASTE 5-10
5.4.2 HAZARDOUS WASTE 5-10
5.5 SANITARY AND OTHER WASTE DISCHARGES 5-10
5.6 AIR QUALITY IMPACTS 5-10
5.6.1 IMPACT ASSESSMENT 5-10

TABLE OF CONTENTS

5.6.2 MONITORING PROGRAMS 5-14
5.7 NOISE 5-15
5.8 CHANGES TO NON-AQUATIC SPECIES POPULATION 5-16
5.8.1 IMPACTS 5-16
5.8.2 MONITORING 5-17
5.9 OPERATIONS TRAFFIC 5-17
5.10 ARCHAEOLOGICAL SITES 5-17
6.0 TRANSMISSION LINES 6-1
7.0 ECONOMIC AND SOCIAL EFFECTS OF PLANT CONSTRUCTION AND OPERATION 7-1
7.1 SOCIO-ECONOMIC BENEFITS 7-1
7.1.1 DIRECT SOCIO-ECONOMIC BENEFITS 7-1
7.1.2 INDIRECT ECONOMIC BENEFITS 7-2
7.1.3 OTHER ECONOMIC BENEFITS 7-3
7.1.4 RECREATIONAL AND ENVIRONMENTAL VALUES 7-3
7.1.5 OTHER ENVIRONMENTAL BENEFITS 7-3
7.1.6 SUMMARY OF BENEFITS 7-4
7.2 SOCIO-ECONOMIC COSTS 7-5
7.2.1 TEMPORARY EXTERNAL COSTS 7-5
7.2.2 LONG-TERM EXTERNAL COSTS 7-6
8.0 SITE AND DESIGN ALTERNATIVES 8-1
9.0 COORDINATION 9-1
REFERENCES REF-1

TABLE OF CONTENTS

LIST OF TABLES

Table 2.2-1. Areas Not Found within 5 Miles of the New Hope Project Site

Table 2.2-2. Population Census Counts, Population Estimates, and Projections

Table 2.3-1. Monthly and Annual Average Temperatures Measured at Palm Beach International Airport

Table 2.3-2. Monthly and Annual Average Precipitation and Relative Humidity Measured at Palm Beach International Airport

Table 2.3-3. Seasonal and Annual Average Wind Direction and Wind Speed Measured at Palm Beach International Airport

Table 2.3-4. Seasonal and Annual Average Atmospheric Stability Classes Determined at Palm Beach International Airport

Table 2.3-5. Seasonal and Annual Average Morning and Afternoon Mixing Heights Determined at Palm Beach International Airport

Table 2.3-6. National and State AAQS, Allowable PSD Increments, and Significant Impact Levels

Table 2.3-7. Summary of Maximum Measured PM10, O3, NO2, CO and SO2 Concentrations for Palm Beach County, 2001 to 2002

Table 2.3-8. Baseline Ambient Sound Pressure Level Data in the Vicinity of the NHPP Site (September 6, 2003)

Table 3.3-1. Design Fuel Specifications

Table 3.3-2. Maximum Fuel Usage and Heat Input Rates Per Boiler

Table 3.4-1. Maximum Short-Term Emissions (Per Boiler)

Table 3.4-2. Maximum Annual Emissions Per Boiler

Table 3.4-3. Maximum Annual Fugitive Dust Emissions

Table 3.4-4. Physical, Performance, and Emissions Data for the New Mechanical Draft Cooling Tower

Table 5.1-1. Predicted Plume Characteristics and Drift Deposition from New Mechanical Draft Cooling Tower

Table 5.6-1. Summary of Maximum Pollutant Concentrations Compared to the EPA Class II Significant Impact Levels, the EPA Class I Significant Impact Levels, and PSD Class I Increments

Table 5.6-2. Summary of Maximum Pollutant Concentrations Predicted for the Project Only

TABLE OF CONTENTS

LIST OF FIGURES

Figure 2.1-1. Location of the NHPP Site
Figure 2.1-2. Location of NHPP and Surrounding Area
Figure 2.1-3. Adjacent Properties to the NHPP Site
Figure 2.2-1. Future Land Use Map for Palm Beach County
Figure 2.3-1. Annual Wind Rose for Palm Beach International Airport, Florida (1987 - 1991)
Figure 2.3-2. Winter Wind Rose for Palm Beach International Airport, Florida (December - February 1987 - 1991)
Figure 2.3-3. Spring Wind Rose for Palm Beach International Airport, Florida (March - May 1987 - 1991)
Figure 2.3-4. Summer Wind Rose for Palm Beach International Airport, Florida (June - August 1987 - 1991)
Figure 2.3-5. Fall Wind Rose for Palm Beach International Airport, Florida (September - November 1987 - 1991)
Figure 3.1-1. Existing Facility Plot Plan
Figure 3.1-2. Simplified Flow Diagram
Figure 3.2-1. Project Site Boundary
Figure 3.2-2. Overall Site Arrangement
Figure 3.2-3. Photographs of NHPP Facility
Figure 3.5-1. Overall Water Balance Diagram
Figure 3.9-1. Materials Handling System
Figure 5.7-1. Sound Level Comparisons

1.0 NEED FOR POWER AND THE PROPOSED FACILITIES

This chapter of the Site Certificate Application (SCA) describes New Hope Power Partnership (NHPP) and explains why the "Project" is needed.

1.1 INTRODUCTION

NHPP is applying for certification of a 65 megawatt (MW) expansion in the steam electric generating capacity (the Project) of the existing cogeneration plant, a 74.9 MW (net) biomass-fired facility located in Palm Beach County, Florida. NHPP projects that the net output of the Project will range from 150,000 to 190,000 megawatt hours per year (MWH/year) with most of the electrical energy produced during the spring and summer months. NHPP will commit to sell 70 percent of the net incremental electrical energy output from the Project to Florida Power & Light Company (FPL), at a 1-percent discount from FPL's avoided energy cost for a minimum of 5 years; NHPP anticipates that virtually all of the additional incremental output will also be sold to Florida utilities with responsibility for serving retail load, at rates that are cost-effective to those utilities. The capacity of the Project will also be available to meet peak demands in Peninsular Florida.

The output from the Project will thus cost-effectively meet FPL's, and Peninsular Florida's need for system reliability and integrity and for adequate electricity at a reasonable cost. By its use of Florida-origin, renewable biomass fuel in a cogeneration application, the Project is itself a significant and meaningful conservation measure in that its output will displace the use of non-renewable fossil fuels to generate power for the Florida power supply system.

1.1.1 THE APPLICANT

NHPP is a Florida partnership that owns the existing cogeneration facility (the Facility), a biomass-fired facility located adjacent to the Okeelanta Corporation sugar mill and refinery approximately 6 miles south of South Bay, Florida, in Palm Beach County.

1.1.2 OVERVIEW OF THE EXISTING FACILITY

The Facility is an electric cogeneration facility that burns biomass fuel to generate electricity and steam. The Facility's current capacity is 74.9 MW (net output to the Florida grid). Approximately 98 to 99 percent of the total thermal input to the Facility is biomass fuel: bagasse, land-clearing debris (whole trees and shrubs), yard waste, and other clean wood waste. The remaining 1 to 2 percent is

natural gas and No. 2 fuel oil. Construction of the Facility was completed in 1995, and initial operations began late that year.

The Facility is a qualifying cogeneration facility and a qualifying small power production facility within the meaning of the Public Utility Regulatory Policies Act of 1978 (PURPA) and the rules of the Federal Energy Regulatory Commission (FERC) promulgated pursuant to PURPA. Following the completion of the Project, the Facility will continue to be a qualifying cogeneration facility pursuant to PURPA and the FERC's rules, but will no longer be a qualifying small power production facility under those rules because of an 80-MW capacity limitation applicable to small power production facilities. As a cogeneration facility fired almost entirely by biomass fuel, the Facility will continue to serve the goals and policy purposes of both the PURPA and the Florida Energy Efficiency and Conservation Act (FEECA), Sections 366.80 through 366.85, Florida Statutes.[1]

The Facility supplies the Okeelanta sugar mill with process steam during the sugarcane-grinding season, which is approximately October through March. The Facility also supplies the Okeelanta sugar refinery with process steam on a year-round basis. Electricity that is not used to serve ancillary electrical loads within the Facility, is sold at wholesale to utilities for resale to their retail consumers or to other utilities. NHPP does not make any retail sales of electricity. Over the past six years, the Facility has generated approximately 2,100,000 net MWH for sale into the wholesale power market; more than 98 percent of this power has been sold to Florida utilities. All of the Facility's output since the beginning of 1999 has been sold to Florida utilities. The majority of those sales (68 percent) have been made to FPL.

The Facility consists of handling and storage facilities for the Facility's biomass fuel, three steam boilers, one steam turbine electric generator (STG), a condenser, a mechanical draft cooling tower, and a switchyard through which the electric generating equipment is connected to the Florida bulk power supply grid via an interconnection with FPL's transmission system at the Okeelanta Substation.

[1] All references to the Florida Statutes in this SCA are to the 2002 edition thereof.

1.1.3 OVERVIEW OF THE PROJECT

The Project consists of adding an additional STG to the Facility to take advantage of additional biomass fuel and steam that is available to produce electricity. The new STG will have a gross nameplate capacity of approximately 70 MW and is expected to produce incremental peak output of 65 MW, bringing the Facility's total capacity, including the Project, to approximately 140 MW (net). Construction is scheduled to begin during the summer of 2005 with the projected in-service date for the Project of May 31, 2006.

NHPP projects that the Project will produce approximately 150,000 to 190,000 MWH of net incremental energy per year for sale to FPL and to other utilities with retail-serving responsibilities. Most of this energy will be produced during the summer months (April through September); however, some energy will be produced for sale into the Florida grid during the winter months.

1.1.4 PURPOSE OF THE SITE CERTIFICATE APPLICATION

The licensing of power plants in Florida requires compliance with federal, state, regional, and local laws, regulations, and ordinances. The primary state law governing the licensing of the Project is the Florida Electrical Power Plant Siting Act (PPSA), Sections 403.501 through 403.518, Florida Statutes, and Section 403.519, Florida Statutes, which governs the Florida Public Service Commission's (PSC) determination of need for power plants subject to the PPSA. (Although codified adjacent to the PPSA, Section 403.519 is part of FEECA; the other provisions of that act are codified at Sections 366.80 through 366.85, Florida Statutes.)

Pursuant to the PPSA, the Florida Department of Environmental Protection (FDEP) coordinates the PPSA review process for the certification (i.e., approval by the Governor and Cabinet sitting as the Siting Board) of a new power plant or an expansion of a power plant that is subject to the PPSA. The PPSA process begins with the submittal of an SCA by the applicant to the FDEP's Office of Siting Coordination. The process includes three hearings (i.e., a land use hearing, the PSC's need determination hearing, and a site certification hearing) and culminates with certification of a proposed plant or expansion by the Siting Board.

In accordance with the applicable statutes and rules, NHPP is submitting this SCA for the Project to the FDEP. This SCA describes the Project, the need for the Project, the environmental conditions on

the Site, and the environmental and socio-economic impacts of the Project. This SCA has been prepared in accordance with, and to fulfill the requirements of, the PPSA and the FDEP's rules governing power plant SCAs contained in Chapter 62-17, Florida Administrative Code (F.A.C.).

1.2 NEED FOR THE PROPOSED PROJECT

Pursuant to Section 403.519, Florida Statutes, the need for a proposed power plant encompasses several aspects of need. The following discussion addresses in detail the ways in which the Project meets the need for additional electric generating capacity and energy in Florida. In summary, the Project will meet the need for system reliability by adding approximately 65 MW (net) of electrical generating capacity to the Florida bulk power supply grid, in a geographically and electrically favorable location in South Florida. The Project's additional 65 MW of capacity available to meet peak demands in Florida is equivalent to the peak demands of approximately 13,000 homes [at a peak demand of 5 kilowatts (kW) per home].

The Project will also meet and serve the needs of FPL, and, NHPP expects, of other Florida utilities, for adequate electricity at a reasonable cost. By the nature of the proposed sale of the incremental electric power output to be generated by the Project, which will be made at the purchasing utility's "avoided energy cost" or pursuant to negotiated power purchase contracts, all such sales will be cost-effective to FPL and to other utilities that purchase power from the expanded Facility.

As a cogeneration plant that is fueled almost entirely by renewable biomass fuel produced (grown) in Florida, the Project will conserve substantial quantities of primary, non-renewable fossil fuels (natural gas, oil, and coal) that would otherwise be burned to generate electricity for use by Florida consumers. The Project will also be available to produce and sell "green" power to Florida utilities, such as FPL, Tampa Electric Company, and several municipal electric utilities to support their "green power" retail tariff offerings.

1.2.1 NEED FOR ELECTRIC SYSTEM RELIABILITY AND INTEGRITY

The Project is consistent with and meets FPL's and Peninsular Florida's needs for system reliability and integrity. Although NHPP is proposing to sell the incremental output of the Project on an as-available energy basis, without specific commitments as to time and quantity of delivery, the Project will be normally operated on a "base load" mode during the summer months and therefore the Project's output will be normally available to meet peak demands in Peninsular Florida, and

accordingly, the Project will contribute to the reliability and integrity of the Peninsular Florida bulk power supply system. The PSC's authority pursuant to Section 366.055, Florida Statutes, to require that the generating reserves of all electric utilities be made available during energy emergencies declared by the Governor and Cabinet, will ensure that the 65 MW of incremental capacity being made available by the Project will be available to serve Florida's electric needs in the event of any capacity shortfall in the State. Moreover, the Project's location in South Florida will also contribute to the reliability and integrity of FPL's system by bolstering the supply of power in the high-demand South Florida region of FPL's system.

The 2003 Regional Load & Resource Plan prepared by the Florida Reliability Coordinating Council ("FRCC 2003 Load & Resource Plan") shows that in 2005, Peninsular Florida will have a summer reserve margin of approximately 14.99 percent, without exercising load management and interruptible resources, and of approximately 23.00 percent with the exercise of such resources. For example, with the Project's capacity available to Peninsular Florida, the summer reserve margins improve to approximately 15.14 and 23.16 percent, respectively. The additional 65 MW of capacity is enough to meet the needs of approximately 13,000 Florida residences (at a peak demand of 5 kW per household).

The Project will also meet FPL's need for system reliability and integrity by virtue of its location in FPL's high-demand Southeast Florida Area. FPL's recently issued 2003 Request for Proposals identifies a geographic preference for new resources located south of FPL's Corbett substation, which is defined as FPL's Southeast Area or Southeast Florida Area. This geographic preference is due to "the growing disparity between load and generating resources in the Southeast area of Florida [which] has been created by strong regional load growth without new generating capacity additions in this region since 1993."[2] The Project is located south of the Corbett substation.

FPL's 2003 RFP also identifies (at pages 2-3) a preference for fuel diversity. The Project will also enhance reliability, specifically "physical" fuel diversity, by virtue of its being fueled by approximately 98 to 99 percent Florida-origin renewable biomass fuels. Because of the proposed sale at FPL's as-available energy costs, which are determined on an hour-to-hour basis by the incremental

[2] Florida Power & Light Company's 2003 Request for Proposals (August 2003) (hereinafter "FPL's 2003 RFP") at 3.

generating resources on FPL's system, this reliability enhancement is physical rather than economic. Up to 30 percent of the Project's output will, however, be available for sale on other bases, including to meet the demands of Florida consumers (as expressed through the utilities' "green power tariffs") and utilities for "green," renewable-source electricity.

1.2.2 NEED FOR ADEQUATE ELECTRICITY AT A REASONABLE COST

By virtue of the power sales from the Project being made either at FPL's (or other utilities') avoided-cost-based as-available energy purchase rates or pursuant to negotiated contracts, the Project will cost-effectively meet FPL's (and other purchasing utilities') need for adequate electricity at a reasonable cost. NHPP will commit to sell 70 percent of the net incremental electricity produced by the Project to FPL at a 1-percent discount from FPL's avoided energy cost for a minimum of 5 years pursuant to FPL's COG-1 power purchase tariff. By definition and by operation of law, purchases at the COG-1 as-available energy purchase rate are to be at "the utility's actual avoided energy cost before the sale of interchange energy." PSC Rule 25-17.0825(2)(a), F.A.C. The avoided energy costs are all costs the utility avoided due to the purchase of as-available energy, including the utility's incremental fuel, identifiable variable operating and maintenance expense, and identifiable variable utility power purchases less demonstrable utility administrative costs required to calculate avoided energy costs. NHPP anticipates that virtually all, if not all, of the additional incremental power output from the Project will be sold to FPL or to other Florida utilities with retail-serving responsibility at those utilities' as-available energy purchase rates or pursuant to negotiated power purchase contracts. Any such sales will also be cost-effective to the purchasing utilities.

1.2.3 STRATEGIC CONSIDERATIONS

The Project provides numerous significant strategic benefits to the Florida bulk power supply system and to FPL. First, the Project is located in a geographically and electrically favorable location within the Florida grid, specifically in the Southeast Florida Area south of FPL's Corbett substation. The Project's location in this area is important because of the significant, and growing, imbalance between load (demand) and generation in that region. As noted in FPL's 2003 RFP, the load in this area is approximately 12,000 MW as compared to approximately 6,500 MW of generation available therein.

Second, the Project will provide "physical" fuel diversity benefits in that the biomass fuel is produced (primarily grown) within Florida, thereby reducing the State's exposure to interruptions of imported fuel supplies.

Third, the Project will conserve expensive, non-renewable fossil fuels by generating electricity with renewable energy resources, thereby providing effective contributions to the State's energy conservation. As a cogeneration facility, it will make additional contributions to energy efficiency and conservation. In addition, because the vast majority of the Project's biomass fuel is grown and processed in Florida, the Project will enhance the State's energy self-sufficiency and sustainability.

1.2.4 COST-EFFECTIVENESS OF THE PROJECT

Sales of the Project's incremental electrical output will necessarily be cost-effective to FPL, to any other purchasing utilities, and to their retail customers. As described above, NHPP will commit to sell 70 percent of the net incremental electricity generated by the Project to FPL at a 1-percent discount from FPL's avoided energy cost for a minimum of 5 years pursuant to FPL's COG-1 power purchase tariff. NHPP may sell the additional 30 percent of the Project's output to FPL or other utilities at their as-available energy purchase rates, or pursuant to negotiated contracts. By definition and by operation of law, purchases at the COG-1 as-available energy purchase rate are to be at "the utility's actual avoided energy cost before the sale of interchange energy." PSC Rule 25-17.0825(2)(a), F.A.C.

Similarly, since the rates for energy purchases pursuant to negotiated power purchase contracts are also required "not to exceed the utility's avoided energy cost," Rule 25-17.0825(1), F.A.C., and since the rates for firm capacity and energy purchases are likewise "expected to contribute towards the deferral or avoidance of additional capacity construction or other capacity-related costs by the purchasing utility at a cost to the utility's ratepayers which does not exceed full avoided costs," Rule 25-17.0832(2), F.A.C., any other purchases of the Project's output can also be reliably expected to be cost effective to the purchasing utilities and their customers.

1.2.4.1 Cost-Effectiveness to Florida Power & Light Company

As described above, NHPP will commit to sell 70 percent of the net incremental electricity generated by the Project to FPL at a 1-percent discount from FPL's avoided energy cost for a minimum of 5 years pursuant to FPL's COG-1 power purchase tariff. Any additional sales to FPL would either be made pursuant to the COG-1 rate or pursuant to other negotiated rates. Accordingly, all sales of the Project's output to FPL will be demonstrably cost-effective to FPL and FPL's customers because all such sales will be no greater than FPL's avoided cost.

1.2.4.2 Cost-Effectiveness to Peninsular Florida

Similarly, as described above, sales of the Project's output to other Peninsular Florida retail-serving utilities will also be made pursuant to those utilities' as-available energy purchase rates or pursuant to negotiated contracts. Accordingly, all such sales will be cost-effective to the purchasing utilities and their ultimate retail customers.

1.2.4.3 Cost-Effectiveness to New Hope Power Partnership

The proposed Project is a cost-effective business investment for New Hope Power Partnership. It makes obvious good business sense to make more efficient use of the Facility's available steam capacity and to use the available biomass fuels to produce electricity for sale at reasonable prices into the Florida bulk power supply grid.

1.2.5 ENERGY CONSERVATION

As a renewable-fueled generating facility, and as a cogeneration facility, the Project is itself an effective and significant energy conservation measure favored by Florida law. Section 403.519, Florida Statutes, which is part of FEECA, requires the PSC to consider "energy conservation measures available to the applicant to mitigate the need for the proposed power plant" and "any other matters within its jurisdiction . . . ." Section 366.81, Florida Statutes, also part of FEECA, declares the Legislature's intent "that the use of . . . renewable energy sources [and] cogeneration . . . be encouraged," and mandates that FEECA is "to be liberally construed to meet the complex problems of . . . increasing the overall efficiency and cost-effectiveness of electricity and natural gas production and use, encouraging further use of cogeneration facilities, and conserving expensive resources, particularly petroleum fuels."

The Project meets all of the above goals and policy purposes. First, it is fueled by renewable, Florida-origin, biomass fuels. Second, it is an efficient cogeneration facility contributing to the overall efficiency of electricity production in Florida. Third, by virtue of its biomass fuel, it will conserve expensive non-renewable energy resources, including primarily natural gas and oil (depending on which is the marginal generating fuel in Florida from hour to hour). In approximate terms, assuming an average heat rate of 9,000 Btu/kW-hour for the marginal generating resource in Peninsular Florida, generation from the Project will save approximately 1.5×10^{12} Btu of primary, non-renewable fossil fuel resources that would otherwise be used to generate electricity for consumption in Florida.

Accordingly, the Project is a significant energy conservation measure that meets the specific goals of the Florida Legislature as articulated in FEECA.

1.3 DESCRIPTION AND OVERVIEW OF THE PROJECT

1.3.1 INTRODUCTION

The Project consists of adding an additional STG to the Facility to take advantage of additional steam that is available to produce electricity. The new STG will have a gross nameplate capacity of approximately 70 MW and is expected to produce incremental peak output of 65 MW, bringing the Facility's total capacity, including the Project, to approximately 140 MW (net). Construction is scheduled to begin during the summer of 2005 with the projected in-service date for the Project of May 31, 2006.

1.3.2 PROJECT DESCRIPTION

The Project consists of adding an additional 70 MW (nameplate capacity) STG to the existing Facility to bring the Facility's total net generating capability to approximately 140 MW. There will be no change in the number and configuration of the Facility's three existing biomass-fired steam boilers. The following summarizes the main systems of the Facility.

1.3.2.1 Fuel Handling.

The total projected fuel input to the three boilers, including existing fuel needs, is approximately 1.8 million tons per year. Bagasse from the Okeelanta sugar mill is delivered to the Facility via conveyors and can be directly transferred through fuel feeders into the boilers or directed to the Facility's fuel storage pile. Bagasse from other sugar mills is delivered to the Facility by truck. Clean wood waste and land-clearing debris are also delivered to the Facility by truck. Clean wood waste and bagasse are stored separately and delivered to fuel bins for input to the boilers by conveyors.

1.3.2.2 Air Pollution Control.

Air pollution control equipment serving each of the Facility's three boilers consists of mechanical dust collectors and an electrostatic precipitator (ESP) to control emissions of particulate matter and heavy metals, a selective non-catalytic reduction (SNCR) system to control emissions of nitrogen oxides, and a carbon injection system to control mercury emissions. Emissions of carbon monoxide and volatile organic compounds are minimized by the use of good combustion practices.

1.3.2.3 Water Use

The Facility's water demands include water for condenser and auxiliary heat exchanger cooling, general plant service water, fire protection water, and steam cycle makeup water. Surface water from a canal connected to the North New River Canal and well water is used to satisfy existing needs. Makeup water for the new cooling system will come from the Okeelanta sugar mill, which currently has a consumptive use permit from the South Florida Water Management District. Water treatment for the Project will not change from current practices except for greater water and steam flows to support the increased steam load associated with powering the new STG.

1.3.2.4 Solid Waste

The primary solid waste from the Facility is fly and bottom ash collected from the boilers. This ash is temporarily stored in a concrete bunker onsite until it is loaded onto trucks for transport to an approved landfill. All incremental ash resulting from the Project will be handled in the same manner.

1.3.3 PROJECTED OPERATIONS

NHPP projects that the net output of the Project will range from 150,000 to 190,000 MWH/year for sale to FPL and to other utilities with retail-serving responsibilities. Most of this energy will be produced during the summer months (approximately April through September) when the sugar mill is not processing sugarcane. However, some energy will be produced for sale into the Florida grid during the winter months.

1.4 BENEFITS OF THE PROJECT

The principal benefits of the Project include the following:

1. Incremental improvements in the reliability and integrity of the Florida bulk power supply grid, including the capability of serving approximately 13,000 additional households at time of system peak demands and also including a geographically and electrically favorable location in the Southeast Florida Area;
2. Cost-effective energy supplies to FPL and to other Florida utilities with responsibility for meeting the needs of retail customers;
3. Conservation of non-renewable fossil fuels (natural gas, oil, and possibly coal) that would otherwise be burned to generate the equivalent amount of electricity, approximately 165,000 MWH/year;

4. Use of Florida-grown renewable energy resources to enhance Florida's energy self-sufficiency and sustainability; and
5. Physical fuel diversity.

2.0 SITE AND VICINITY CHARACTERIZATION

2.1 SITE AND ASSOCIATED FACILITIES DELINEATION

2.1.1 SITE LOCATION

New Hope Power Partnership (NHPP) site is located in unincorporated Palm Beach County (Figure 2.1-1). The existing NHPP site is located about 2.3 miles west of U.S. Highway (US) 27 and about 6 miles southwest of South Bay (Figure 2.1-2). The site is adjacent to the Okeelanta Corporation's sugar mill.

2.1.2 EXISTING SITE USES

The existing NHPP Facility is a 74.9-net megawatt (MW) electric cogeneration facility. Construction was completed on the existing NHPP Facility in 1995, and initial operations began in late 1995. The existing Facility combusts primarily biomass (bagasse and clean wood waste) in three identical steam boilers to generate steam and electricity. Process steam is supplied to the adjacent sugar mill during the sugarcane grinding season, approximately October through March. Process steam is also supplied year round to the Okeelanta sugar refinery. The existing NHPP Facility has material handling and storage facilities for biomass, three boilers, one steam turbine/electric generator, a condenser, a mechanical draft cooling tower, a switchyard, and ancillary equipment.

2.1.3 ADJACENT PROPERTIES

Agricultural uses, dominated by sugarcane, account for much of the land use and cover within 5 miles of the NHPP site (Figure 2.1-3). The only other significant uses adjacent to the Facility are the existing Okeelanta sugar mill and refinery. The mill and refinery are located immediately to the west of the Facility site.

2.1.4 PLANNED SITE USES

The Project will involve the installation of a new steam turbine/electric generator, condenser, and mechanical draft cooling tower, which will enable NHPP to generate an additional 65 megawatts (MW) of electricity. Additional electric equipment (auxiliary and step-up transformers, electric room, and battery pack) also will be installed to export the additional electric power via an existing transmission line. Process steam will continue to be supplied to the Okeelanta sugar mill and refinery. The new equipment will occupy about 0.5 acre on the 82-acre NHPP site (refer to Chapter 3).

2.1.5 100-YEAR FLOOD ZONE

The entire NHPP site is located outside the 100-year flood zone designated for Palm Beach County (Palm Beach County Comprehensive Plan, 1999).

2.2 SOCIO-POLITICAL ENVIRONMENT

2.2.1 GOVERNMENTAL JURISDICTIONS

The NHPP site and adjacent areas are located in unincorporated portions of Palm Beach County. The majority of Palm Beach County's urban development lies along the eastern boundary of the county (Atlantic coast), which is approximately 44 miles from the existing site. The community nearest the site is South Bay, an incorporated municipality that is located over 5 miles north-northeast of the Project. There are no incorporated municipalities located within 5 miles of the Project site.

There are no federal, state, or local areas listed in Table 2.2-1 within 5 miles of the Project site. Portions of the Everglades Agricultural Area Save Our Rivers Acquisition (EAA/SORA) are located about 5.5 miles south of the Project site. EAA/SORA lands consist of over 50,000 acres of state acquisition areas. These lands will be used to create surface water impoundments that will store runoff from the EAA for reuse as agricultural irrigation, and to retain water previously lost and to reduce impacts to coastal estuaries (SFWMD, 2003).

2.2.2 ZONING AND LAND USE PLANS

Palm Beach County has adopted a Comprehensive Plan to meet the requirements of the Local Government Comprehensive Planning and Land Development Regulation Act, Chapter 163, Part II, Florida Statutes, and Chapter 9J-5, F.A.C. The Plan was last revised on December 18, 2002, with an effective date of February 19, 2003. Figure 2.2-1 depicts the Project site in relation to the County's Future Land Use Plan categories.

The NHHP Site and all adjacent land are designated Agricultural Production (AP) on the County's Future Land Use map. Palm Beach County also divides the County into Managed Growth Tiers. The tiers concept allows for the provision of specific land use strategies to distinct geographical areas and defines allowable uses and applicable land development standards on the basis of the tiers. The Project Site is located in the Glades Tier.

Section III A 5 of the Future Land Use Element lists future land uses for the Agricultural designation. Land uses allowed in the Agricultural Production areas include "Facilities associated with, and

dependent upon a principal agricultural activity including but not limited to transportation, storage or processing of agricultural products or by-products". The NHPP Cogeneration Facility, and its expansion, is consistent with this definition because they are dependent upon an agricultural activity for the production of bagasse. The AP designation also allows Utilities. Utility Use is defined in Section III A 8. Utility Facilities includes a full range of utility uses including power plants.

The Glades Tier has been established to preserve and enhance the unique characteristics of the Glades and protect the economically viable agricultural base. General land use designations allowed in the Glades Tier includes Agriculture, Agricultural Protection (AP) category, and Transportation and Utilities.

The Project site is zoned Agricultural Production (AP). The purpose of the AP district conserve and protect areas for agricultural and farming related operations. The AP zoning district corresponds with the AP land use designation. A wide range of agricultural activities and their accessory uses shall be permitted in the AP district to maintain the vitality of the agricultural industry in Palm Beach County.

Uses permitted in this zoning district [subject to Development Review Committee (DRC) site Plan review] and approval includes Agricultural related light manufacturing. Electrical power generation is permitted as a Class A Conditional Use.

Class A conditional uses shall be permitted only if they are approved by the Board of County Commissioners in accordance with the procedures and standards of Section 5.4E, subject to supplementary standards, and other requirements in the Code.

As previously described, the NHPP site and all adjacent land is designated agricultural on the Future Land Use map and is zoned agricultural. In 1999, when considering a petition to amend the development order for the existing Facility, the Palm Beach County Board of County Commissioners found the existing Facility to be:

- Consistent with the County's Comprehensive Plan;
- Consistent with the County's Land Development Code, including Article 6, Supplementary Use Standards and all other requirements of the Land Development Code; and
- Consistent with the uses and character of the land surrounding and in the vicinity of the Facility site.

The relevant excerpts of the Palm Beach County Comprehensive Plan are presented in Appendix 10.2. Appendix 10.2 also includes a compilation of information pertaining to applicable standards as provided in the Palm Beach County Land Development Code. Appendix 10.3 includes a copy of the County's Resolution approving the zoning petition for the site. The zoning for the NHPP site was approved by Palm Beach County June 16, 2004 for an area of 82.12 acres as identified in Chapter 3, Section 3.2.

2.2.3 DEMOGRAPHY AND ONGOING LAND USE

There are no towns or cities located within 5 miles of the NHPP site. The populations for Palm Beach County and the two closest municipalities, South Bay and Belle Glade, are presented in Table 2.2-2. The projected population forecasts for 2010 and 2020 for Palm Beach County are also presented in the table. Palm Beach County's 2002 population estimate is 1,190,390. Most of the population is located within 7 miles of the Atlantic coastline, whereas the Project site is located approximately 44 miles inland. The closest municipalities to the Project site are South Bay and Belle Glade. These communities are located approximately 6 and 8 miles northeast of the Project site. Their 2000 populations were 3,859 and 14,906, respectively. The Project site is located in Census Tract 79.03, which registered a population of 5,623 in 2000. The tract extends throughout much of rural Palm Beach County. Very little population or population change has occurred in the 5 mile from the Project site; the resident population in the 5 mile study area is nearly nonexistent.

The existing land uses on the NHPP site consists of the existing cogeneration facilities, ancillary equipment, and fuel storage areas. Adjacent land use consists of sugarcane fields and a sugar processing facility located immediately west of the Project site.

In the areas located within 5 miles of the NHPP site, the land use is comprised almost entirely of sugarcane fields. Linear facilities bisect the study area, generally in a north-south or east-west orientation, and includes canals, several railroad lines, and electrical transmission lines. U.S. Highway (US) 27, County Road (CR) 827, and several unpaved roads are also located in the study area, US 27 provides access to the site.

Only one home is located in the study area, and it is approximately 19,000 feet (ft) northeast of the NHPP site. With some exceptions, the generalized Level II Florida Land Use, Cover and Forms Classification System (FLUCFCS) code for most of the area within 5 miles of the NHPP site is

215 (agricultural – sugarcane). The FLUCFCS code for the existing Okeelanta sugar mill and Okeelanta sugar refinery is 151. The FLUCFCS code is 831 for the existing NHPP Facility. Other minor FLUCFCS classifications within 5 miles include 510 (canals), 812 (railroad), and 814 (roads and highways). The General Existing Land Use Map prepared by Palm Beach County Planning, Building and Zoning Department depicts all land use within 5 miles of the Plant as agricultural land. Agricultural use will be the predominant land use for the foreseeable future. The only exception is the anticipated conversion of EAA lands to surface water impoundments.

Palm Beach County has established several special planning areas, including overlay districts, neighborhood planning areas, and two special planning study areas. The NHPP site and areas within 5 miles of the Project site are not located in any of these areas. The NHPP site is located in the Rural Service Area and the Glades Managed Growth Tier. Rural Service Areas generally lack certain public utilities and facilities that are typically required for urban and suburban development.

2.2.4 EASEMENTS, TITLE, AGENCY WORKS

No road, pipeline, or water crossings will be required for the NHPP Project. No easements, title, or agency works approvals are anticipated for the proposed Project.

2.2.5 REGIONAL SCENIC, CULTURAL AND NATURAL LANDMARKS

There are no federal, state, or local areas listed in Table 2.2-1 within 5 miles of the NHPP site. There are no recognized resources known for scenic, cultural, or natural significance within 5 miles of the Project site.

2.2.6 ARCHAEOLOGICAL AND HISTORIC SITES

A review of the State of Florida Master Site File (FMSF) was undertaken to determine if known archaeological or historic sites have been recorded for the NHPP site or adjacent areas. The FMSF search revealed that no archaeological sites have been recorded on the NHPP site.

A letter was sent to the Florida Department of State, Division of Historical Resources (DHR) in mid-1993 requesting DHR to determine whether undiscovered archaeological and historical resources were likely to be present in the vicinity of the cogeneration plant (which also is the location of NHPP's proposed Project) and whether a pedestrian survey would be required. DHR responded to the request on July 26, 1993 and determined:

- No significant archaeological or historical sites are recorded for or considered likely to be present in the project area; and
- Because of the project location and/or nature, it is unlikely that such sites will be affected; and
- It is the opinion of DHR that the proposed Project will have no effect on historic properties listed or eligible for listing in the National Register of Historic Places.

A copy of the 1993 DHR letter and the 2003 FMSF review are included in Appendix 10.5.1.

2.2.7 SOCIOECONOMICS AND PUBLIC SERVICES

2.2.7.1 Labor Force

The total labor force in Palm Beach County for 2001 was 540,276 with employment of 510,497. Unemployment in the County during 2001 averaged 29,779 or 5.5 percent. For the State of Florida and the United States, the unemployment rate was 4.8 percent in 2001.

Average monthly private-sector employment by major industry group in Palm Beach County for 2001 is depicted in the following table.

Major Industry Group	Employment
Agriculture	17,586
Mining	30
Construction	32,221
Manufacturing	28,363
Transportation, Communications and Public Utilities	17,895
Wholesale Trade	24,432
Retail Trade	100,946
Finance, Insurance and Real Estate	35,902
Services	182,640
Other	838

The service and retail industries provided the most employment in Palm Beach County with about 41 and 23 percent, respectively, of the total private-sector employment. The construction industry provides about 32,000 jobs. The 2001 employment increased over the 2000 employment for each major industry group.

Employment projections for construction trades and extraction industries in Florida has been estimated for the year 2009. Statewide construction employment is estimated to increase from 230,661 in 2001 to 259,798 in 2009 (Source: State of Florida Agency for Workforce Innovation, Bureau of Labor Market Information, nd).

2.2.7.2 General Income

Palm Beach County had the highest per capita personal income for any county in the state during 2000. The County's average per capita personal income was $41,007 for 2000 compared to the State of Florida and United States average per capita personal incomes of $27,764 and $29,469, respectively (Florida Statistical Abstract, 2002). Over 98 percent of the total earnings in Palm Beach County are derived from non-farm sources. The $20.7 billion (B) of non-farm earned income is derived from private sector businesses, with about $2.7B of non-farm income coming from public sector income sources. The construction industry was the source of $1.5B in earned income in Palm Beach County (US Department of Commerce, Bureau of Economic Analysis, Regional Economic System, May, 2002).

Median household income in Palm Beach County was $39,199 in 1998. This income level ranked the County 2nd out of 67 Florida Counties in median household income and represents a household income level that is 13 percent higher than the statewide average (US Department of Commerce, Bureau of the Census, 2002). Average wage and salary earnings in Palm Beach County in 2000 were $34,603, which was 13 percent higher that the statewide average.

2.2.7.3 Housing

The total number of housing units in Palm Beach County, Belle Blade and South Bay in 2000 is depicted below by occupancy type:

	Palm Beach County	Belle Glade	South Bay
Renter-Occupied	120,151	2,832	336
Owner-Occupied	354,024	2,047	479
Other	82,253	795	132
Total	556,428	5,674	947

The average cost to purchase a house in Palm Beach County in 2000 was $150,791 (Bureau of Economic and Business Research, 2002).

Transient accommodations in Palm Beach County are substantial. A total of 1,623 lodgings exist, representing 85,478 lodging units. The total number of apartment building, rooming house, rental condominium, and transient apartment building units in the County totaled 69,249 in 2002 (Department of Business and Professional Regulation, Division of Hotels and Restaurants, 2002).

2.2.8 AREA PUBLIC SERVICE AND UTILITIES

2.2.8.1 Education

Public education in Florida is operated on a county-wide basis and each county's respective school district establishes educational policies and staffing requirements. According to the Florida Department of Education, Bureau of Education Information and Accountability, Palm Beach County had a total enrollment of 150,610 for the 2000-2001 school year. A total of 201 schools exist in the county. The closest public school to the NHPP site is Rosenwald Elementary School in South Bay, approximately 6 miles north. A review of maps depicting proposed school site locations in Palm Beach County reveals no public school locations planned within 5 miles of the NHPP site.

2.2.8.2 Transportation

US 27 [also designated State Road (SR) 25] is considered the major transportation corridor for north-south traffic movement in western Palm Beach County. This multi-lane divided roadway is located about 2 miles east of the NHPP site. An existing paved access road provides direct access from US 27 to the NHPP site. US 27 has a current and future 2020 function classification as a rural principal arterial. SR 80 and CR 880 provide for east-west traffic movements in the central portion of Palm Beach County. These roadways are assigned a functional classifications of rural principal arterial and rural minor collector, respectively. CR 827 (Okeelanta Road) connects US 27 with SR 80 and also has a functional classification of rural minor collector.

US 17 and SR 80 are 4-lane divided highways. A small segment of SR 80, in and between South Bay and Belle Glade, exists as a 6-lane facility. CR 880 and CR 827 are 2-lane facilities. No major highway capacity improvements are planned for these facilities in the vicinity of the NHPP site or South Bay and Belle Glade. According to the Palm Beach County Comprehensive Plan Transportation Element, none of the roadway segments in the area are designated as 2020 roadway system daily deficiencies (where the volume to capacity ratio exceeds 1.0).

Traffic counts taken by the Florida Department of Transportation (FDOT) in 2002 indicate an average annual daily traffic (AADT) of 7,600 on US 27 in the area near the NHPP site. The closest traffic

count is north of the intersection of US 27 and Interstate (I) 75. The 2000 AADT at that location was 10,200 vehicles.

Palm Beach County has established a minimum, peak season, peak Level of Service (LOS) of D for links as well as intersections.

A CSX Railroad branch-line runs east-west south of the NHPP site. A rail spur serves the existing sugarcane mill.

There are several licensed public use airports in Palm Beach County. Belle Glade Municipal Airport is the closest publicly owned general aviation airport located in proximity to the Project site. The facility consists of a single east-west oriented runway and is located about 9.5 miles northeast of the Project site. Several small privately owned airports are located in the sugarcane fields; the closest field is about 1 km northwest of the Project site.

2.2.8.3 Medical Facilities

Palm Beach County has 18 hospitals, which contain over 4,200 licensed beds. Emergency medical transport is provided within Palm Beach County by emergency medical technicians (EMT) stationed at most of the county's fire stations. Licensed medical practitioners in Palm Beach County include 3,191 physicians; 1,568 dentists and dental hygienists; 4,325 health practitioners; 13,701 nurses; and 223 opticians and pharmacists (Florida Department of Business and Professional Regulation, 2002).

Glades General Hospital is an accredited, 73-bed acute care facility located in Belle Glade, approximately 9 miles northeast of the site. The hospital provides a 24-hour physician staffed Emergency Room with access to Trauma Hawk air ambulances. Glades General Hospital offers both in-patient and out-patient services and 16 medical programs.

2.2.8.4 Firefighting Facilities

There are 525 full-time certified Palm Beach County fire fighters located at 39 stations in Palm Beach County. The County Fire-Rescue facilities and staff serve the Glades area on a contract basis. The closest fire station to the NHPP site is located in South Bay.

2.2.8.5 Police Protection

Law enforcement in the vicinity of the NHPP site is provided by the Palm Beach County Sheriff's Department. The Sheriff's Department operates 10 districts, and the Project site is located in District 5, which is headquartered in Belle Glade. The Florida Highway Patrol provides service along US 27. Okeelanta Corporation maintains security to control unauthorized access to the existing Facility and the site. Also, the Sheriff's Department routinely patrols the plant entrance road from US 27 to the NHPP site.

2.2.8.6 Recreation Facilities

Due to the rural nature of the area and the significant sugarcane fields in the vicinity of the Project site, there are no recreational facilities in the study area. There are approximately 60 active and passive recreational county parks in Palm Beach County and about 35 parks proposed for construction between now and 2015. None of the proposed parks are located within 5 miles of the NHPP site. The closest parks are located near South Bay, Glades Pioneer Park, and South Bay RV Park.

2.2.8.7 Electricity and Gas

Electricity is provided to Palm Beach County businesses and residents by Florida Power & Light Company (FPL). The principal generating stations located near the NHPP site are the FPL Martin Power Plant and the Indiantown Cogeneration Plant in Martin County, the FPL Riveria Power Plant in Palm Beach County, and the FPL Port Everglades and Lauderdale plants in Broward County.

An existing 6-inch natural gas pipeline lateral provides gas to the NHPP Facility. This lateral is connected ultimately to the Florida Gas Transmission Company (FGT) natural gas trunk pipeline that parallels the Florida Turnpike in eastern Palm Beach County.

2.2.8.8 Water Supply Facilities

There are no public potable water supply facilities in the study area. The nearest water treatment and supply system is located in South Bay. The existing Okeelanta sugar mill and refinery, and the NHPP Facility are supplied by a private onsite potable water system.

2.2.8.9 Sewage Treatment Facilities

There are no public sanitary wastewater collection, treatment, or disposal facilities in the study area. The nearest facilities are located in South Bay. The sanitary wastes generated at the existing

Okeelanta sugar mill and refinery, and the Facility are treated in an approved wastewater treatment package plant. The effluent, after treatment and disinfection, is disposed of onsite.

2.2.8.10 Solid Waste Disposal

Municipal solid waste generated at the existing Okeelanta sugar mill and refinery, and the NHPP Facility is collected by an approved franchised commercial hauler that transports solid waste from these facilities to the Glades Regional (Solid Waste) Transfer Station. Solid waste from the transfer station is then transported by the County to the North County Resource Recovery facility for disposal.

2.3 BIO-PHYSICAL ENVIRONMENT

2.3.1 GEOHYDROLOGY

2.3.1.1 Geologic Description of the Site Vicinity

A general geologic description of the sediments and rock type encountered at the NHPP site with increasing depth is as follows:

- Undifferentiated Sediments – Comprised of Pahokee and Terra Ceia Mucks, a poorly drained, organic soil to depths of between 3 and 5 ft.

- Tamiami Formation – The sediments range in age from Holocene to Pliocene. Comprised of fine to medium grained- quartz sands with the Pliocene and some of the Pleistocene sediments of this aquifer being predominantly carbonates. This formation is approximately 90 ft in depth.

- Hawthorn Formation – Comprised of an alternating sequence of phosphatic and sandy, clayey dolosilts, limestones, and dolomites. The Hawthorn Formation is approximately 600 ft thick.

- Tampa Limestone – Comprised of hard, dense limestone with varying amounts of quartz sand and clay in the carbonate matrix. The Tampa Member is of Miocene age and is estimated to be approximately 300 ft thick at the site.

- Suwannee Limestone – Comprised of soft to hard, fossiliferous limestone with interbeds that contain quarts sand or chert, with dolomitized beds more prevalent near the base of the unit. The Suwannee Limestone is of Oligocene age and is estimated to be 300 ft thick in the vicinity of the site.

- Avon Park Formation – Comprised of hard, fossiliferous, limestone and dolomite, with lenses of evaporate near the base of the unit. The Avon Park Formation is of Eocene age, and is estimated to be 700 ft thick in the vicinity of the site.

- Lake City Limestone – Comprised of Dark brown crystalline dolomite alternating layers of with chalky fossiliferous layers. The Lake City Limestone is similar to that of the Avon Park Formation from the Eocene age and is considered to be approximately 600 ft thick in the vicinity of the site.

- Oldsmar Formation – Comprised of dolomite and limestone with intergranular evaporates throughout the unit. The Oldsmar Formation is of Eocene age

2.3.1.2 Detailed Site Lithologic Description

Two investigations have been conducted at the NHPP site to characterize the near-surface geology at specific locations within the property boundary. These studies were conducted by Ardaman & Associates, Inc. (1993) and Environmental Consulting & Technology, Inc. (ECT) (1996). The scopes of work associated with these investigations are summarized below.

Ardaman & Associates, Inc. (1993) – Completed 8 Standard Penetration Test (SPT) borings and developed soil profiles for the cogeneration facility area. A total of five SPT borings were completed to a depth of 30 ft, two borings were advanced to a depth of 40 ft and one boring was completed to a depth of 60 ft. An additional hand auger boring was advanced to a depth of 15 ft.

ECT (1996) – Completed nine soil borings in the percolation basin area of the site. These borings were subsequently converted to monitoring wells. At six locations, soil and rock cores were taken continuously from land surface to 16 ft and soil profiles were developed.

The results of the field investigation conducted by ECT (1996) to describe conditions at the site are typical of the site area. Soils/rock encountered during drilling activities were generalized into four strata, presented in order of increasing depth:

- Stratum I – Encountered at all boring locations. Materials were organic muck and the thickness of these materials ranged from 2 ft at the northwestern section of the site to 3 ft at the northeastern portion of the site.
- Stratum II – This stratum underlies Stratum I materials. Materials were very hard silty limerock (caprock), and cemented sands and shells. The thickness of this stratum ranged from 3 to 5 ft.

- Stratum III – This stratum is comprised predominantly of carbonate sand, shell and mud in varying proportions. Under the caprock, and cemented sands, alternating layers of silty gray fine sand and gray cemented sand and shells are present up to 60 ft. It is likely that these "layers" are a single formation.

Based on reports generated regarding the geology of the region, the surficial aquifer thickness is approximately 90 ft at the project site.

2.3.1.3 Geologic Maps

The site is located in the Everglades physiographic region (Fenald and Patton, 1984). Near-surface soils in the vicinity of the site are characterized as nearly level, very poorly drained, organic soil (USDA, 1974).

The lithology present at land surface throughout Palm Beach County is characterized by the United States Department of Agriculture (USDA, 1974) as organic muck that generally occurs at a thickness between 3 and 5 ft in western Palm Beach County. This surficial unit is consistent with the description of the sediments presented above in Section 2.3.1.1. To the east of the NHPP site in western Palm Beach County, sediments of are of the Terra Ceia and Pahokee Series of nearly level, very poorly drained, organic soils in broad, fresh water marsh areas. The Terra Ceia soils consist of a black muck (sapric material) which is approximately 8 inches thick. Below this is dark reddish brown muck that extends to a depth of 65 inches or more. The Pahokee Series consists of 36 to 51 inches of black muck (sapric material) underlain by limestone bedrock (USDA, 1974).

2.3.1.4 Bearing Strength

Geotechnical investigations have been conducted at the locations selected for development of facilities within the NHPP site. Initial work at the NHPP Site was conducted by Ardaman & Associates, Inc. in the 1990's prior to initial site development to characterize subsurface conditions. Additional geotechnical investigations were conducted in 1996 in the area north of the existing facilities.

The investigations concluded that the soils on the site located below the surficial organics are adequate to support construction, provided that all surficial deleterious material, such as bagasse piles and organics, are removed down to the caprock. Well compacted granular fill material should be used to bring the area to grade. The report stated that footings may be proportioned for a maximum

bearing stress of 4,000 pounds per square foot (lb/ft^2); either directly on the caprock or the granular backfill (Ardaman, 1996).

2.3.2 SUBSURFACE HYDROLOGY

2.3.2.1 Subsurface Hydrologic Data for the Site

The occurrence of groundwater in the vicinity of the site is affected by the geologic formations described in Section 2.3.1.1. The surficial aquifer, which is about 90 ft thick, and the Floridan aquifer, which is more than 2,000 ft thick, are separated by more than 500 ft of sediments of relatively low permeability (Hawthorn Formation) that act to restrict the vertical movement of water between the surficial and the Floridan aquifers. These three aquifers are described below in order of increasing depth.

Surficial Aquifer

The surficial aquifer system in Palm Beach County consists of sand, clay, silt, shell, and limestone of Holocene, Pleistocene, and Pliocene age. Its thickness is variable (decreasing westward and northward) and is estimated to be as much as 400 ft in northeastern Palm Beach County (Miller, 1987; Shine and others, 1989). The surficial aquifer is approximately 90 ft thick in western Palm Beach County near the NHPP site. Impermeable and semipermeable clays and marls (calcareous clays) of the Hawthorn Group of Early Oligocene to Middle Miocene (Scott, 1988) age and the Tamiami Formation of Pliocene age underlie the surficial aquifer system at its base. The surficial aquifer occurs in Palm Beach County where the unconsolidated sediments are encountered. The surficial aquifer extends from the water table to the underlying intermediate confining unit. An aquifer performance test was conducted by ECT (1996) at the NHPP site and, based on 21 slug tests, the hydraulic conductivity averaged 1.4 ft/day. The surficial aquifer in the area of NHPP is about 90 ft thick (ECT, 1996).

Recharge to the surficial aquifer occurs on a local basis, mainly by infiltration by rainfall. Discharge from the surficial aquifer occurs by seepage into surface water bodies and canals, evapotranspiration, and some limited downward seepage to the underlying aquifer. The gradient of the surficial aquifer at the site is extremely flat. Therefore, the direction of groundwater flow in the surficial aquifer may be affected by a number of factors, such as pumping of wells, infiltration from agricultural canals, agricultural practices, and localized rainfall events.

Hawthorne Aquifer

The Hawthorn formation lies below the surficial aquifer. This formation serves as a confining unit between the surficial aquifer and the underlying Floridan Aquifer. The Hawthorne aquifer is composed of alternating sequence of phosphatic and sandy, clayey dolosilts, limestones and dolomites. The yield of these aquifers is normally low and they are not often used for water supply. The low permeability beds within the Hawthorn aquifer cause water from that aquifer and the Floridan aquifer to be under artesian pressure.

Floridan Aquifer

The transmissivity of the Upper Floridan aquifer in Palm Beach is estimated to range from 10,000 to 100,000 ft^2/day (feet squared per day) according to Bush and Johnston (1988), with porosity ranging from 0.30 to 0.35 percent. Leakance rates for the upper Floridan aquifer range from 0.00001 to 0.0023 ft^3/day/ft^3. The low permeability beds of the Hawthorn aquifer cause waters of the Floridan aquifer to be under artesian pressure (Fernald and Patton, 1984). Consequently, there is no recharge of the Floridan aquifer in the vicinity of the site.

2.3.2.2 Karst Hydrogeology

The NHPP site is located in an area designated as low potential for sinkhole development (SFWMD, 1992). No sinkhole features are known to exist on the project site or in its vicinity. Consequently, the formation of sinkholes is not expected to occur in the NHPP site (KBN, 1993).

2.3.3 SITE WATER BUDGET AND AREA USERS

2.3.3.1 Site Water Budget

Components of the existing site water budget include precipitation, evaporation and evapotranspiration (ET), runoff, and groundwater recharge. The average annual rainfall in western Palm Beach County is approximately 52 inches per year, with the highest rainfall in the summer months. Average annual lake evaporation is approximately 51 inches per year. The average runoff in the site vicinity (based on Belle Glade data) is approximately 8 inches per year (SFWMD, 2003). Since there is little or no recharge to the Hawthorne and the Floridan aquifers, the annual average evapotranspiration must be approximately 44 inches per year.

2.3.3.2 Area Users

There are no community water supplies within 5 miles of the NHPP site. A review of current permits issued by SFWMD (SFWMD, 2003) for the area of Township 45 South, Range 36 East, which

extends at least 2.5 miles from the Project site, identified predominantly agricultural water users for sugarcane production. With the exception of the potable wells permitted by Okeelanta Corporation, there are no public or private potable water supply wells within the above mentioned township and range. The water supply wells owned by Okeelanta are approximately 0.75 miles east of the NHPP site. The average 0.5-ft drawdown from the wells extends approximately 2,200 ft from the westernmost well. The wells are located approximately 4,000 to 5,000 ft west of the North New River Canal (KBN, 1993).

2.3.4 SURFICIAL HYDROLOGY

The NHPP site is located within the Everglades Agricultural Area (EAA) basin. The plant is located in Okeelanta, Florida which is approximately 6 miles south of South Bay, Florida in a rural and undeveloped area. Water is withdrawn from the North New River Canal, the Miami Canal (via a private canal system), and from the surficial aquifer. Stormwater is routed through a series of basins that discharge to a swale on the east side of the NHPP site entrance road. The swale currently flows into the agricultural canal. The drainage system consists of wet detention ponds and inflow occurs via a number of interior grassed swales. The water levels of soils at the site are approximately 11 ft-msl. Land surface elevation at the NHPP site is approximately 12 to 13 ft-msl with the plant equipment elevation of about 16.5 ft-msl. Existing surface water discharge is located to the north of the NHPP site to the private canal system. The existing Facility has a MSSW permit that allows non-contact stormwater to be discharged to the North New River Canal. When the NHPP Project is complete, all process and stormwater will be pumped from the wood storage perimeter ditch into the percolation pond system (Miller, 2003).

2.3.4.1 Hydrologic Characterization

Physical Characteristics

The NHPP site is within the Everglades Agricultural Area (EAA). The Facility withdraws water from the North New River and Miami Canals under a Consumptive Use Permit (CUP) with the SFWMD. The EAA total area encompasses approximately 1,181 square miles. This area has very little natural drainage and depends on large pump stations to prevent floods from heavy rains.

Hydrologic Characteristics

Historic flow and elevation data of the Miami Canal at control structures S354 and S3 (Lake Harbor) and the North New River Canal S351 and S2 (near South Bay) show that the average historical flow through the S354 structure is 56.8 cfs and the average historical flow through the S351 structure is

1.8 cfs. These structures and pumps release water from Lake Okeechobee to the EAA in the dry season and pump excess water back to the lake in the wet season. Further downstream on these canals, pumps at Stations S7 and S8 move the water out of the EAA into Water Conservation Areas 2 and 3. Flows at these stations average 5,000 to 15,000 cfs.

Chemical Characteristics

The overall water quality in the Miami Canal and the North New River Canal varies throughout the course of the year. Water in the canals is of sufficient quality to utilize as cooling water for the NHPP Facility. The northern sections of North New River Canal and Miami Canal are used for agricultural purposes, predominantly sugarcane farming.

2.3.4.2 Measurement Programs

Hydrologic and water quality data used to characterize the site area surface water conditions were compiled from existing sources.

2.3.5 VEGETATION AND LAND USE

The Project will occupy about 0.5 acre of the existing 82-acre NHPP site (FLUCFCS 831). This area is currently gravel and limestone. The majority of the areas outside of the NHPP site are planted sugarcane (FLUCFCS 215). The existing Okeelanta sugar mill and refinery (FLUCFCS 151) are located west and south respectively, of the NHPP site.

2.3.6 ECOLOGY

The area that will be used for the Project (0.5 acre), the NHPP site, and the surrounding areas have been previously impacted by agricultural and industrial activities. There is no natural habitat remaining. The area designated for the Project has been filled with gravel and limestone. Because of the disturbed nature of the land, the ecological significance and habitat value of the area proposed for the Project are very low. There are no unique upland species on the site. No federally or state listed species are know to use the area.

2.3.6.1 Pre-Existing Stresses

The greatest pre-existing stress to terrestrial systems of the area designated for the Project, as well as the NHPP site, is the result of past development activity. The natural topography, soils, and hydrology are extensively altered as a result of the previous agricultural activities and subsequent

construction of the existing NHPP Facility. As a result, there are no remaining natural ecosystems and wildlife habitat on the site.

Aquatic systems (i.e., canals) in the vicinity of the NHPP site are subjected to stress from numerous sources. Pre-existing stresses include:

1. Water management practices,
2. Agricultural development, and
3. Highway construction and operation.

The area designated for the Project does not contain wetlands. The Project will not impact any wetland areas.

2.3.6.2 Monitoring Programs

The ecology of the area designated for the Project was evaluated during a site visit. No ecological impacts are anticipated as a result of the Project and, therefore, no measurement programs are proposed.

2.3.7 METEOROLOGICAL AND AMBIENT AIR QUALITY

2.3.7.1 Meteorology

Meteorological data collected at existing monitoring stations were used to describe the local and regional climatology in the vicinity of the NHPP site. The closest existing meteorological station to the NHPP site with complete data is the National Weather Service (NWS) station located at the Palm Beach International Airport, situated approximately 64 kilometers (km) (40 miles) east-northeast. The NWS has recorded weather observations for more than 50 years at this site. These data are the most complete for, and representative of, the region surrounding the Project site.

The climate in the NHPP site area is subtropical with a marine influence from the Atlantic Ocean. The monthly and annual average temperatures for this area are presented in Table 2.3-1. The annual average temperature is approximately 75 degrees Fahrenheit (°F) with monthly average temperatures varying from a maximum of 83°F to a minimum of 65°F. Record extreme temperatures range from a low of 27°F to a record high of 101°F. During the summertime, temperatures rarely exceed 100°F due to the high relative humidities with subsequent cloud cover formation and the abundant convective-type precipitation (e.g., thunderstorms).

The monthly and annual average precipitation data are presented in Table 2.3-2. Approximately 68 percent of the annual precipitation falls during the six warmest months, May through October. The average annual precipitation is approximately 61 inches, but this has varied from as little as 39 inches to more than 86 inches in the past 30 years. The majority of rain is in the form of short-lived convection showers (e.g., thunderstorms). Large amounts of rain are also produced during the late summer or fall when tropical storms or hurricanes may pass near the area. These events may result in heavy downpours that reach torrential proportions; 24-hour amounts from 6 to more than 10 inches are not uncommon.

Monthly and annual average relative humidities, which indicate the amount of moisture in the air at a given temperature, are presented in Table 2.3-2 for the morning hours of 1:00 a.m. and 7:00 a.m. and early afternoon and evening hours of 1:00 p.m. and 7:00 p.m. The highest humidities are coincident with the coolest ambient temperatures, which generally occur at 7:00 a.m., or near dawn. The lowest humidities coincide with the highest ambient temperatures.

The Project area lies entirely within the trade wind belt (i.e., below 30°N latitude), resulting in predominant winds from the east. Because of the location of the Atlantic Ocean, moderate to strong late afternoon sea breezes occur on days with strong land heating and produce localized onshore winds to reinforce the easterly winds. Annual and seasonal windroses for the 5-year period from 1987 through 1991 are given in Figures 2.3-1 through 2.3-5. A summary of the seasonal and annual average wind direction and wind speed, including calm conditions, is presented in Table 2.3-3.

Except during the passage of tropical storms or hurricanes, high wind speeds generally do not occur. During the winter and spring, there are usually a few days when wind speeds are greater than 20 to 30 miles per hour (mph).

Atmospheric stability is a measure of the atmosphere's capability to disperse pollutants and potentially reduce ground-level concentrations. During the daytime with strong solar heating, the atmosphere can disperse pollutants very quickly for a relatively short period of time. This condition is considered as very unstable and generally occurs infrequently during the year. During the nighttime under clear skies and light wind speeds, the atmosphere is considered stable with minimal potential to disperse pollutants. During the day or night when wind speeds are moderate to high, pollutants are dispersed at moderate rates (i.e., dispersion rates that are lesser than those during

unstable conditions but greater than those during stable conditions). This condition is considered neutral and occurs frequently throughout the year.

The seasonal and annual average occurrences of atmospheric stability classes for this area for 1987 to 1991 are shown in Table 2.3-4. During the summer months, unstable conditions occur nearly 28 percent of the time due to strong solar heating, whereas unstable conditions occur only 7 percent of the time in the winter months. Neutral stability occurs most frequently during the winter months due to the higher wind speeds that occur in this season. The occurrence of stable conditions is nearly uniform throughout the year.

The mixing height is a parameter used to define the vertical height to which pollutants can disperse and, therefore, is used in estimating the volume of air in which pollutants are emitted and can be dispersed. In general, the higher the mixing height, the greater the potential for pollutants to be dispersed and for ground-level concentrations to be reduced.

The seasonal and annual average morning and afternoon mixing heights for the area for 1987 to 1991 determined using the Holzworth method are listed in Table 2.3-5. The highest afternoon mixing heights occur in the spring and the lowest morning mixing heights occur in winter.

Thunderstorms are the most frequent of severe storms, occurring an average of 79 days per year as reported by the NWS at Palm Beach International Airport. These storms occur throughout the year, but about 81 percent occur from May through October.

Hurricanes and tornadoes are other types of severe weather that can occur at the Project area, but the probability of a hurricane or tornado passing over the NHPP site is low. In the 80-km (50-mile) coastal strip from Jupiter to Vero Beach, there is about a 11 percent chance that a tropical storm will pass over the area during any given year (Gale Research Co., 1980). For storms of hurricane strength (i.e., wind speeds exceeding 73 mph), the chance decreases to about 8 percent, and there is only a 5 percent chance that the winds will be greater than 124 mph (i.e., wind speeds of a great hurricane).

Statistics compiled by the severe local storms branch of the national severe storms forecast center (Pautz, 1969) show that 49 tornadoes were spotted within the 1 degree latitude by 1 degree longitude square near the NHPP site from 1955 to 1967. The month during which tornadoes occur most frequently is June.

The tornado recurrence interval for any specific point location within the 1 degree square was estimated by the methodology of Thom (1963). The recurrence interval, r, is equal to 1/p where p is the probability of a tornado striking within the 1 degree square area and is estimated as follows:

$$p = (2.8209 \times t)/a$$

where: t = mean annual frequency of tornadoes occurring, and
a = area of the 1°square (square miles).

In this analysis, t was assumed to be 1.5 based on data collected from 1953 to 1962 and was estimated to be 4,240 square miles (mi^2). Therefore, the mean recurrence interval for a tornado striking a point within this square is about once per 1,000 years.

2.3.7.2 Ambient Air Quality

Ambient Standards

The National and Florida Ambient Air Quality Standards (AAQS) are presented in Table 2.3-6. Primary National AAQS were promulgated to protect the public health, and secondary National AAQS were promulgated to protect the public welfare from any known or anticipated adverse effects associated with the presence of pollutants in the ambient air. Areas of the country in violation of AAQS are designated as nonattainment areas, and new sources to be located in or near these areas may be subject to more stringent air permitting requirements. Pollutants for which AAQS have been established are referred to as criteria pollutants. These pollutants include particulate matter (PM) with an aerodynamic particle size of 10 micrometers (μm) or less (PM_{10}), sulfur dioxide (SO_2), carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), and lead (Pb).

On July 18, 1997, the U.S. Environmental Protection Agency (EPA) promulgated revisions to the National AAQS for O_3 and PM [62 Federal Register (FR) No. 138]. The O_3 standard was modified to be 0.08 parts per million (ppm) for a 3-hour average concentration; this standard is achieved when the 3-year average concentration of the 99th percentile values is 0.08 ppm or less. The revised PM AAQS included two new $PM_{2.5}$ standards ($PM_{2.5}$ represents PM with an aerodynamic diameter of 2.5 μm or less), a short-term 24-hour average standard and an annual average standard. Also included was a revised PM_{10} standard. The $PM_{2.5}$ standards were introduced with a 24-hour standard of 65 micrograms per cubic meter ($\mu g/m^3$) (3-year average concentration of the 98th percentile values) and an annual standard of 15 $\mu g/m^3$ (3-year average concentration at community monitors). The revised PM_{10} standard changes the form of compliance from an expected exceedance not to be

exceeded more than once per year averaged over 3 years to a 3-year average concentration of the 99th percentile values. While the FDEP has not yet adopted these AAQS, monitoring has been performed to determine compliance. Based on evaluations performed by FDEP, Palm Beach County would meet the revised AAQS.

Palm Beach County and Broward County are classified as an attainment or maintenance area for all criteria pollutants (Rule 62-204.340, F.A.C.). Adjacent counties, such as Martin, and Hendry Counties, are classified as attainment areas for all criteria pollutants.

In promulgating the 1977 Clean Air Act (CAA) Amendments, Congress specified that certain increases above an air quality *baseline concentration* for SO_2 and PM would constitute *significant deterioration* for sources located in attainment areas. The magnitudes of the allowable increases, or prevention of significant deterioration (PSD) increments, depend on the classification of the area in which a new source (or modification) will be located or have an impact. Three PSD increment classifications were designated based on criteria established in the 1977 CAA amendments. Initially, Congress promulgated areas as either Class I (national parks; national wilderness areas; and memorial parks larger than 5,000 acres; and national parks larger than 6,000 acres) or as Class II (all areas not designated as Class I). No Class III areas, which would be allowed greater deterioration than Class II areas, were designated. EPA then promulgated as regulations the requirements for classifications and area designations.

On October 17, 1988, EPA promulgated regulations to prevent significant deterioration due to NO_x emissions and established PSD increments for NO_2 concentrations. The EPA class designations and allowable PSD increments are presented in Table 2.3-6. Florida has adopted the EPA allowable increments for PM_{10}, SO_2, and NO_2.

Palm Beach County is classified as a Class II area (Rule 62-204.340, F.A.C.) since it is an attainment or maintenance area for all pollutants. The nearest Class I area to the NHPP site is the Everglades National Park (NP) located about 92 km (57 miles) to the south.

Ambient Air Quality Data

The NHPP site is located in a rural area of Palm Beach County. Air monitoring data are collected for PM_{10}, O_3, SO_2, NO_2, and CO in Palm Beach County, but with the exception of PM_{10} monitoring in

Belle Glade and SO_2 data collected in South Bay, the data are more representative of air quality for urban areas with more industrial/commercial development compared to the NHPP site.

A summary of the maximum pollutant concentrations measured in St. Lucie and Palm Beach Counties from 2001 through 2002 is presented in Table 2.3-7. Also included are SO_2 data from South Bay for the year 1997 (the only year this monitor operated). These data indicate that the maximum air quality concentrations measured in the county are well below applicable standards.

Existing Air Pollutant Sources

The NHPP site is located in an area with a minimal number of air pollution sources located nearby. The closest existing major source with PM, SO_2, or NO_x emissions greater than 100 tons per year (TPY) is the Sugarcane Growers Cooperative sugar mill located in Belle Glade, about 16 km (10 miles) from the NHPP site. Within 32 km (20 miles) of the NHPP site, the major air emission sources include Everglades Sugar, U.S. Sugar-Clewiston, Atlantic Sugar, and U.S. Sugar Bryant. In general, other major air pollution sources are located more than 50 km (31 miles) from the NHPP site.

2.3.7.3 Measurement Programs

All information (i.e., meteorology and air quality data) was compiled from offsite monitoring stations maintained and operated by governmental agencies (i.e., FDEP, NWS and PBCHD).

Meteorological data were obtained from the NWS surface and upper-air station at the Palm Beach International Airport. These data were obtained for a 5-year period from 1987 through 1991 from which the joint frequency of wind direction, wind speed, and atmospheric stability and a 5-year average of mixing heights were developed. Since 1986, the wind sensors at the Palm Beach International Airport have been located 33 ft-msl. Regular surface observations are taken just before each hour, 7 days per week. Upper-air soundings are conducted twice per day at 0700 and 1900 eastern standard time.

The air monitoring data were obtained from FDEP web site. The Palm Beach County air quality monitoring stations are operated and maintained by the Palm Beach County Health Department (PBCHD).

2.3.8 NOISE

2.3.8.1 Background

Sound propagation involves three principal components: a noise source, a person or a group of people, and the transmission path. While two of these components, the noise source and the transmission path, are easily quantified (i.e., via direct measurements or though predictive calculations); the effects of noise to humans is the most difficult to determine due to the varying responses of humans to the same or similar noise patterns. The perception of sound (noise) by humans is very subjective, and just like odors and taste, is very difficult to predict a response from one individual to another. To address the direct physical effects, such as hearing loss and the less direct effects of interference with activities such as sleep and conversation, noise standards and criteria have been developed.

The magnitude of noise levels or loudness is referred to as sound pressure level (SPL) with units in decibels (dB). Decibels are calculated as a logarithmic function of SPL in air to a reference effective pressure, which is considered the hearing threshold, or:

$$SPL = 20 \log_{10} (P_e/P_o)$$

where: P_e = measured effective pressure of sound wave in micropascals (μPa), and

P_o = reference effective pressure of 20 Pa.

To account for the effect of how the human ear perceives sound pressure, at moderate to low levels, sound pressure levels are adjusted for frequency (or pitch). One of the most commonly used frequency filters is the A-weighting (dBA), which adjusts measurements for the approximated response of the human ear to low-frequency SPLs [i.e., below 1,000 hertz (Hz)] and high-frequency SPLs (i.e., above 1,000 Hz).

In the early 1970s, the EPA established numerical noise standards, which are summarized in their 1974 report *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare, With An Adequate Margin of Safety* (EPA, 1974). In developing these standards, reported as both equivalent sound pressure level (L_{eq}) and day-night sound pressure level (L_{dn}), the EPA drew on a large body of survey data describing the degree of activity interference and resulting annoyance for various noise levels. However, these standards were promulgated in the Noise Control Act of 1972 without regard to economic or technical feasibility. Additionally, these guidelines, often misconstrued, were not meant to be pragmatic or realistic goals for short-term noise control (Harris,

1991). The Noise Control Act of 1972 and its numerical standards were subsequently repealed and the EPA closed its Office of Noise and Radiation.

Palm Beach County has adopted noise sound level standards as part of the Unified Land Development Code (Article 7 Section 7.8, A. 4. Noise, Table 7.8-1). The sound level standards are:

Receiving Land Use Category	Time	Sound Level Limit (dBA)
Residential		
Fixed mechanical equipment	Any time	60
Residential		
All other sources	7:00 a.m. – 8:00 p.m.	60
	8:00 p.m. – 11:00 p.m.	55
	11:00 p.m. – 7:00 a.m.	50
Commercial		
All sources	Any time	70

In addition to the sound level limits established for each receiving land use category in the ULDC, Palm Beach County has a general noise nuisance ordinance related to county parks. The ordinance (Ordinance Number 96-44 Section 21-39) restricts loud, excessive, unnecessary noise where it produces actual physical discomfort and annoyance to persons of ordinary sensibilities.

2.3.8.2 Noise Measurement Procedures

An ambient noise-monitoring program was performed to assess the existing ambient noise levels in the general vicinity of the NHPP site. Baseline noise level data were obtained on September 6, 2003. The equipment used to monitor the baseline noise levels operated in the slow response mode to obtain accurate, integrated, dBA sound pressure levels. A windscreen was used because all measurements were taken outdoors. The microphone was positioned so that a random incidence response, as specified by the American National Standard Institute (ANSI), was achieved. The sound level meter and octave band analyzer were calibrated immediately prior to and just after the sampling period to provide a quality control check of the sound level meter's operation during monitoring.

Integrated SPL data consisting of the following noise parameters were collected at each location:

L_{eq} The sound pressure level averaged over the measurement period; this parameter is the continuous steady sound pressure level that would have the same total acoustic energy as the real fluctuating noise over the same time period;

Max The maximum 1- second sound pressure level for the sampling period;

Min The minimum 1-second sound pressure level for the sampling period; and

Ln The sound pressure levels, which were exceeded n% of the time during sampling period. For example, L_{90} is the sound level exceeded 90 percent of the time during the monitoring period.

The SPL data were analyzed and reported in dBA. The higher the decibel value, the louder the sound.

The SPLs and octave band data were collected at the monitoring locations, for a minimum of 15 continuous minutes, using measurement techniques set forth by American National Standard Institute (ANSI) S12.9-1993/Part 3 (ANSI, 1993).

The noise monitoring equipment used during the study included:

1. Continuous Noise Monitoring Equipment:
   a. Larson Davis Model 824 Precision Integrating Sound Level Meter with Real Time Frequency Analyzer;
   b. Larson Davis Model PRM902 Microphone Preamplifier;
   c. Larson Davis Model 2560 Prepolarized 1/2" Condenser Microphone; and
   d. Windscreen, tripod, and various cables.
2. Sound Level Meter Calibration Unit:
   a. Larson Davis Model CAL200 Sound Level Calibrator, 94/114 dB at 1,000 Hz.

Monitoring was conducted using the sound level meter mounted on a tripod at a height of 1.2 meters (m) (4 ft) above grade. Local meteorological conditions (wind speed, wind direction, temperature, and relative humidity) were measured during the monitoring periods. Major noise sources observed during monitoring at each location were noted.

The SPLs and octave band data were collected at five different locations, which are summarized below:

- Site 1 – South Bay Post Office located on South US 27 approximately 6 miles north-northeast of the NHPP site.

- Site 2 – Residential House associated with farm located on US 27 approximately 3.6 miles northeast of the NHPP site. This is the closest residence to the NHPP site.
- Site 3 – NHPP site property located about 520 ft northeast of the boiler building. This site represents farfield noise generated by the existing NHPP Facility.
- Site 4 – Located in sugarcane field off of plant access road approximately 1.1 miles from the NHPP site and 1.2 miles from US 27.
- Site 5 – Located at the plant access road and US 27.

The Larson Davis sound level meter complies with Type I--Precision requirements set forth for sound level meters and for one-third octave filters. The L_{eq} (equivalent sound pressure level averaged for the sampling period) as well as the maximum, minimum and Ln SPLs during each monitoring episode were recorded and are presented in Table 2.3-8. The average minimum, maximum, L_{90} and L_{eq} SPLs for each site were calculated. The SPL averages were calculated using the following formula:

$$\text{Average SPL} = 10 \text{ Log} \frac{\sum_{i-1}^{N} 10^{(SPLi/10)}}{N}$$

where: N = number of observations, and

SPL_i = individual sound pressure level in data set.

2.3.8.3 Existing Ambient Sound Pressure Level Conditions

The ambient noise levels observed at five locations where monitoring was performed are presented in Table 2.3-8. The table lists the general meteorological data and the sound levels for the L_{min}, L_{max}, L_{90}, and L_{eq} in dBA. L_{min} and L_{max} represent the minimum and maximum 1-second noise levels observed during the monitoring period. The L_{90} represents the noise level that is exceeded 90 percent of the time. The L_{min} or L_{eq} are generally considered the background sound level since transient loud noise sources, such as truck traffic, are excluded. However, for measurements taken near equipment that is operating continuously such as near the NHPP site, the L_{90} can represent the steady state sound level. The L_{eq} represents the average noise over the entire monitoring period and would include transient noise sources

The sound levels, observed at Site 1, were typical of a commercial/residential setting. While there was some traffic on nearby US 27, the L_{90} and L_{eq} were within 2 dBA, indicating a minimum of loud

transient noise sources when monitoring was conducted. Site 2 experienced more traffic noise as the location was about 30 ft off of US 27, where highway speeds of over 55 mph are allowed. Truck traffic (semi-trailer) was the most noticeable at this site.

Sound pressure levels measured at Site 3 were relatively consistent given the proximity of the NHPP Facility, which was operating at the time of monitoring. The Site 3 noise level measurements provide an excellent operational baseline from which impacts can be predicted.

Noise measurements at Site 4 were primarily influenced by wind generated noise from the nearby sugarcane field. The wind speeds during monitoring approached 20 mph causing elevated noise levels. During lower wind speeds, noise levels observed at Site 4 were relatively low (e.g., L_{90} of 50.8 dBA).

The observed sound level measurements at Site 5 were influenced by large diesel engines pumping water from one canal into another canal to the east. This continuous engine noise combined with the transient traffic noise from US 27 resulted in the highest L_{90} noise level (63.3 dBA) observed during monitoring.

The results of the monitoring indicated that, for the closest residential sites to the NHPP site, traffic and other noise associated with US 27 and urban activities dominate the observed sound pressure levels. Noise generated by the NHPP Facility was not observed at any of the monitoring sites located a mile or more from the NHPP site. Noise observed at Site 4, near the NHPP Facility, was indicative of noise levels at or within industrial plants.

Table 2.2-1. Areas Not Found within 5 Miles of the New Hope Project Site

National	State	Regional/Local/Other
Park	Park	County Park
Forest	Forest	Special Management Area Established by Law
Seashore	Archeological Landmarks or Landmark Zone	Indian Reservation
Wildlife Refuge	Save Our Rivers Land	Military Land
Wilderness Area	Area of Critical State Concern	Major Private Land-Holding for which the Primary Purpose is Environmental Protection
Memorial	Conservation and Recreation Lands	
Monument	Game Management Area	
Marine Sanctuary	Aquatic Preserve	
Estuarine Sanctuary	Outstanding Florida Waters	
Critical Habitat of Endangered Species	Scenic and Wild River	
Roadless Area Review and Evaluation (RARE) Area		
Wild and Scenic River		

Source: Golder, 2003.

Table 2.2-2. Population Census Counts, Population Estimates, and Projections

Political Jurisdiction	2000 Census	2001 Population Estimate	2002 Population Estimate	Medium Population Projection 2010	Medium Population Projection 2020
Palm Beach County	1,131,841	1,161,608	1,190,390	1,371,200	1,622,400
South Bay	3,859	3,827	3,889	NA	NA
Belle Glade	14,906	14,885	15,205	NA	NA
Census Tract 79.03	5,629	NA	NA	NA	NA

NA = Information not available

Source: University of Florida, Bureau of Economic and Business Research, 2002.
U.S. Census Bureau, 2003

Table 2.3-1. Monthly and Annual Average Temperatures Measured at Palm Beach International Airport

Month	Daily Temperatures (°F)[a]			Extremes (°F)[b]	
	Average	Maximum	Minimum	Maximum	Minimum
January	65.1	74.5	55.7	89	27
February	66.2	75.9	56.5	90	32
March	70.0	78.8	61.2	94	30
April	73.4	82.0	64.7	99	43
May	77.6	85.6	69.7	96	51
June	80.6	88.1	73.1	98	61
July	82.2	89.9	74.5	101	66
August	82.5	90.0	75.0	98	65
September	81.6	88.6	74.6	97	66
October	77.8	84.9	70.7	95	46
November	72.3	80.0	64.5	91	36
December	67.4	76.0	58.7	90	28
Annual	74.7	82.9	66.6	101	27

[a] 30-year period of record, climatological normal, 1961 to 1990.

[b] 63-year period of record, 1938 to 2000.

Source: National Oceanic and Atmospheric Administration (NOAA), 2000.

Table 2.3-2. Monthly and Annual Average Precipitation and Relative Humidity Measured at Palm Beach International Airport

	Precipitation (inches)			Humidity (%)[a] Hour (LT)			
Month	Average[a]	Maximum[b]	Minimum[b]	1 a.m.	7 a.m.	1 p.m.	7 p.m.
January	2.80	11.18	0.22	81	83	59	72
February	2.69	8.71	0.29	80	83	56	70
March	3.66	16.78	0.33	78	81	56	68
April	2.91	18.26	0.04	76	79	54	65
May	6.13	15.22	0.39	79	80	59	71
June	8.09	17.91	1.07	84	84	65	76
July	6.14	17.74	1.22	85	85	64	75
August	6.02	13.52	1.73	84	85	64	75
September	8.53	24.86	1.77	84	87	66	78
October	6.60	18.74	0.56	80	83	62	74
November	4.69	14.63	0.23	80	83	61	73
December	2.49	11.69	0.06	80	82	59	73
Annual Average	60.75			81	83	60	72
Maximum/Minimum		24.86	0.04				

Note: LT = local time.

[a] 30-year period of record, climatological normal, 1961 to 1990.

[b] 61-year period of record, 1940 to 2000.

Source: NOAA, 2000.

Table 2.3-3. Seasonal and Annual Average Wind Direction and Wind Speed Measured at Palm Beach International Airport [a]

			Prevailing Wind	
Season	Average Wind Speed (mph)	Calm (%)	Direction	Average Wind Speed (mph)
Winter	11.9	1.9	Northwest	10.7
Spring	12.4	1.5	Southeast	14.0
Summer	9.3	4.8	East-southeast	11.7
Fall	11.3	2.8	East	13.6
Annual	11.2	2.7	Southeast	12.8

[a] 5-year period of record, 1987 to 1991. The data for this period were also used in the air quality impact analyses for the Project.

Source: NOAA, 1991.

Table 2.3-4. Seasonal and Annual Average Atmospheric Stability Classes Determined at Palm Beach International Airport [a]

Season	Occurrence (%) of Stability Class					
	Very Unstable	Moderately Unstable	Slightly Unstable	Neutral	Slightly Stable	Moderately Stable
Winter	0.0	1.0	5.7	62.7	18.1	12.5
Spring	0.1	2.2	13.9	57.3	16.9	9.6
Summer	0.5	6.1	20.9	35.0	19.1	18.5
Fall	0.0	2.3	11.3	53.8	18.4	14.2
Annual	0.2	2.9	13.0	52.1	18.1	13.7

[a] 5-year period of record, 1987 to 1991. The data for this period were also used in the air quality impact analyses for the Project.

Source: NOAA, 1991.

Table 2.3-5. Seasonal and Annual Average Morning and Afternoon Mixing Heights Determined at Palm Beach International Airport [a]

Season	Mixing Height (m)	
	Morning	Afternoon
Winter	756	1,279
Spring	893	1,438
Summer	830	1,365
Fall	797	1,281
Annual	819	1,341

[a] 5-year period of record, 1987 to 1991. The data for this period were also used in the air quality impact analyses for the Project. Mixing heights based on surface temperatures and upper-air data from the NWS station at Palm Beach International Airport.

Source: NOAA, 1991.

Table 2.3-6. National and State AAQS, Allowable PSD Increments, and Significant Impact Levels

Pollutant	Averaging Time	National AAQS ($\mu g/m^3$) Primary Standard	National AAQS ($\mu g/m^3$) Secondary Standard	Florida AAQS [a] ($\mu g/m^3$)	PSD Increments ($\mu g/m^3$) [a] Class I	PSD Increments ($\mu g/m^3$) [a] Class II	Significant Impact Levels [b] ($\mu g/m^3$)
Particulate Matter [c] (PM_{10})	Annual Arithmetic Mean	50	50	50	4	17	1
	24-Hour Maximum	150	150	150	8	30	5
Sulfur Dioxide	Annual Arithmetic Mean	80	NA	60	2	20	1
	24-Hour Maximum	365	NA	260	5	91	5
	3-Hour Maximum	NA	1,300	1,300	25	512	25
Carbon Monoxide	8-Hour Maximum	10,000	10,000	10,000	NA	NA	500
	1-Hour Maximum	40,000	40,000	40,000	NA	NA	2,000
Nitrogen Dioxide	Annual Arithmetic Mean	100	100	100	2.5	25	1
Ozone [c]	1-Hour Maximum [d]	235	235	235	NA	NA	NA
Lead	Calendar Quarter Arithmetic Mean	1.5	1.5	15	NA	NA	NA

Note: Particulate matter (PM_{10}) = particulate matter with aerodynamic diameter less than or equal to 10 micrometers.
NA = Not applicable, i.e., no standard exists.

[a] Short-term maximum concentrations are not to be exceeded more than once per year, except for PM_{10} and O_3 AAQS which are based on expected exceedances.

[b] Maximum concentrations are not to be exceeded.

[c] On July 18, 1997, EPA promulgated revised AAQS for particulate matter and ozone. For particulate matter, $PM_{2.5}$ standards were introduced with a 24-hour average standard of 65 $\mu g/m^3$ (based on the 3-year averages of the 98th percentile values) and an annual standard of 15 $\mu g/m^3$ (3-year averages at community monitors). The form of the 24-hour PM_{10} standard was changed; compliance is based on 3-year average of 99th percentile concentrations that is 150$\mu g/m^3$ or less. The O_3 standard was modified to be 0.08 ppm for the 8-hour average; achieved when the 3-year average of 99th percentile values is 0.08 ppm or less. The courts have stayed these standards. Florida DEP has not yet adopted the revised standards.

[d] 0.12 ppm; achieved when the expected number of days per year with concentrations above the standard is fewer than 1.

Sources: Federal Register, Vol. 43, No. 118, June 19, 1978.
40 CFR 50; 40 CFR 52.21.
Florida Chapter 62.204, F.A.C.

Table 2.3-7. Summary of Maximum Measured PM_{10}, O_3, NO_2, CO and SO_2 Concentrations for Palm Beach County, 2001 to 2002

Site No.	Operator	Location	Measurement Period Year	Measurement Period Months	Concentration 1-Hour Highest	1-Hour 2nd Highest	3-Hour Highest	3-Hour 2nd Highest	8-Hour Highest	8-Hour 2nd Highest	8-Hour 3-year Average 4th Highest	24-Hour Highest	24-Hour 2nd Highest	Annual Average
PM_{10} [a]		**Florida AAQS:**			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**150 µg/m³**	**50 µg/m³**
12-099-0008	PBCHD	Belle Glade	2001	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	49	41	20
			2002	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	34	28	15
12-099-2003	PBCHD	Delray Beach/345 S. Congress	2001	Jan-June	NA	NA	NA	NA	NA	NA	NA	49	42	26
12-009-2005	PBCHD	Delray Beach/225 S. Congress	2001	June-Dec	NA	NA	NA	NA	NA	NA	NA	38	31	21
			2002	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	47	46	22
Ozone [a]		**Florida AAQS:**			**NA**	**0.12 ppm**	**NA**	**NA**	**NA**	**NA**	**0.08 ppm**	**NA**	**NA**	**NA**
12-099-0009	PBCHD	Royal Palm Beach	2001	Jan-Dec	0.107	0.090	NA	NA	NA	NA	NA-Site Moved	NA	NA	NA
			2002	Jan-Dec	0.082	0.074	NA	NA	NA	NA	0.067	NA	NA	NA
12-099-2004	PBCHD	Delray Beach	2001	Jan-Dec	0.102	0.098	NA	NA	NA	NA	0.075	NA	NA	NA
			2002	Jan-Dec	0.091	0.084	NA	NA	NA	NA	0.068	NA	NA	NA
Nitrogen dioxide		**Florida AAQS:**			**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**0.053 ppm**
12-099-1004	PBCHD	Palm Beach	2001	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0166
			2002	Jan-Dec	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.017
Carbon monoxide		**Florida AAQS:**			**NA**	**35 ppm**	**NA**	**NA**	**NA**	**9 ppm**	**NA**	**NA**	**NA**	**NA**
12-099-1004	PBCHD	Palm Beach	2001	Jan-Dec	3.3	3.2	NA	NA	2.5	2.2	NA	NA	NA	NA
			2002	Jan-Dec	3.9	3.8	NA	NA	3.3	2.3	NA	NA	NA	NA
Sulfur dioxide		**Florida AAQS:**			**NA**	**NA**	**NA**	**0.5 ppm**	**NA**	**NA**	**NA**	**NA**	**0.1 ppm**	**0.02 ppm**
12-099-3004	PBCHD	Riviera Beach	2001	Jan-Dec	NA	NA	0.008	0.004	NA	NA	NA	0.003	0.003	0.0011
			2002	Jan-Dec	NA	NA	0.008	0.005	NA	NA	NA	0.002	0.002	0.0011
4150-001-502		South Bay[b]	1997	Jan-Dec	NA	NA	0.021	0.018	NA	NA	NA	0.007	0.005	0.002

Note: NA = not applicable.
AAQS = ambient air quality standard.
PBCHD = Palm Beach County Health Department

[a] On July 18, 1997, EPA promulgated revised AAQS for particulate matter and ozone. For particulate matter, $PM_{2.5}$ standards were introduced with a 24-hour average standard of 65 µg/m³ (based on the 3-year averages of the 98th percentile values) and an annual standard of 15 µg/m³ (3-year averages at community monitors). The form of the 24-hour PM_{10} standard was changed; compliance is based on 3-year average of 99th percentile concentrations that is 150 µg/m³ or less. The O_3 standard was modified to be 0.08 ppm for the 8-hour average; achieved when the 3-year average of 99th percentile values is 0.08 ppm or less. Florida DEP has not yet adopted the revised standards but is performing monitoring to determine compliance.

[b] SO_2 data was obtained in 1997.

Table 2.3-8. Baseline Ambient Sound Pressure Level Data in the Vicinity of the NHPP Site (September 6, 2003)

Site Number	Location	Date	Temperature	Wind Speed	Wind Direction	Sound Pressure Levels (dBA)				Comments/Notes
						L_{min}	L_{max}	L_{90}	L_{eq}	
1	South Bay Post Office (6 miles N-NE of NHPP site)	6-Sep-03	86 °F	5-10	SW	48.9	58.7	52.4	53.9	Traffic and residential noise (mowing lawns)
2	Residence U.S. Highway 27 (3.6 miles NE of NHPP site)	6-Sep-03	87 °F	8-12	SW	52.2	78.8	54.6	67.7	Traffic and field mowing
3	NHPP Site	6-Sep-03	86 °F	4-5	SW	62.5	64.7	62.9	63.5	NHPP operations
4	Sugarcane Field (1.1 miles NE of NHPP site)	6-Sep-03	86 °F	10-17	SW	50.5	70.5	50.8	59.5	Wind noise and minor traffic, several small vehicles
5	Plant Entrance on U.S. Highway 27 (2.3 miles from NHPP site)	6-Sep-03	87 °F	8-12	SW	62.1	74.5	63.3	67.7	Diesel water pumps nearby (30 yds) and traffic

Note: wind speeds in miles per hour

Source: Golder, 2003.

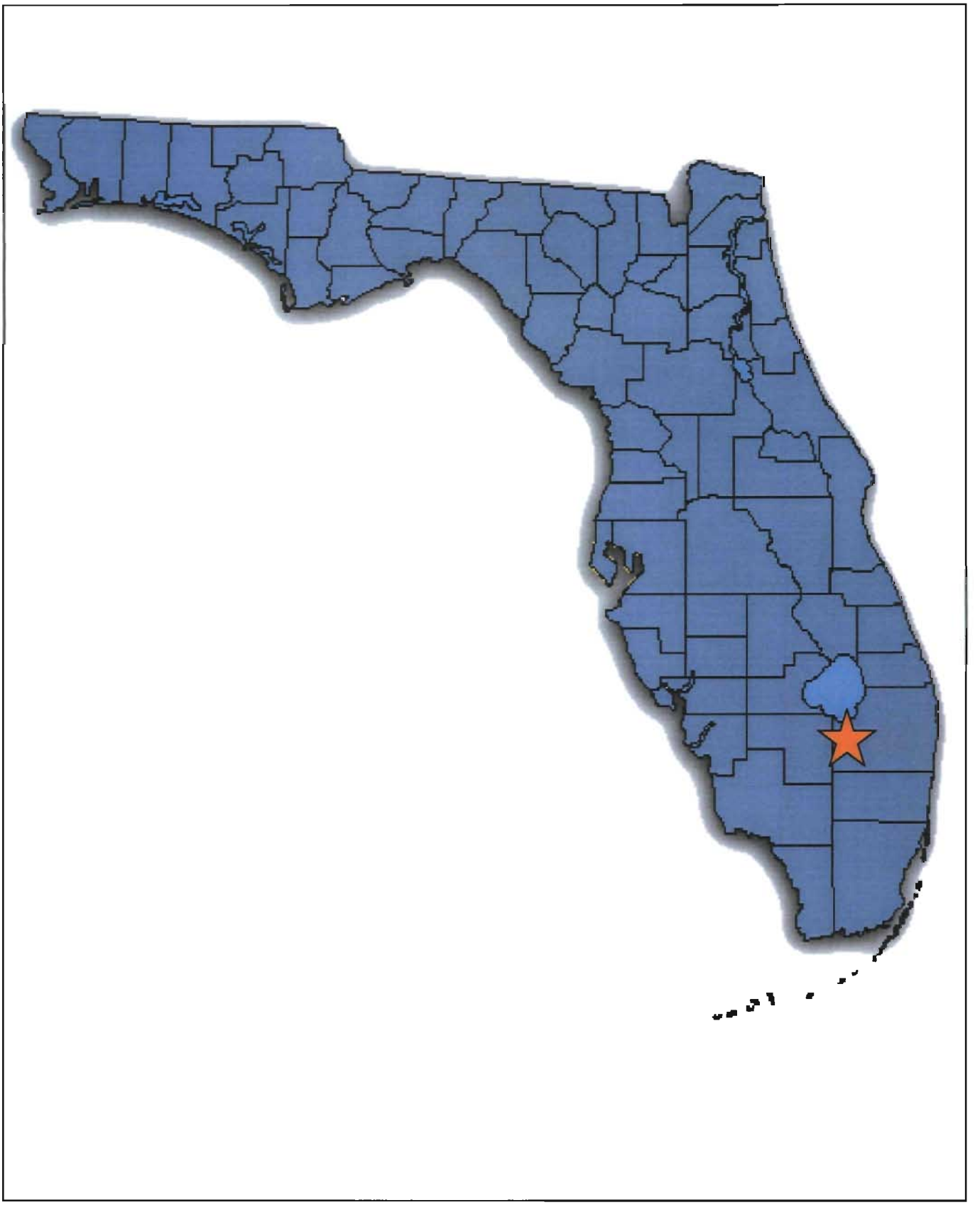


Figure 2.1-1
Location of the NHPP Site

Source: Golder, 2003.

Golder Associates

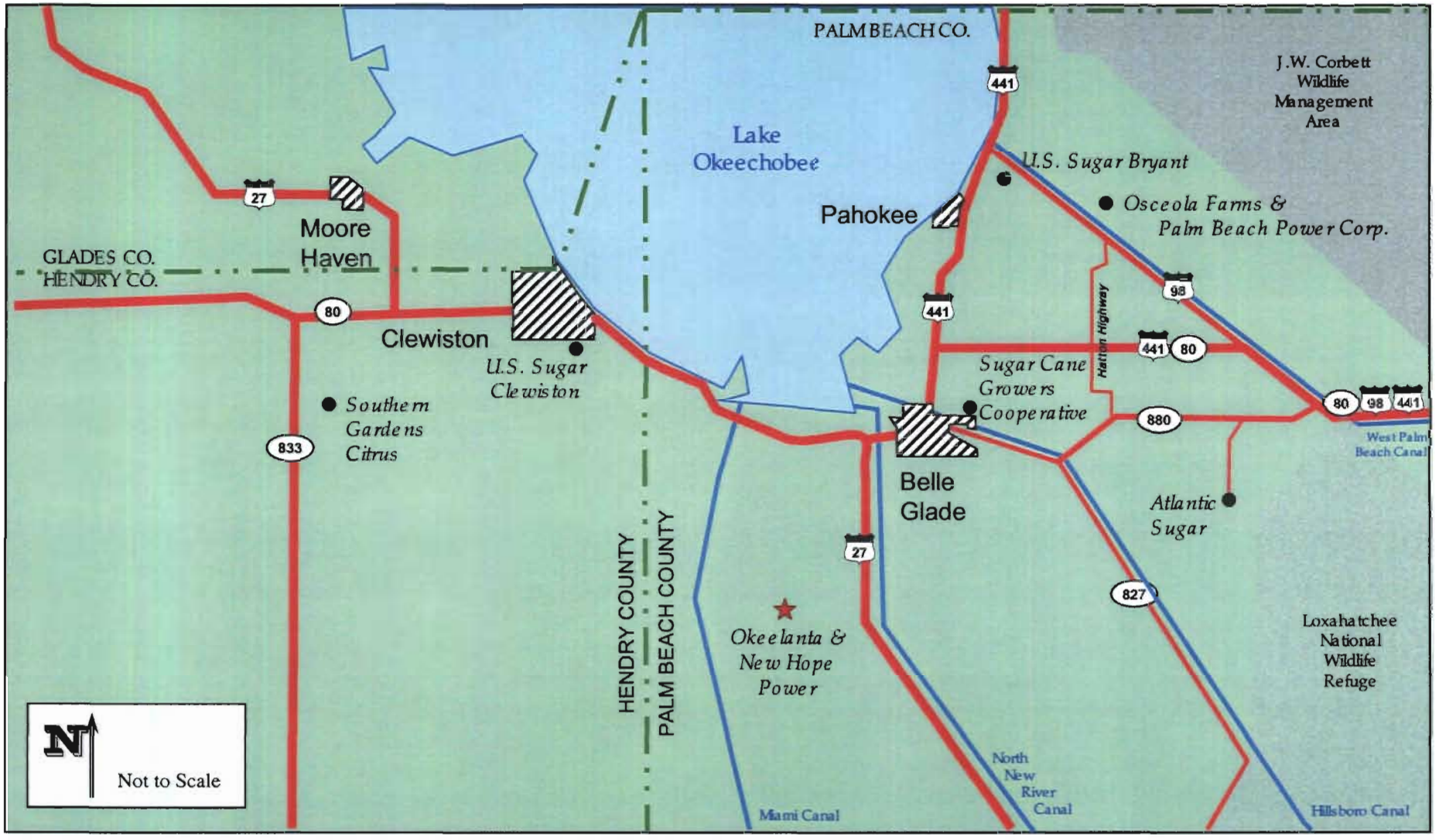


Figure 2.1-2
Location of NHPP and Surrounding Area

Source: Golder, 2003.

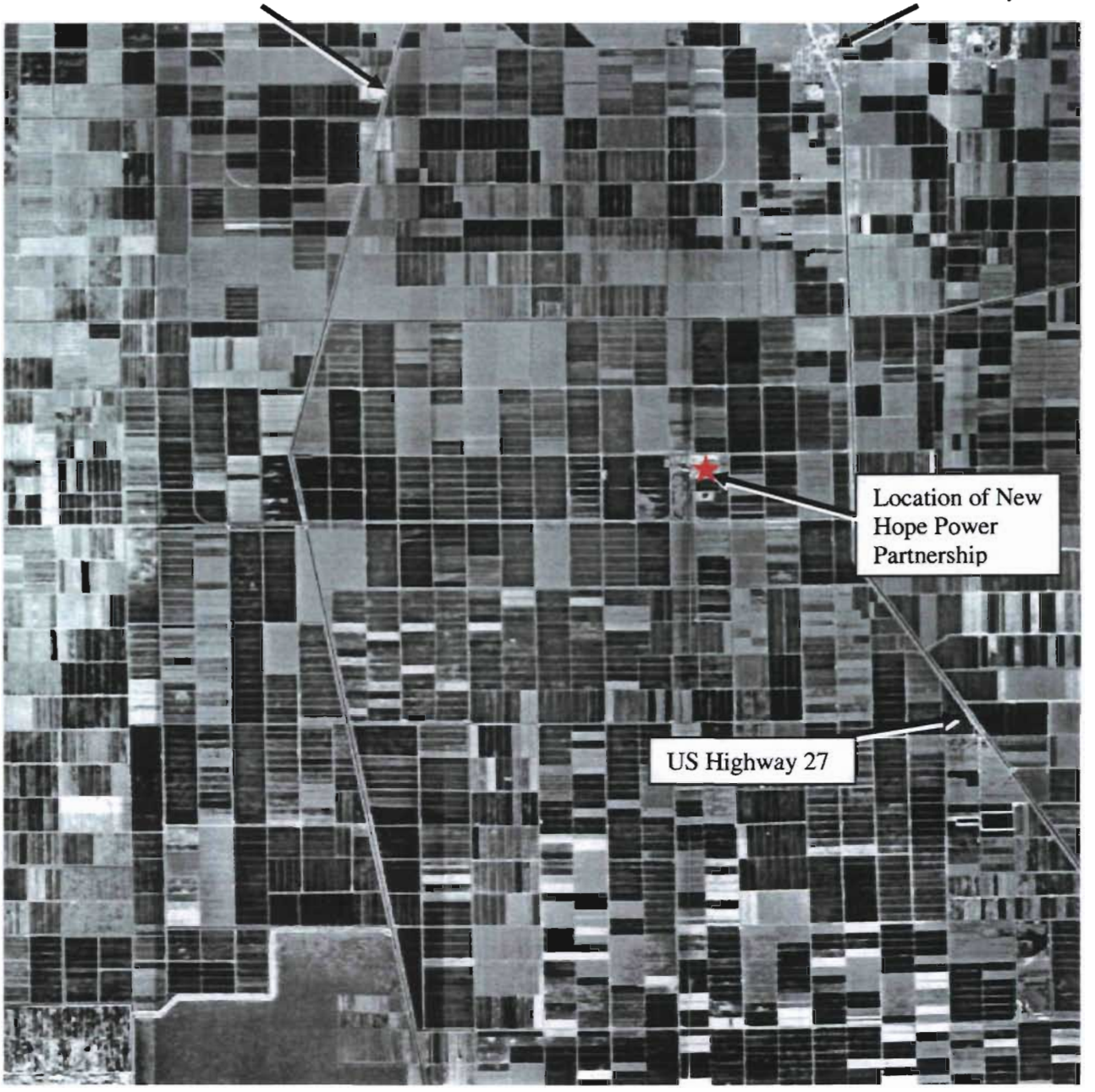


Figure 2.1-3
Adjacent Properties to the NHPP Site

Source: Golder, 2003.

Golder Associates

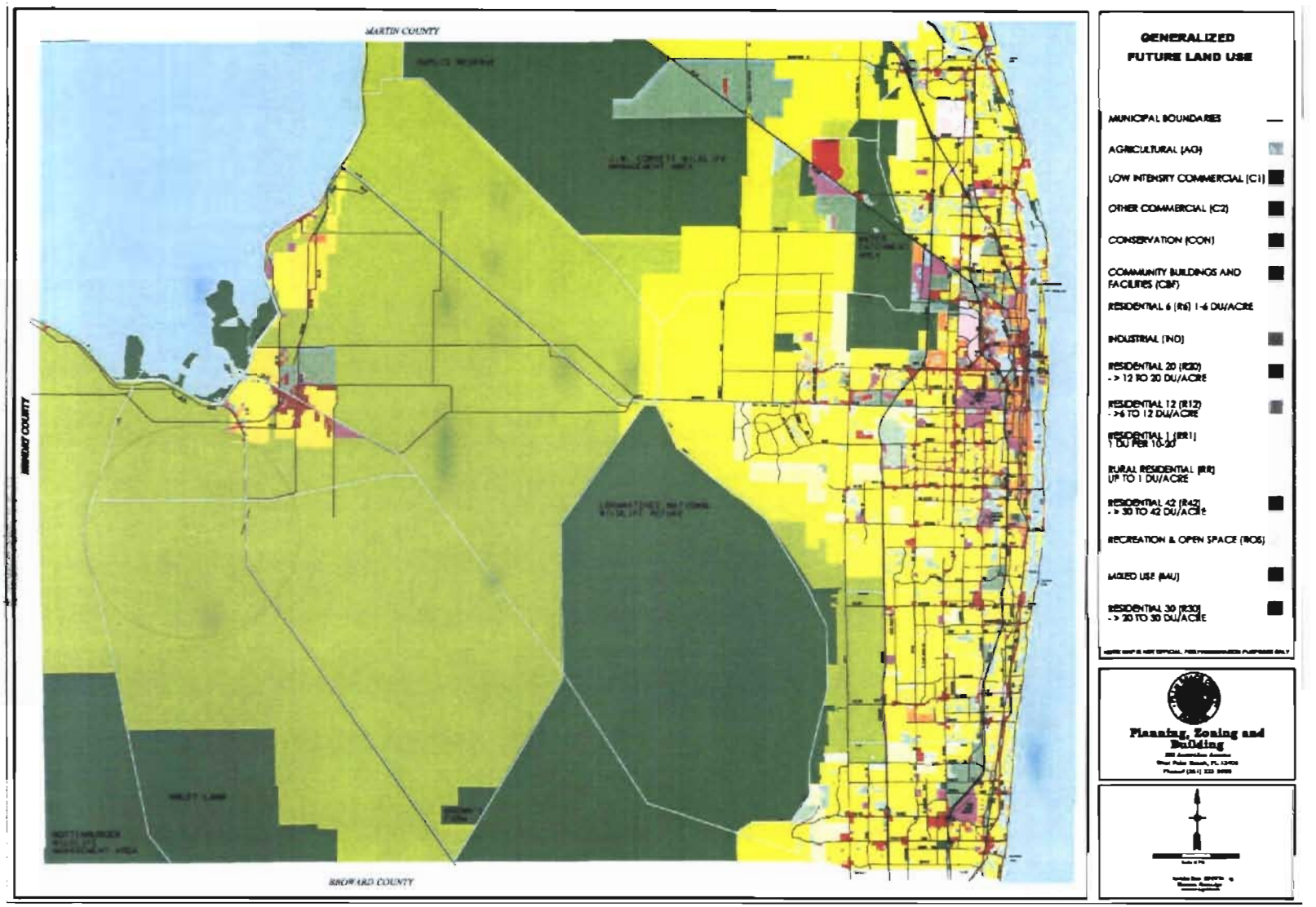
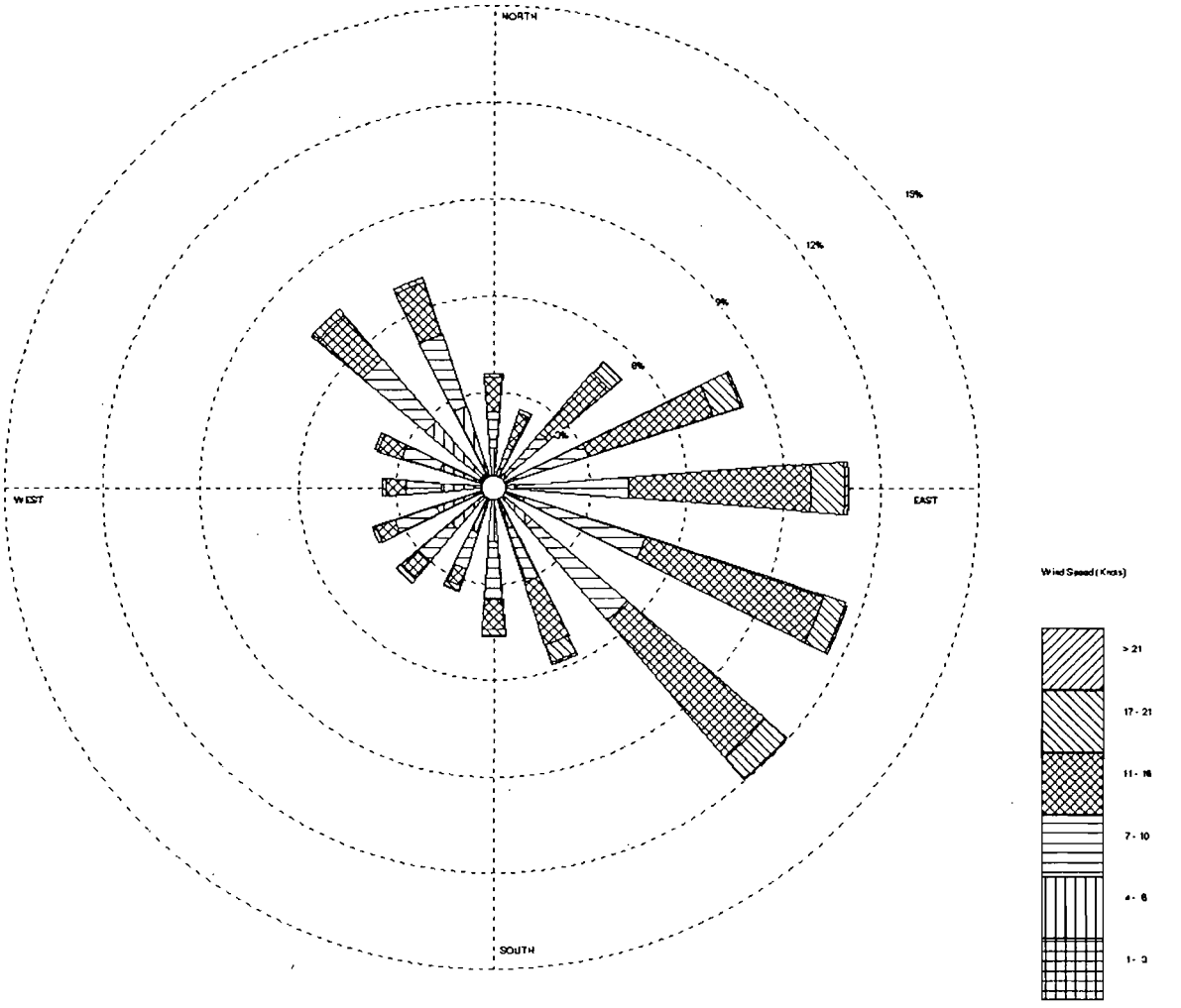


Figure 2.2-1
Future Land Use Map for Palm Beach County

Source: Palm Beach County, 2003; Golder, 2003.

Golder Associates



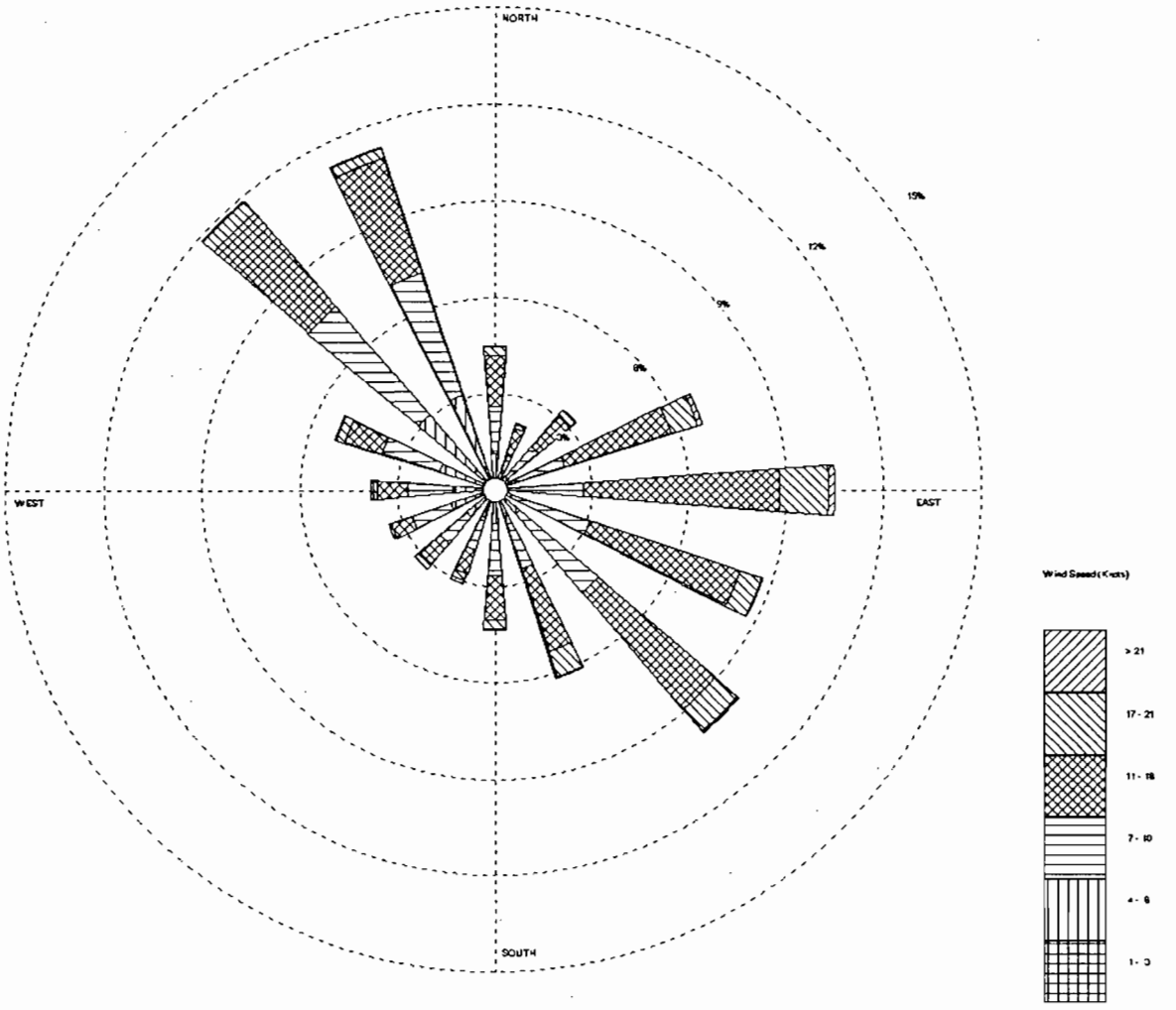
Station No. 12844

Average Wind Speed	10.0 Knots
Calm winds	2.69%

Figure 2.3-1. Annual Wind Rose for Palm Beach International Airport, Florida (1987 – 1991)

Source: National Climatic Data Center, 2001; Golder, 2003.

Golder Associates



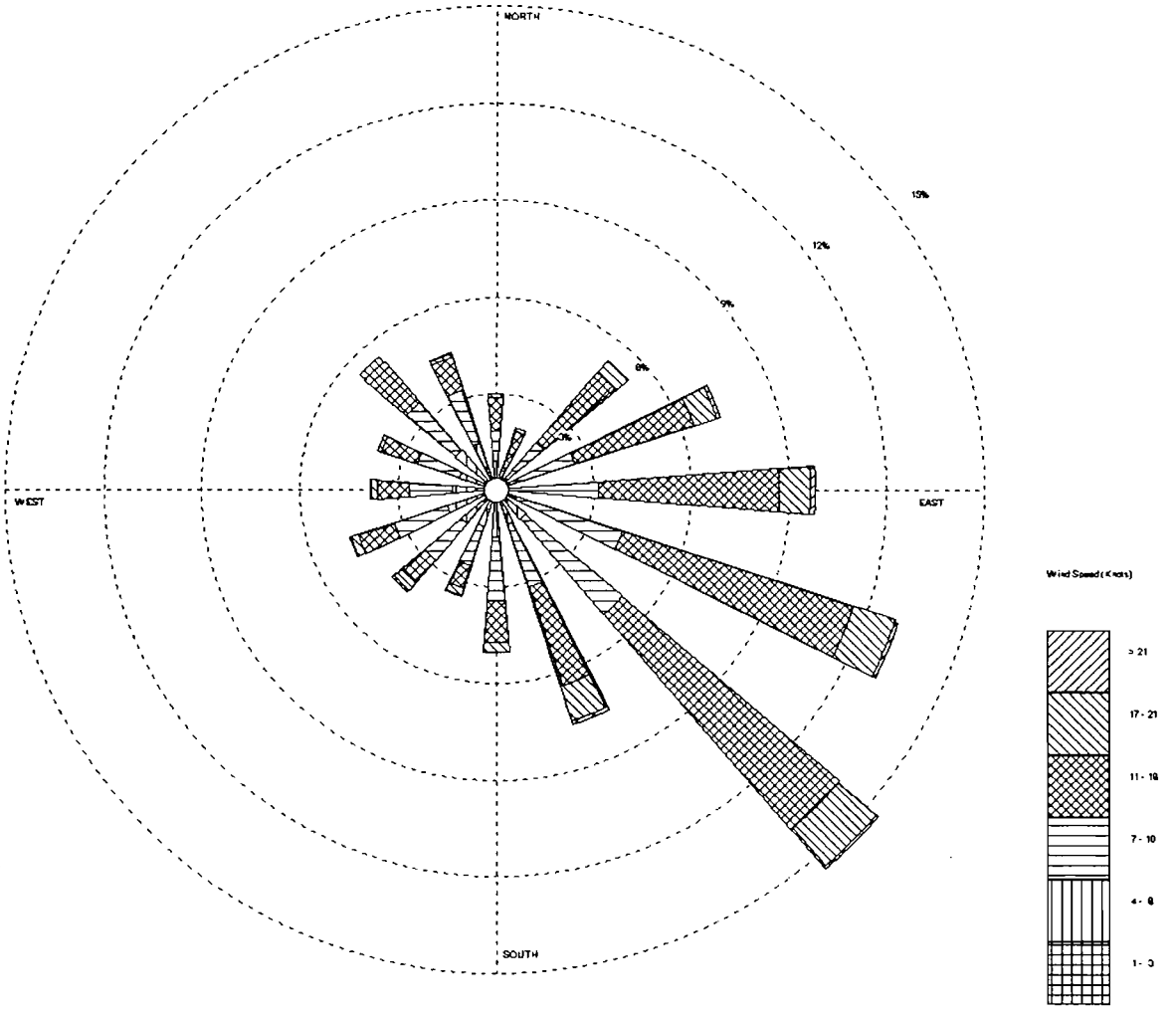
Station No. 12844

Average Wind Speed	10.5 Knots
Calm winds	1.86%

Figure 2.3-2. Winter Wind Rose for Palm Beach International Airport, Florida (December- February 1987 – 1991)

Source: National Climatic Data Center, 2001; Golder, 2003.

Golder Associates



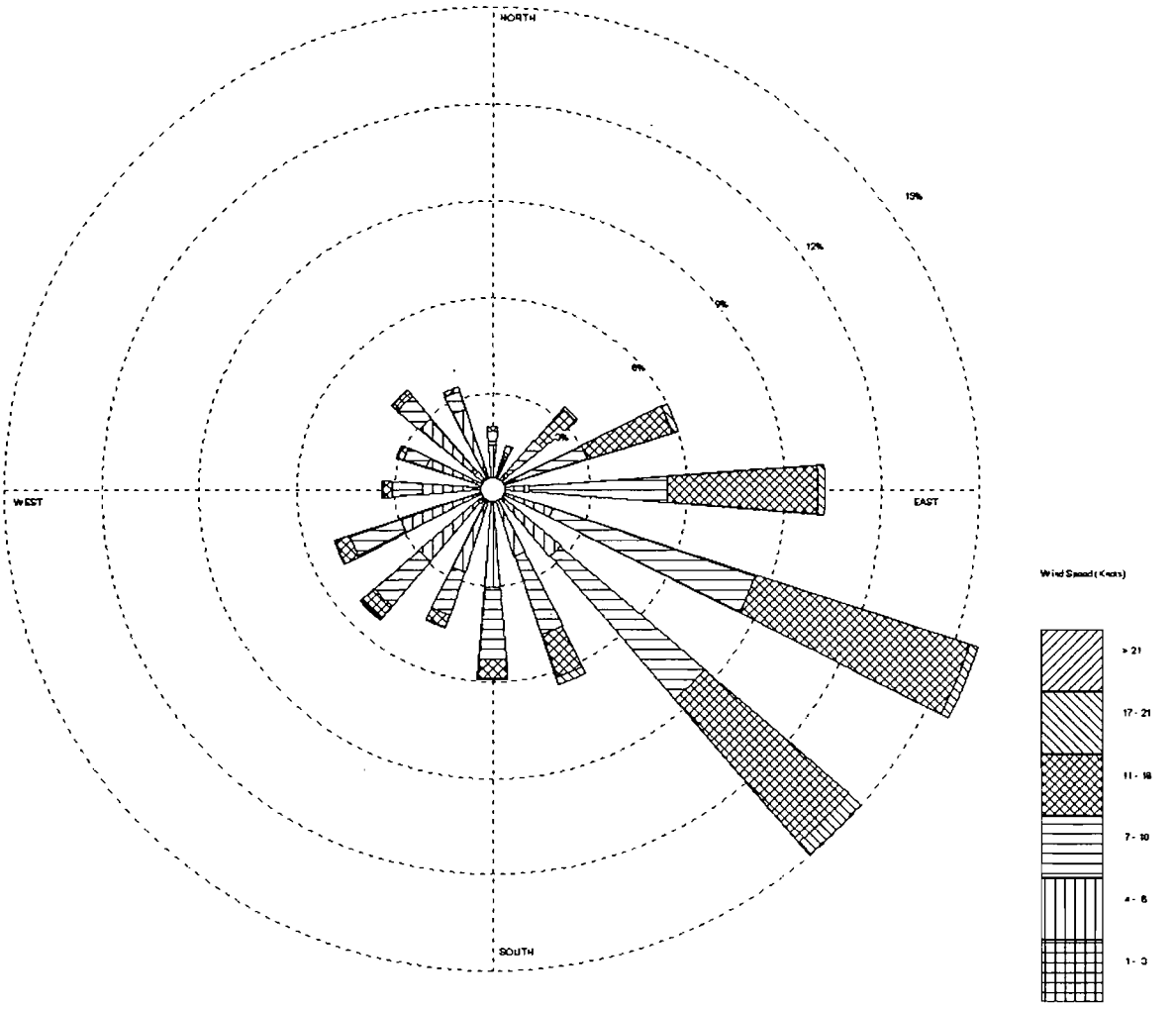
Station No. 12844

Average Wind Speed	10.9 Knots
Calm winds	1.49%

Figure 2.3-3. Spring Wind Rose for Palm Beach International Airport, Florida (March - May 1987 – 1991)

Source: National Climatic Data Center, 2001; Golder, 2003.

Golder Associates



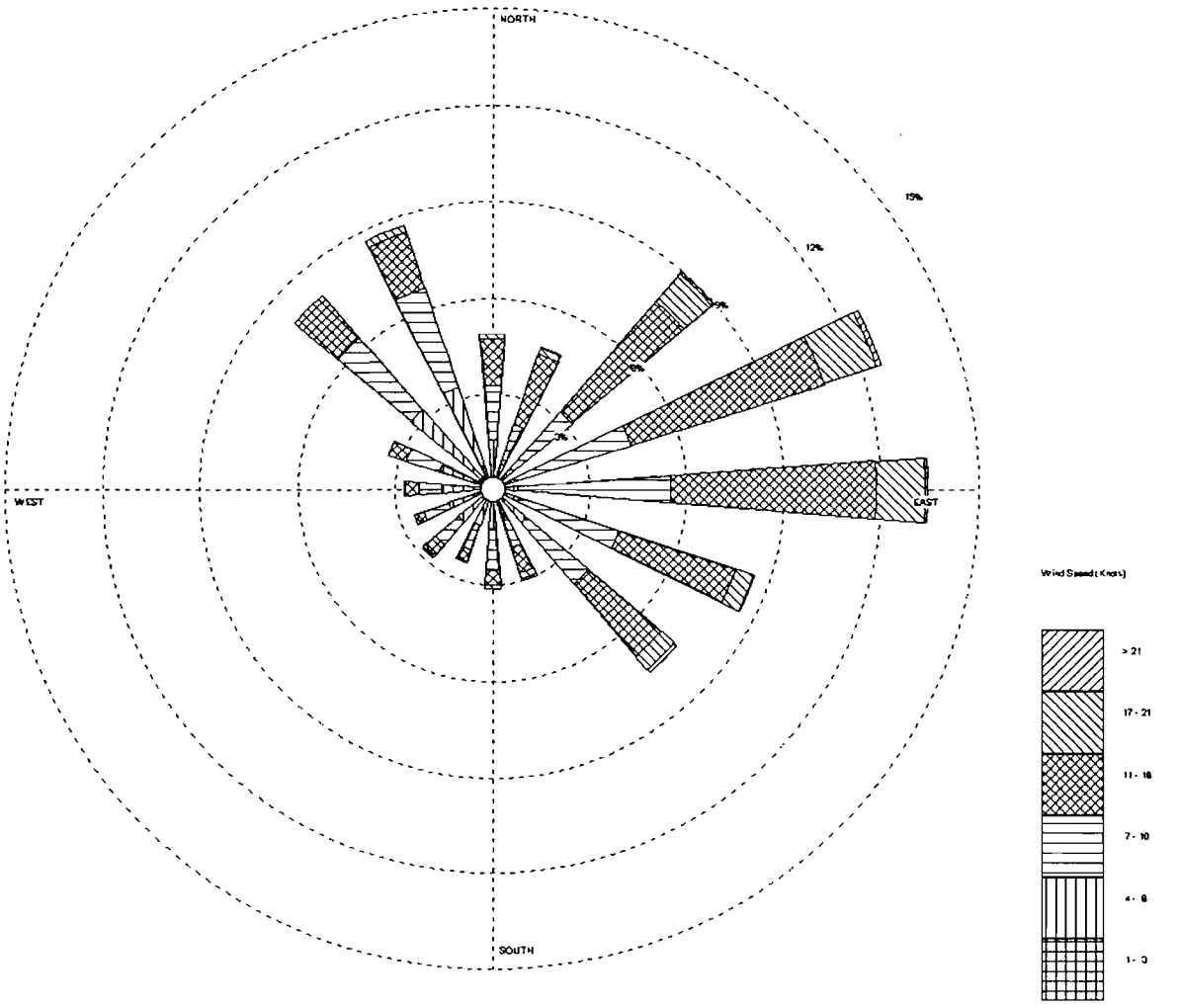
Station No. 12844

Average Wind Speed	8.53 Knots
Calm winds	4.84%

Figure 2.3-4. Summer Wind Rose for Palm Beach International Airport, Florida (June - August 1987 – 1991)

Source: National Climatic Data Center, 2001; Golder, 2003.

Golder Associates



Station No. 12844

Average Wind Speed	10.0 Knots
Calm winds	2.55%

Figure 2.3-5. Fall Wind Rose for Palm Beach International Airport, Florida (September - November 1987 – 1991)

Source: National Climatic Data Center, 2001; Golder, 2003.

Golder Associates

3.0 THE PLANT AND DIRECTLY ASSOCIATED FACILITIES

3.1 BACKGROUND

NHPP is the owner of a 74.9-net megawatt (MW) cogeneration facility located adjacent to the Okeelanta Corporation sugar mill, approximately 6 miles south of South Bay in Palm Beach County, Florida. The Facility combusts primarily biomass (bagasse and clean wood waste) in three identical steam boilers to generate steam and electricity. The cogeneration facility supplies the adjacent sugar mill with process steam during the sugarcane grinding season, approximately October through March. The Facility also supplies the Okeelanta sugar refinery with process steam year around.

Construction was completed on the NHPP Facility in 1995, and initial operations began in late 1995. The existing NHPP Facility consists of material handling and storage facilities for biomass, three boilers, one steam turbine/electric generator, a condenser, a mechanical draft cooling tower, a switchyard, and ancillary equipment. A plot plan for the existing Facility is presented in Figure 3.1-1, and a process flow diagram is presented in Figure 3.1-2.

The Project will enable NHPP to generate an additional 65 megawatts (MW) of electric power. The Project will involve the installation of a new steam turbine/electric generator, condenser, and mechanical draft cooling tower. Additional electric equipment (auxiliary and step-up transformers, electric room, and battery pack) will be installed to export additional power via an existing transmission line. The biomass storage area also will be expanded as part of the Project.

NHPP has requested and received a PSD permit modification from the FDEP to increase the maximum heat input rate to each of the three boilers from 715 to 760 MMBtu/hr when firing 100-percent biomass. The maximum heat input to each of the three boilers is 605 MMBtu/hr when firing natural gas and 490 MMBtu/hr when firing very low sulfur distillate oil. In addition, the average steam rate was increased from 455,418 to 506,100 lb/hr of steam. The Facility cap on heat input was removed to allow the three cogeneration boilers to simultaneously operate up to the maximum steam rate for 8,760 hours per year (hr/yr). The total Facility annual heat input was

increased from 11.5 x 10^{12} to 19.97 x 10^{12} Btu/yr. No physical changes to the boilers were required to implement these capacity increases. The FDEP has issued Air Permit No. 0990332-016-AC/PSD-FL-196(O) (see Appendix 10.1.5 for a copy of permit). The heat input and emission levels of specified in the FDEP Air Construction/PSD permit accommodate the proposed Project without further modifications.

Air pollution control equipment serving each boiler consists of mechanical dust collectors and an electrostatic precipitator (ESP) to control PM and heavy metal emissions, a selective non-catalytic reduction (SNCR) system for the control of NO_x emissions, and a carbon injection system for mercury (Hg) control.

Primary water uses for the proposed Project will be for condenser cooling, steam cycle makeup, and service water.

The Facility has been designed to minimize direct discharges to surface waters. Stormwater runoff is collected and routed to stormwater detention ponds or the percolation ponds (see Section 3.8). All wastewaters, including process water pretreatment backwash, plant and equipment drains, and neutralization unit effluent, are treated as appropriate and discharged to the existing percolation pond. The same procedures and operations will be followed when the Project is completed.

3.2 SITE LAYOUT

Figure 3.2-1 presents the boundary of the NHPP Facility (82.12 acres) after the Project is completed. Figure 3.2-2 is a plot plan showing the existing and added equipment. Photographs of the existing Facility are shown in Figure 3.2-3. The new steam turbine/electric generator and cooling tower will be located west of the existing Facility on the site. The areas to be used for the new equipment are previously disturbed upland areas. The facilities and their approximate areas are:

Fuel Handling and Storage	35.0 acres
Power Block Boilers and Steam Turbines/Electric Generators and Cooling Tower	4 acres
Stormwater Ponds	6.4 acres
Truck Unloading	1.5 acres
Office and Maintenance Building and Parking	1 acre
New Steam Turbine/Cooling Tower	0.5 acre
Miscellaneous (e.g., site access roads, etc.)	33.7 acres
Total Land Area	82.1 acres

Non-contact stormwater runoff will be released to the stormwater treatment basins (see Figure 3.2-2). Contact stormwater is released to the existing percolation pond system. No additional point source water discharges will be associated with the Facility.

3.3 FUEL

The primary fuel used by the NHPP Facility is biomass, consisting of bagasse and clean wood waste. No. 2 fuel oil and natural gas are used at startup, to supplement biomass fuel and for periods when the biomass fuel supply is interrupted. Total fossil fuel usage is limited to less than 25 percent of the Facility's heat input on a calendar quarter basis.

Typical properties of bagasse, clean wood waste, No. 2 distillate oil, and natural gas are shown in Table 3.3-1. The maximum fuel usage and heat input rates for each cogeneration boiler, including maximum short-term and annual averages for biomass, No. 2 fuel oil, and natural gas, are summarized in Table 3.3-2. No. 2 fuel oil and natural gas firing will be limited to less than 25 percent on a calendar quarter heat input basis.

Onsite storage is provided for about 250,000 tons of bagasse and 175,000 tons of clean wood waste. Distillate oil will be stored in the existing 50,000-gallon tank.

The existing boilers are connected onsite with an existing 6-inch natural gas lateral constructed to the site. Clean wood waste and distillate oil are delivered to the site by truck. Bagasse is provided from

the adjacent Okeelanta sugar mill by conveyor. Bagasse received from other sugar mills is delivered by truck.

3.4 AIR EMISSIONS CONTROLS

3.4.1 AIR EMISSIONS TYPES AND SOURCES

Air pollutants will be emitted from the boilers when firing bagasse, clean wood waste, natural gas, and distillate oil. Emissions will emanate from the three stacks serving the boilers. The material handling and storage of bagasse and clean wood waste potentially generate emissions of fugitive dust.

The maximum short-term emissions for each cogeneration boiler for biomass, No. 2 fuel oil, and natural gas are presented in Table 3.4-1. The maximum short-term emissions for each fuel burned alone are shown.

The maximum annual emissions for each boiler for three fuel combinations (i.e., 100-percent biomass; 75.1-percent biomass/24.9-percent No. 2 fuel oil; 75.1-percent biomass/24.9-percent natural gas) are presented in Table 3.4-2. The maximum annual emissions for any fuel scenario are indicated by the footnote. As shown, the maximum annual emissions for each pollutant occur with 100-percent biomass firing.

The emission factors used in Tables 3.4-1 and 3.4-2 are consistent with the permit limits and emission factors contained in FDEP Permit No. 0990332-016-AC/PSD-FL-196(O). Note that FDEP, in its final Permit No. 0990332-016-AC/PDS-FL-196(O), approved slightly lower limits for PM_{10} and VOC.

Maximum annual fugitive emissions for biomass usage are shown in Table 3.4-3. The maximum amount of biomass burned in the boilers consists of 1,063,162 tons per year (TPY) of clean wood waste and 1,444,659 TPY bagasse. In Table 3.4-3, it was conservatively assumed that an additional 50 percent would be processed through the material handling system, to account for year-to-year variability in biomass fuel deliveries.

Small amounts of PM will be emitted from the new cooling tower in the form of drift (i.e., small water droplets with dissolved solids from the intake water). Cooling tower drift is minimized using drift eliminators. Information on the new cooling tower particulate emissions are presented on Table 3.4-4. The level of emissions from the proposed cooling tower will be so small that this unit can be classified as an insignificant activity and that it is exempt from permitting pursuant to FDEP Rule 62-210.300(3), F.A.C.

3.4.2 AIR EMISSION CONTROLS

Air pollution control equipment, serving each boiler, consists of mechanical dust collectors and an ESP to control PM and heavy metal emissions, an SNCR system for the control of NO_x emissions and a carbon injection system for Hg control.

3.4.3 CONTROL TECHNOLOGY DESCRIPTION AND BEST AVAILABLE CONTROL TECHNOLOGY (BACT)

BACT review is required under the State of Florida and EPA regulations pertaining to PSD. Federal PSD regulations are codified in 40 Code of Federal Regulations (CFR) Part 52.21. The State of Florida has adopted PSD regulations, which have been approved by the EPA. The BACT review is part of the evaluation of control technology under the federal and Florida PSD rules. BACT is applicable to all pollutants for which PSD review is required and is pollutant-specific. BACT is an emission limitation that is based on the maximum degree of reduction for each regulated pollutant that is determined to be appropriate after taking into account energy, environmental, and economic impacts and other costs. BACT cannot be any less stringent than the federal New Source Performance Standards (NSPS) applicable to the source under evaluation.

The State of Florida and EPA have established a policy for BACT review in which the most stringent control alternatives are evaluated first. The alternatives are either rejected based on technological, environmental, energy, or economic reasons or are proposed as BACT. This procedure is referred to as the "top-down" approach. For the NHPP boilers, the FDEP has made recent BACT determinations (Air Permit No. 0990332-016-AC/PSD-FL-196(O), issued on October 29, 2003). A new BACT determination is not required as part of the Project, because the Project will not cause significant increase in the Facility's emissions of any PSD criteria pollutants. The following subsections summarize information on the control technology and BACT emission limits.

3.4.3.1 Nitrogen Oxides

The existing boilers at the NHPP cogeneration facility use SNCR systems to reduce NO_x emissions. SNCR is a system that injects urea into the boiler to reduce NO_x emissions. In this process, urea is injected into the flue gas stream in the boiler and reacts with NO_x to form nitrogen and water vapor. For the NHPP cogeneration boilers, urea is injected into each boiler at average and maximum rates of 25 gallons per hour (gal/hr) and 65 gal/hr, respectively.

The BACT determination for NO_x was based on the use of the existing SNCR system. The BACT emission limit for NO_x is 0.15 pound per million British thermal units (lb/MMBtu) based on a 30-day rolling average for biomass, No. 2 fuel oil, and natural gas. For each boiler, this limit is equivalent to 499.3 TPY of NO_x.

3.4.3.2 Carbon Monoxide (CO) and Volatile Organic Compounds (VOCs)

CO and VOC emissions are controlled through proper furnace design and good combustion practices, including control of combustion air and temperature, distribution of fuel on the combustion grate, and control over the furnace loads and transient conditions.

The BACT for CO and VOC was based on proper furnace design and good combustion practices. The CO emission limits for the cogeneration boilers are 0.50 lb/MMBtu as a 30-day rolling average and 0.35 lb/MMBtu as a 12-month rolling average for biomass firing. The VOC emission limit for the cogeneration boilers is 0.05 lb/MMBtu.

3.4.3.3 Sulfur Oxides (SO_2) and H_2SO_4 Mist

SO_2 emissions are controlled by burning biomass, low sulfur No. 2 distillate fuel oil (0.05-percent sulfur, maximum), and natural gas. All of these fuels are inherently very low in sulfur, and therefore produce low SO_2 emissions. The following table summarizes the biomass fuel sulfur content, based on historical fuel sampling at the NHPP cogeneration facility.

Clean Wood Waste (% by wt. Dry)	Bagasse (% by wt. Dry)
0.02%, low	0.02%, low
0.07%, avg.	0.03%, avg.
0.27%, high	0.05%, high

In addition, SO_2 removal is inherent to the process of combusting biomass. The fly ash produced during biomass firing is alkaline in nature and absorbs SO_2 from the exhaust stream. The ash is then collected in the mechanical collectors and the ESP. Significant SO_2 removal has been demonstrated at NHPP. Based on fuel analyses and CEM data, daily SO_2 removal efficiencies at NHPP are estimated to range from 87 to 99 percent.

The BACT for SO_2 was based on firing of low sulfur fuels. The BACT emission limits for SO_2 for biomass firing are:

- 0.20 lb/MMBtu on a 24-hour average,
- 0.10 lb/MMBtu on a 30-day rolling average, and
- 0.06 lb/MMBtu on a 12-month rolling average.

For fuel oil firing, the BACT was based on burning low sulfur distillate oil with a maximum sulfur content of 0.05 percent. This is equivalent to SO_2 emissions of approximately 0.05 lb/MMBtu. The estimated SO_2 emission rate for natural gas firing is 0.0058 lb/MMBtu, based on emission factors.

3.4.3.4 Particulate Matter

PM emissions are controlled by mechanical cyclone dust collectors and ESPs. The dust collectors were installed during the year 2000, and are located immediately following each boiler's air preheater, prior to the ESP. The dust collectors are designed to remove at least 85 percent of the PM in the flue gases (PM greater than 10 microns in size). The dust collectors remove larger size PM prior to the ESP. Each cogeneration boiler is vented though separate ESPs and stacks. The current PM/PM_{10} permit limit for the NHPP boilers is 0.03 lb/MMBtu, equivalent to NSPS Subpart Da standards.

The BACT for PM/PM_{10} was based on the use of mechanical cyclone dust collectors followed by ESPs. The current PM/PM_{10} emission limit is 0.026 lb/MMBtu.

3.4.4 DESIGN DATA FOR CONTROL EQUIPMENT

The cogeneration facility uses several emission control techniques to reduce emissions. An SNCR system is used to reduce NO_x emissions. Further, the cogeneration boilers minimize CO and VOC through proper furnace design and good combustion practices, including control of combustion air and combustion temperature, distribution of fuel on the combustion grate, and controls over the furnace loads and transient conditions. Particulate emissions are controlled by an ESP. Multiple cyclones were installed during the 2000 calendar year to improve control of particulate emissions.

3.4.4.1 Mechanical Dust Collectors

The cyclone dust collectors are supplied by Barron Industries (Model 460 Tube Base III 9K15-2023 AU). These mechanical cyclone dust collectors remove larger size PM prior to the ESP.

3.4.4.2 Electrostatic Precipitator

The ESPs for the NHPP Facility are manufactured by Flakt, Inc. Design specifications for the ESP (one per boiler) are provided below:

Chambers = 1

Collecting Plate = 12.30 ft L x 39.37 ft H

Fields/Chamber = 3

Specific Collection Area = 200 ft^2/1,000 acfm (minimum)

Gas Velocity = <4 ft/s

Pressure Drop = less than 2.8-inches H_2O

Operating Temperature = 350°F

Ash Handling = Trough hopper with screw conveyor

Particulate removal efficiency: >99.2 percent

3.4.4.3 NO_x Control System

The NO_x control system employs a urea injection system manufactured by Nalco-Fueltech. The technology is an SNCR process, which reduces NO_x emissions through chemical reactions with urea.

In the process, urea is injected into the flue gas stream and reacts with NO_x to form nitrogen and water vapor.

The NO_X control system includes the following major components:

- Carrier air compressors,
- Urea tank,
- Urea/air flow controls,
- Control panel,
- Injection manifolds and injectors, and
- Valves and instrumentation.

A single urea storage tank system supplies urea to all three boilers. Urea for injection into the boilers is drawn from the tank. Two injection zones are used to provide injection at full and part load conditions. Each zone has six injectors. Zone switching valves direct the urea/carrier mixture to the appropriate injection zone.

The urea injection system meets the NO_X emission limit of 0.15 lb/MMBtu when firing biomass or No. 2 fuel oil by complying with the following operational specifications (on a per boiler basis):

Urea injection rate - 65 gal/hr (maximum)

Ammonia Slip - 25 ppm (maximum)

3.4.5 DESIGN PHILOSOPHY

The Project minimizes air pollutant emissions by using the most appropriate air pollution control equipment for minimizing air emissions when firing biomass. This includes the use of mechanical collectors and ESPs to minimize emissions of PM and SNCR to minimize emissions of NO_x. Emissions of SO_2 are minimized through the use of low-sulfur fuels (biomass, natural gas, and distillate oil) as well as intrinsic reduction from the alkaline nature of the biomass. Emissions of CO and VOC are minimized through the use of good combustion practices. Together, these methods reduce emissions while using renewable energy sources (bagasse and clean wood waste) to generate electrical energy.

3.5 PLANT WATER USE

The water demands and uses for the Project include condenser and auxiliary heat exchanger cooling, general plant service water, firewater, and steam cycle makeup water.

A detailed water balance for the NHPP Facility, including the Project, is presented in Figure 3.5-1. Average flows are provided for the sugarcane grinding and non-grinding seasons.

The various components of the water balance are discussed in Sections 3.5.1 through 3.5.4. Section 3.5.5 presents a discussion of variations in water use from plant operational factors.

3.5.1 CIRCULATING WATER HEAT REJECTION SYSTEM

3.5.1.1 System Design

Heat (thermal energy) is a byproduct of the generation of electricity. A portion of the thermal energy produced is converted to electrical energy through the turbine generator, while the remainder of the energy is rejected through a cooling water system. The Facility's existing cooling water system consists of a mechanical draft cooling tower from which water is continuously pumped through the steam turbine condensers and heat exchangers that absorb the rejected energy. The cooling water flow is discharged back into the cooling tower, where the energy is dissipated to the atmosphere through evaporation. The evaporation/heat dissipation rate is a function of local climatic conditions, heat load, and cooling flow.

Makeup water for the cooling tower is required based on the evaporation rate and the cycles of concentration of dissolved constituents of the source water. Water chemistry is maintained to minimize scaling by optimizing the cycles of concentration and releasing a portion of the circulating water (i.e., blowdown).

The existing heat dissipation system includes a cooling tower and circulating water system through the existing condenser for steam cycle heat rejection. The Project will add a new steam cycle to the NHPP Facility, which will be fundamentally the same as the existing system, but it will be sized to match the nominal 65-MW generating capability of the new steam turbine/electric generator. Table 3.4-4 presents the conceptual information for the mechanical draft cooling tower.

3.5.1.2 Sources of Cooling Water

The surface water from a canal connected to the North New River Canal and surficial groundwater are used as cooling water for the existing NHPP Facility. The current water use is authorized subject to the provisions of a Water Use Permit (WUP) issued by the South Florida Water Management District (SFWMD) (Permit No. 50-03146-W). The annual allocation is 879 million gallons. The maximum annual withdrawal from the surficial aquifer is 137 million gallons. The maximum daily allocation is 3 million gallons per day (MGD), with a maximum withdrawal from the surficial aquifer of 0.6 MGD.

Makeup water for the Facility's new cooling system will come from the adjacent Okeelanta sugar mill. This Facility currently is authorized (WUP No. 50-01035-W) to use 14.4 MGD and has sufficient capacity to meet the needs of the new cooling system.

3.5.1.3 Dilution System

There is no dilution system associated with the Facility's existing cooling system. No dilution system will be associated with the new cooling system.

3.5.1.4 Blowdown, Screen Organisms, and Trash Disposal

Existing cooling tower blowdown is directed to one of four percolation cells that have been authorized by FDEP (Permit No. FLA150355-004-IW1N). These ponds are rotated on an annual basis. Between uses, these areas are used for growing sugarcane. The canal intake system has screens for controlling trash intake to the system.

3.5.1.5 Injection Wells

There are no injection wells associated with the cooling system or the Project.

3.5.2 DOMESTIC/SANITARY WASTEWATER

Sewage treatment is provided by the Okeelanta sugar mill and is adequate to serve the needs of the NHPP site. No additional domestic/sanitary facilities will be installed as part of the Project.

3.5.3 POTABLE WATER SYSTEMS

There will be no increases in potable water uses associated with the Project. Water for drinking comes from the Okeelanta sugar mill. The existing potable water system is adequate to serve the needs of the Facility after the addition of the Project.

3.5.4 PROCESS WATER SYSTEMS

3.5.4.1 Demineralized Water

The second largest water use for the Facility will be for demineralized water [conductivity < 0.1 microSiemens per centimeter (μS/cm)]. Demineralized water is required for:

1. Makeup to replace blowdown from the boilers (necessary to maintain a low dissolved solids content in the boilers),
2. Makeup to replace miscellaneous steam losses in the steam cycle, and
3. Makeup for the steam lost in supplying process steam.

Water from the existing wells will continue to be used for demineralized water. The existing water treatment system consists of reverse osmosis (RO) and ion exchange equipment. The system will be expanded as necessary to provide demineralized water for the Project. The ion exchangers are periodically regenerated with solutions of sulfuric acid and sodium hydroxide. The regenerant waste streams are and will continue to be treated by the existing plant neutralization system for discharge to the percolation pond. The RO reject is and will continue to be directed to the percolation pond system.

3.5.4.2 General Service Water

General use water, including pump and equipment seal water, blowdown, quench, cleaning and flushing water, and fire water will be provided by the existing service water system.

3.5.5 WATER USE VARIATIONS

Average daily water requirements for the Project are identified in the water balance diagram (Figure 3.5-1). Greatest water consumption occurs when process steam is provided to the Okeelanta sugar mill and refinery. For the major plant water uses (i.e., cooling tower makeup and steam cycle makeup), water use is reduced when operating load is reduced. General service use is less dependent

on operating load. Variations in ambient meteorological conditions will also result in variations in water demand.

3.6 CHEMICAL AND BIOCIDE WASTE

The NHPP Facility has an existing wastewater treatment system consisting of four percolation cells (ponds) that are used on a rotating basis for cooling water blowdown, RO reject, neutralized water treatment, non-contact and contact stormwater. During any year, only one of the four percolation cells are used for wastewater disposal; the remaining cells are used to grow sugarcane. The existing FDEP wastewater facility permit for this system (FLA150355-004-IW1N) has been increased to accommodate the water discharge from the Project, which primarily consists of cooling tower blowdown and stormwater. The annual average flow will be a maximum of 1.1 MGD within a protected maximum of 1.25 MGD during the grinding season. NHPP is seeking approval of this system through the FDEP South District Office, because the percolation pond system is used on a rotating basis and sugarcane is grown in these areas 3 out of 4 years.

The principal uses of chemicals and biocides will be for cooling tower water and steam cycle water quality control, chemical cleaning of the boiler and preboiler piping systems, and miscellaneous chemical drains.

3.6.1 COOLING SYSTEM WATER CHEMICAL TREATMENT

Intermittent shock chlorination or other FDEP-approved oxidizing or nonoxidizing biocides are used to prevent biofouling of the canal intake systems. A sodium hypochlorite solution is fed into the intake piping of the canal water makeup system.

For the existing cooling tower, a scale inhibitor is fed to the circulating water system to control the formation of calcium carbonate scales. These scales can adhere to heat transfer surfaces and impair cooling condenser performance. Sulfuric acid is added to the circulating water system to reduce alkalinity in the circulating water makeup, thus, reducing the likelihood of scale formation. In addition, a polymer may be added to the circulating water system to help hold suspended solids in suspension. Similar treatment will be used for the new cooling tower.

3.6.2 STEAM CYCLE WATER TREATMENT

The water treatment for the Project will not change from the current practices with the exception of greater steam flows to support the increased steam load. Currently, the steam-condensate-feedwater cycle is chemically treated to prevent corrosion or scaling of the condensate piping and boiler tubing and drums. The steam cycle feedwater is treated with an oxygen scavenger, such as a dilute hydrazine solution, for dissolved oxygen control and with an amine, such as aqueous ammonia, for pH control. Sodium phosphate is fed to the boilers for control of pH and hardness. Residual phosphate in the boiler reacts with hardness to form a nonadherent precipitate that can be removed through boiler blowdown.

3.6.3 SANITARY WASTEWATER TREATMENT

No additional sanitary treatment system will be required. The facilities at the Okeelanta sugar mill have the capability to handle sanitary wastes from the NHPP Facility. There will be a minimal increase in sanitary waste resulting from the addition of the Project.

During construction, construction-related sanitary wastes will be managed by the installation, use, and maintenance of portable chemical toilets. As necessary, sanitary wastes will be pumped from these individual toilets and disposed of offsite in an approved facility by a licensed contractor.

3.6.4 MAKEUP WATER DEMINERALIZATION

As discussed in Section 3.5.4, the makeup water will be demineralized using the existing plant process water treatment system, consisting of reverse osmosis and ion exchange demineralizer equipment. The existing treatment equipment will be expanded as necessary to support the additional demineralized water demands associated with the Project. The regenerant waste streams and the RO reject will continue to be treated by existing plant systems for discharge to the percolation pond system.

3.6.5 CHEMICAL CLEANING

The internal water surfaces for the boilers were chemically cleaned during commissioning. These boilers may be cleaned during the life of the plant. The chemicals used will not be permanently stored onsite but will be delivered to the site by a licensed contractor at the time of the scheduled

periodic cleanings. The chemical cleaning solutions that may be used for acid and alkaline cleaning of the boilers typically consist of the following:

1. Inhibited citric acid;
2. Aqueous ammonia;
3. Organic chelates, such as EDTA;
4. Disodium phosphate;
5. Trisodium phosphate;
6. Nonfoaming wetting agents; and
7. Foam inhibitors.

Wastewaters will consist of the cleaning solutions and material removed during the cleaning process. The chemical cleaning contractor will dispose of the chemical cleaning wastes through neutralization and use of the percolation pond system or by using the services of a licensed offsite waste disposal system.

Since chemical cleaning is an infrequent maintenance operation, it does not contribute to the liquid wastes produced by the normal operation of the plant.

3.6.6 MISCELLANEOUS CHEMICAL DRAINS

Chemical wastewater can result from draining a chemical storage tank or from cleaning and maintenance operations such as washdown of chemical storage areas. Currently, chemical wastes are contained and either scavenged locally or routed to the existing neutralization system for treatment. Flows from the miscellaneous chemical drains will be intermittent and will not normally contribute to the wastewater flows. The process will not change with the addition of the Project.

3.6.7 NEUTRALIZATION SYSTEM

The existing neutralization system will continue to be used for treatment of all chemical wastes resulting from the NHPP water treatment systems.

3.6.8 MISCELLANEOUS EQUIPMENT AND FLOOR DRAINS

Miscellaneous equipment and floor drain wastewater can result from maintenance drains of equipment, seal water drains, and drains from general cleaning and maintenance, such as washdown

of general plant areas. Miscellaneous equipment and floor drains will continue to be directed to an oil/water separator and then routed to the percolation pond system.

3.7 SOLID AND HAZARDOUS WASTE

3.7.1 SOLID WASTE

The primary solid waste from the NHPP Facility is bottom ash and fly ash collected from the boilers (e.g., mechanical collectors and ESPs). The collected bottom ash and fly ash (mixed ash) is stored in an ash bunker and loaded into trucks for transport to an approved landfill. The maximum amount of mixed ash generation is 110,130 TPY based on the maximum heat input to the three boilers and a mixture of 47.9-percent clean wood waste and 52.1-percent bagasse (heat input basis).

Only small quantities of other solid wastes are generated. An approved trash disposal contractor will dispose of all municipal solid wastes.

3.7.2 HAZARDOUS WASTE

The NHPP generates used oil, which is not a hazardous waste. Waste oil primarily includes lube oil from various equipment and from oil/water separator operation. The Facility generates a small amount of hazardous waste from filters from the port washer, which disposed of appropriately. The Facility is considered a conditionally exempt small quantity generator of hazardous waste.

3.8 ONSITE DRAINAGE SYSTEM

There are existing site drainage facilities for the NHPP Facility that have been constructed and designed in accordance with the State of Florida regulations for water quality and water quantity control. The existing site drainage system consists of channels, culverts, and pumps, which convey runoff to the site drainage system of channels and stormwater ponds. Stormwater associated with the operation of the NHPP Facility, including the Project, will be routed to the percolation pond system eliminating any surface water discharge.

3.8.1 STORMWATER DETENTION PONDS

Contact and non-contact stormwater will be routed to the percolation pond system.

3.8.2 STORMWATER RUNOFF CONTROL DURING CONSTRUCTION

Prior to beginning any earth disturbing activities, a silt fence will be installed along the perimeter of the Project where runoff to offsite areas is expected. This silt fence will filter sediments from construction runoff. During construction, the extent of earth disturbances will be minimized as much as is practical. Limerock surfacing may be provided for laydown areas.

Temporary erosion and sedimentation control measures will be designed to prevent sediment from being displaced and carried offsite by construction runoff. Silt fences and inlet and outlet protection may be used to assist in sediment control. All temporary sediment and erosion control measures will be removed at the end of construction.

3.9 MATERIALS HANDLING

3.9.1 BIOMASS FUEL AND BYPRODUCTS

Bagasse from other sugar mills and clean wood waste is delivered to the NHPP Facility by truck. Bagasse from the Okeelanta sugar mill is delivered to the NHPP Facility by conveyor and can be directly transferred to the boilers or directed to the storage pile. Clean wood waste and bagasse are stored separately. Clean wood waste and bagasse are reclaimed by a series of conveyors and directed to the boilers (Figure 3.9-1). There will be no change in the existing fuel handling methods resulting from the Project.

The maximum potential fuel usage based on maximum heat input to the three boilers is about 2.5 million TPY. Actual fuel delivery may be more because bagasse production is seasonal and additional supplies may be available at the end of the crop season.

Fly and bottom ash are removed from the site in covered trucks and hauled to an approved landfill. Maximum mixed ash production is about 110,000 TPY.

3.9.2 CONSTRUCTION MATERIALS AND EQUIPMENT

Construction materials and equipment will be delivered to the site by the existing road access. Heavy equipment (e.g., steam turbine, generator, and transformer) will be delivered by road. The existing access road will continue to be used during the construction and operation of the Project.

Construction laydown areas for materials will be located in areas adjacent to the NHPP site. Materials will be unloaded and moved around the site using portable cranes and trucks.

3.9.3 ROADS

Construction trucks will travel to the NHPP site via US 27 and the existing site access road. This route was used during construction and operation of the existing Facility and will continue to be used.

Table 3.3-1. Design Fuel Specifications[a] for the New Hope Power Partnership Cogeneration Facility

Parameter	Biomass		No. 2 Fuel Oil	Natural Gas
	Bagasse	Wood Waste		
Specific Gravity	–	–	0.865	–
Heating Value (Btu/lb)	3,600	4,500	19,175	–
Heating Value (Btu/gal)	–	–	138,000	–
Heating Value (Btu/scf)				1,000
Ultimate Analysis (dry basis percentage):				
Carbon	48.93	49.58	87.01	[b]
Hydrogen	6.14	5.87	12.47	[b]
Nitrogen	0.25	0.40	0.02	0.27 – 0.45
Oxygen	43.84	40.90	0.00	0.0
Sulfur	0.03	0.07	0.05	2 grains/100 scf
Ash/Inorganic	1.0	9.0	0.00	0.0
Moisture	52	37	–	0.6 lb/MMscf

[a] Represents average fuel characteristics.
[b] 96 – 97% as methane (CH_4); 1.8 – 2.6% as ethane (C_2H_6); 0.16 – 0.29% as propane (C_3H_8); and <0.09% as butane (C_4H_{10} and higher).

Sources: New Hope Power Partnership, 2000; Combustion Engineering, 1981; GolderAssociates Inc., 2003.

Table 3.3-2. Maximum Fuel Usage and Heat Input Rates per Boiler, New Hope Power Partnership

Fuel	Heat Input	Heat Transfer Efficiency (%)	Heat Output	Fuel Firing Rate	
	Maximum Short-Term (per boiler)				
	(MMBtu/hr)		(MMBtu/hr)		
Biomass - Bagasse	760	68	517	211,111	lb/hr [a]
- Wood	760	68	517	168,889	lb/hr [b]
No. 2 Fuel Oil	490	85	417	3,551	gal/hr
Natural Gas	605	85	514	605,000	scf/hr
	Annual Average (per boiler)				
	(Btu/yr)		(Btu/yr)		
NORMAL OPERATIONS (100% BIOMASS)					
Biomass	6.658E+12	68	4.527E+12	924,667	TPY [a]
No. 2 Fuel Oil	0	85	0	0	gal/yr
Natural Gas	0	85	0	0	MMscf/yr
TOTAL	6.658E+12		4.527E+12		
24.9% OIL FIRING					
Biomass	4.707E+12	68	3.201E+12	653,750	TPY [a]
No. 2 Fuel Oil	1.561E+12	85	1.327E+12	11,309,008	gal/yr
Natural Gas	0	85	0	0	MMscf/yr
TOTAL	6.268E+12		4.527E+12		
24.9% NATURAL GAS FIRING					
Biomass	4.707E+12	68	3.201E+12	653,750	TPY [a]
No. 2 Fuel Oil	0	85	0	0	gal/yr
Natural Gas	1.561E+12	85	1.327E+12	1,561	MMscf/yr
TOTAL	6.268E+12		4.527E+12		

[a] Based on bagasse firing.

[b] Based on wood firing.

Notes:

40 CFR 60, Subpart Da, limits fossil-fuel firing to less than 25% for each boiler (heat input basis).

Total heat output required = 4.527E+12 Btu/yr per boiler.

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

Bagasse - 3,600 Btu/lb

Wood - 4,500 Btu/lb

No. 2 Fuel Oil - 138,000 Btu/gal

Natural gas - 1,000 Btu/scf

Table 3.4-1. Maximum Short-Term Emissions for New Hope Power Partnership Cogeneration Facility (per boiler)

Regulated Pollutant	Biomass			No. 2 Fuel Oil			Natural Gas			Maximum Emissions for any fuel (lb/hr)	Total All Three Boilers (lb/hr)
	Emission Factor (lb/MMBtu)	Activity Factor (MMBtu/hr)	Maximum Emissions (lb/hr)	Emission Factor (lb/MMBtu)	Activity Factor (MMBtu/hr)	Maximum Emissions (lb/hr)	Emission Factor (lb/MMBtu)	Activity Factor (MMBtu/hr)	Maximum Emissions (lb/hr)		
Particulate (PM)	0.026 (2)	760	19.76	0.03 (1)	490	14.70	0.0073 (2)	605	4.42	19.76	59.28
Particulate (PM_{10})	0.026 (2)	760	19.76	0.03 (1)	490	14.70	0.0073 (2)	605	4.42	19.76	59.28
Sulfur Dioxide--3-hr Average	0.30 (5)	760	228.0	--	--	--	--	--	--	228.0	684.0
--24-hr Average	0.20 (2)	760	152.0	0.05 (6)	490	24.50	0.0058 (2)	605	3.51	152.0	456.0
Carbon Monoxide--1-hr Average (cold-startup)	6.5 (5)	225 [a]	1,462.5	1.0 (2)	490	490.0	0.08 (2)	605	48.4	1,462.5	4,387.5
--1-hr Average (normal operation)	1.0 (5)	760	760.0	--	--	--	--	--	--	760.0	2,280.0
--8-hr Average (cold startup)	4.5 (5)	225 [a]	1,012.5	--	--	--	--	--	--	1,012.5	3,037.5
--8-hr Average (normal operation)	1.0 (5)	760	760.0	--	--	--	--	--	--	760.0	2,280.0
Nitrogen Oxides	0.20 (5)	760	152.00	0.20 (5)	490	98.00	0.20 (5)	605	121	152.00	456.0
VOC	0.05 (2)	760	38.0	0.03 (2)	490	14.70	0.0053 (2)	605	3.21	38.00	114.00
Lead	1.5E-04 (7)	760	0.11	8.9E-07 (7)	490	4.4E-04	4.8E-07 (7)	605	2.9E-04	0.11	0.34
Mercury	5.4E-06 (2)	760	4.10E-03	2.4E-06 (2)	490	1.2E-03	2.5E-07 (2)	605	1.5E-04	4.10E-03	0.0123
Fluorides	7.0E-04 (3)	760	0.53	6.27E-06 (2)	490	3.1E-03	--	--	--	0.53	1.60
Sulfuric Acid Mist	0.018 (4)	760	13.68	0.003 (4)	490	1.4700	3.48E-04 (4)	605	2.11E-01	13.68	41.04

[a] Under cold startup conditions, each boiler is limited to 150,000 lb/hr of steam. Heat input rate is based on this limited steam rate.

References:

1. NSPS, 40 CFR 60, Subpart Da.
2. Based on Permit No. 0990332-016-AC.
3. Based on maximum of 3 most recent stack tests (1999-2001).
4. Based on 6% of the SO_2 emissions.
5. Based on CEM data.
6. Based on use of No. 2 fuel oil with a maximum sulfur content of 0.05% sulfur.
7. Based on information in the permit application for Permit No. 0990332-016-AC. There are no emission limits.

Table 3.4-2. Maximum Annual Emissions Per Boiler, New Hope Power Partnership Cogeneration Facility

Regulated Pollutant	Biomass Emission Factor (lb/MMBtu)	Biomass Activity Factor (E12 Btu/yr)	Biomass Annual Emissions (TPY)	Alternate Fuel Emission Factor (lb/MMBtu)	Alternate Fuel Activity Factor (E12 Btu/yr)	Alternate Fuel Annual Emissions (TPY)	Total Annual Emissions Per Boiler (TPY)	Total Annual Emissions 3 Boilers (TPY)
			100% Biomass					
Particulate (PM)	0.026 [d]	6.658	86.55	--	--	--	86.55 [a]	259.65
Particulate (PM_{10})	0.026 [d]	6.658	86.55	--	--	--	86.55 [a]	259.65
Sulfur dioxide [b]	0.06	6.658	199.73	--	--	--	199.73 [a]	599.18
Nitrogen oxides [c]	0.15	6.658	499.32	--	--	--	499.32 [a]	1,498.0
Carbon monoxide [b]	0.35	6.658	1165.08	--	--	--	1,165.08 [a]	3,495.2
VOC	0.05 [e]	6.658	166.44	--	--	--	166.44 [a]	499.32
Lead	1.5E-04	6.658	0.499	--	--	--	0.50 [a]	1.50
Mercury	5.4E-06	6.658	0.0180	--	--	--	0.018 [a]	0.054
Fluorides	7.0E-04	6.658	2.3302	--	--	--	2.33 [a]	6.99
Sulfuric acid mist	0.0036	6.658	11.98	--	--	--	11.98 [a]	36.0
			75.1% Biomass / 24.9% Fuel Oil					
Particulate (PM)	0.026 [d]	4.707	61.19	0.03	1.561	23.42	84.61	253.82
Particulate (PM_{10})	0.026 [d]	4.707	61.19	0.03	1.561	23.42	84.61	253.82
Sulfur dioxide [b]	0.06	4.707	141.21	0.05	1.561	39.03	180.24	540.71
Nitrogen oxides [c]	0.15	4.707	353.03	0.15	1.561	117.08	470.10	1,410.3
Carbon monoxide [b]	0.35	4.707	823.73	0.35	1.561	273.18	1,096.90	3,290.7
VOC	0.05 [e]	4.707	117.68	0.03	1.561	23.42	141.09	423.27
Lead	1.5E-04	4.707	0.353	8.9E-07	1.561	6.95E-04	0.35	1.06
Mercury	5.4E-06	4.707	0.0127	2.4E-06	1.561	0.0019	0.015	0.044
Fluorides	7.0E-04	4.707	1.6475	6.27E-06	1.561	0.0049	1.65	4.96
Sulfuric acid mist	0.0036	4.707	8.47	0.003	1.561	2.34	10.81	32.4
			75.1% Biomass / 24.9% Natural Gas					
Particulate (PM)	0.026 [d]	4.707	61.19	0.0073	1.561	5.70	66.89	200.67
Particulate (PM_{10})	0.026 [d]	4.707	61.19	0.0073	1.561	5.70	66.89	200.67
Sulfur dioxide [b]	0.06	4.707	141.21	0.0300	1.561	23.42	164.63	493.88
Nitrogen oxides [c]	0.15	4.707	353.03	0.15	1.561	117.08	470.10	1,410.3
Carbon monoxide [b]	0.35	4.707	823.73	0.08	1.561	62.44	886.17	2,658.5
VOC	0.05 [e]	4.707	117.68	0.0053	1.561	4.14	121.81	365.43
Lead	1.5E-04	4.707	0.353	4.8E-07	1.561	3.75E-04	0.35	1.06
Mercury	5.4E-06	4.707	0.0127	2.5E-07	1.561	1.95E-04	0.013	0.039
Fluorides	7.0E-04	4.707	1.6475	--	--	--	1.65	4.94
Sulfuric acid mist	0.0036	4.707	8.47	3.48E-04	1.561	0.27	8.74	26.2

[a] Denotes maximum annual emissions for any fuel scenario.

[b] Based on 12-month rolling average.

[c] Based on 30-day rolling average.

[d] DEP has approved a permit limit of 0.026 lb/mmBtu in Permit No. 0990332-016-AC/PSD-FL-196(O).

[e] DEP has approved a permit limit of 0.05 lb/mmBtu in Permit No. 0990332-016-AC/PSD-FL-196(O).

Note: No emissions of total reduced sulfur, asbestos, or vinyl chloride are expected.
Fuel type percentages are based on heat input.

Table 3.4-3. New Hope Power Partnership Facility Maximum Annual Fugitive Dust Emissions

SOURCE	TYPE OF OPERATION	M MOISTURE CONTENT (%)	U WIND SPEED (MPH)	UNCONTROLLED PM EMISSION FACTOR (LB/TON) [a]	UNCONTROLLED PM_{10} EMISSION FACTOR (LB/TON) [a]	CONTROL	CONTROL EFFICIENCY (%)	CONTROLLED PM EMISSION FACTOR (LB/TON)	CONTROLLED PM_{10} EMISSION FACTOR (LB/TON)	ACTIVITY FACTOR	MAXIMUM ANNUAL PM(TSP) EMISSIONS (TPY)	MAXIMUM ANNUAL PM_{10} EMISSIONS (TPY)
BIOMASS HANDLING												
TRUCK DUMPS (2)	BATCH DROP	37	9.4	0.00009	0.00004	NONE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
CHAIN CONVEYORS-TO-UNLOADING CONVEYOR (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
UNLOADING CONVEYOR-TO-SCREEN	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
SCREEN	CONTINUOUS DROP	37	9.4	0.00009	0.00004	NONE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
SCREEN-TO-HOGGER	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
HOGGER	CRUSHING	--	--	0.02	0.01	ENCLOSED	95	0.00100	0.00047	3,761,731 TPY [g]	1.881	0.8896
HOGGER-TO-STORAGE CONVEYOR	BATCH DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
SCREEN-TO-STORAGE CONVEYOR	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	0 TPY	0.000	0.0000
SCREEN-TO-BOILER FEED CONVEYOR	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	0 TPY	0.000	0.0000
STORAGE CONVEYOR-TO-RADIAL STACKER	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
RADIAL STACKER-TO-BIOMASS STORAGE PILE	CONTINUOUS DROP	37	9.4	0.00009	0.00004	NONE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
UNDERPILE RECLAIMERS (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSED	90	0.00001	0.00000	3,761,731 TPY [g]	0.017	0.0081
RECLAIMERS-TO-BOILER FEED CONVEYOR (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
BOILER FEED CONVEYOR-TO-CHAIN DIST. CONVEYOR (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
CHAIN DIST. CONVEYOR -TO-BOILER METER BINS (4)	BATCH DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	3,761,731 TPY [g]	0.170	0.0805
BAGASSE CONVEYOR-TO-CHAIN DIST CONVEYOR (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	0 TPY	0.000	0.0000
BAGASSE CONVEYOR-TO-RECYCLE CONVEYOR	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	0 TPY	0.000	0.0000
CHAIN DIST. CONVEYORS-TO-RECYLE CONVEYOR (2)	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	376,173 TPY [f]	0.017	0.0081
RECYCLE CONVEYOR-TO-RECYCLE STACKER	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	0 TPY	0.000	0.0000
RECYCLE CONVEYOR-TO-STORAGE CONVEYOR	CONTINUOUS DROP	37	9.4	0.00009	0.00004	ENCLOSURE	0	0.00009	0.00004	376,173 TPY [f]	0.017	0.0081
RECYCLE STACKER-TO-BIOMASS STORAGE PILE	CONTINUOUS DROP	37	9.4	0.00009	0.00004	NONE	0	0.00009	0.00004	0 TPY	0.000	0.0000
BIOMASS STORAGE PILES (2)	WIND EROSION	--	--	--		NONE	0	--		--	0.175 [d]	0.0000 [d]
BIOMASS STORAGE PILE MAINTENANCE	VEHICULAR TRAFFIC	--	--	0.75	0.23 lb/VMT [b]	WATERING	50	0.38	0.11 lb/VMT [b]	21,900 VMT [c]	4.110 [d]	1.2330 [d]
FLY ASH HANDLING												
FLY ASH SILO FILTER	--	--	--	--	--	BAGHOUSE	99	0.01	0.0047 gr/acf	2,500 acfm	0.939	0.444
FLY ASH TRANSFER-TO-TRUCK	CONTINUOUS DROP	5.0	9.4	0.00149	0.00071	WETTING	50	0.00075	0.00035	110,131 TPY [e]	0.041	0.019
TOTAL											9.069	3.496

Notes/References:

[a] Batch Drop and Continuous Drop Emission Factors are computed from AP-42 (USEPA, 1995) Section 13.2.4:
E= k x 0.0032 x (U/5)^1.3 / (M/2)^1.4 lb/ton, where k = 0.74 for PM and 0.35 for PM_{10}.

[b] Pound per Vehicle Mile Travel (lb/VMT).

[c] Based on vehicle operating 12 hrs/day, 365 days/yr @ 5 mph.

[d] Based on EPA AP-42 emission factors.

[e] Based on 1,063,162 TPY woodwaste @ 9% ash and 1,444,659 TPY bagasse @ 1% ash. Assuming 100% is fly ash.

[f] Assuming 10% of biomass is overfeed and is returned to biomass storage pile.

[g] Activity Factor based on 19.97×10^{12} Btu/yr; 47.9% is from wood (4,500 Btu/lb) and the remaining 52.1% is from bagasse (3,600 Btu/lb) = 2,507,821 TPY; an additional 50% was added to account for year-to-year variations.

Table 3.4-4. Physical, Performance, and Emissions Data for the Mechanical Draft Cooling Tower

Parameter	Data [a]
Number of Cells	2
Deck Dimensions, ft	
Length	102
Width	48
Height	24
Stack Dimensions	
Height, ft	38
Stack Top Effective Inner Diameter, per cell, ft	32
Effective Diameter, all cells, ft	45
Performance Data	
Discharge Velocity, ft/min	1,400
Circulating Water Flow Rate (CWFR), gal/min	34,500
Design hot water temperature, °F	115
Design cold water temperature, °F	78
Heat Rejected, million Btu/hr	370
Design Air Flow Rate per cell, acfm	1,099,273
Liquid/ Gas (Air Flow) (L/G) Ratio	2.038
Hours of operation	8,760
Emission Data	
Drift Rate[b] (DR), percent	0.001
Total Dissolved Solids (TDS) Concentration[c], maximum ppm	4,000
Solution Drift[d] (SD), lb/hr	173
PM Drift[e], lb/hr	0.69
tons/year	3.0
PM_{10} Drift	
PM_{10} Portion (percent) of PM Drift	50
PM_{10} Emissions, lb/hr	0.35
tons/year	1.5

[a] Data used in the impact analyses

[b] Drift rate is the percent of circulating water

[c] TDS assumed for modeling; TDS averages for 2001 and 2002 were 4,080 and 3,984 mg/L, respectively

[d] Includes water and based on circulating water flow rate and drift rate (CWFR x DR x 8.34 lb/gal x 60 min/hr)

[e] PM calculated based on total dissolved solids and solution drift (TDS x SD)

Source: Bechtel, 1994.

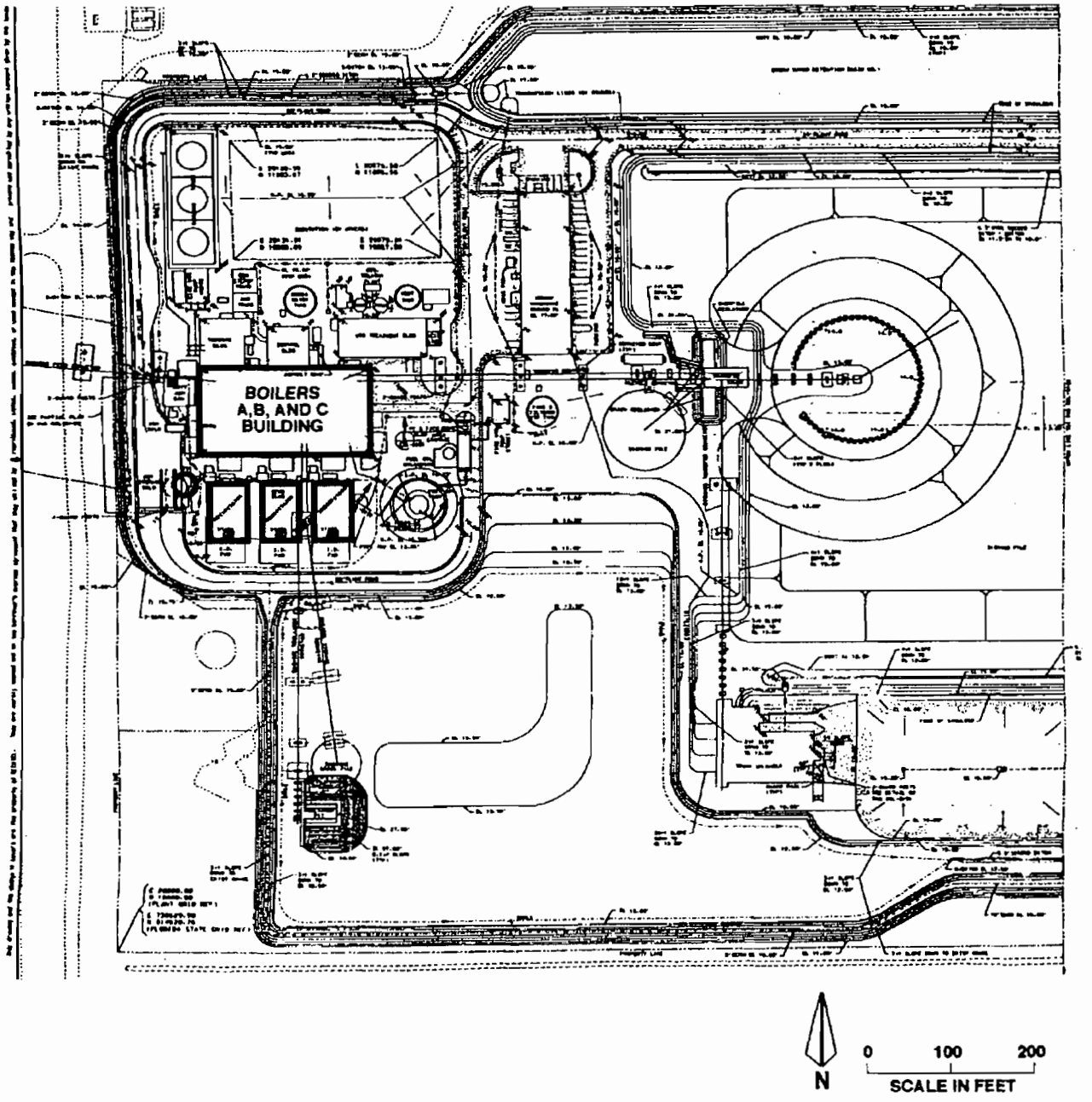


Figure 3.1-1
Plot Plan of the Existing New Hope Power Partnership Facility

Source: Bechtel, 1996; Golder, 2000.

Golder Associates

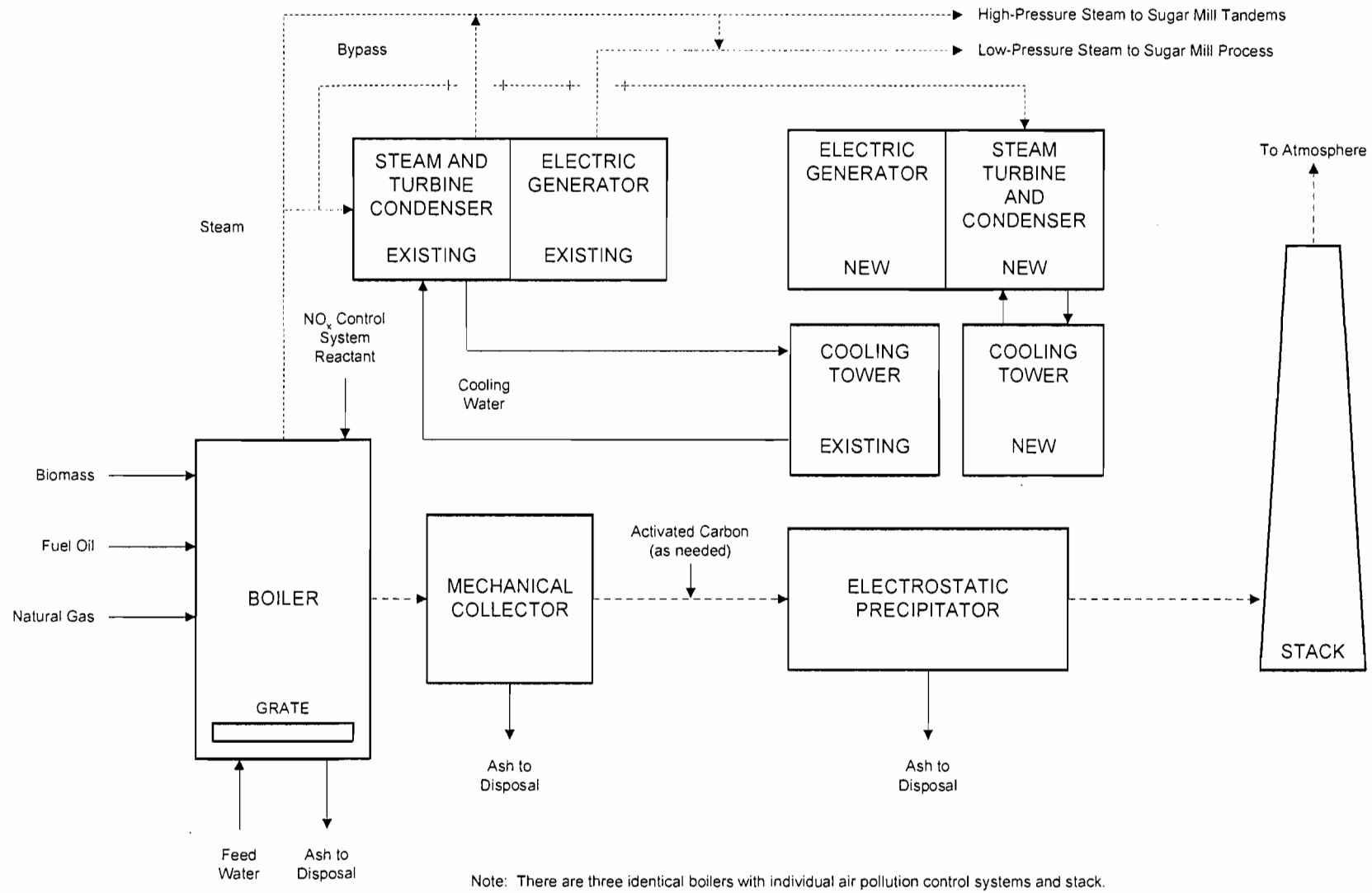


Figure 3.1-2
Simplified Flow Diagram
New Hope Power Partnership Cogeneration Facility
South Bay, FL

Process Flow Legend
Solid/Liquid ——→
Steam ·····→

Golder Associates

Figure 3.2-3a. NHPP Wood and Bagasse storage and handling.

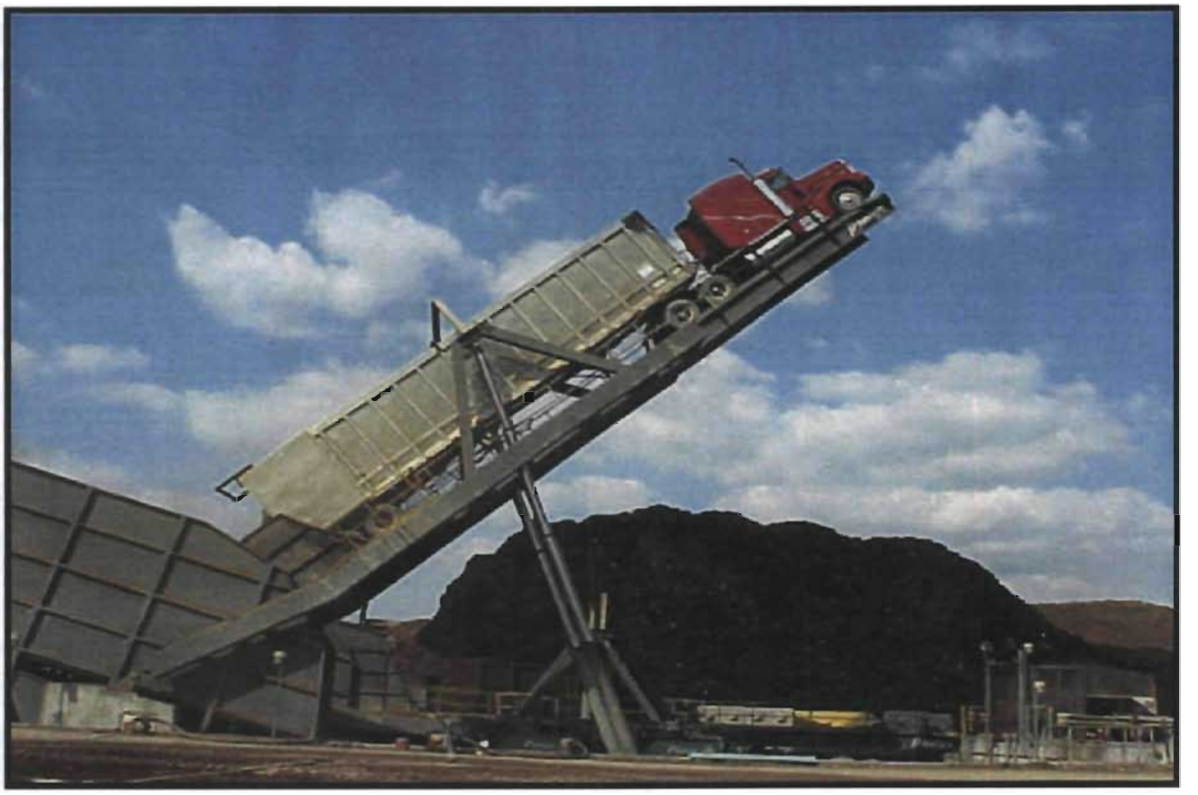


Figure 3.2-3b. NHPP Truck Delivery Area.

3.2-3c. NHPP Existing Biomass Boilers (view looking north).

Figure 3.2-3d. NHPP Existing Steam Turbine/Electric Generator.

Figure 3.2-3e. NHPP Boilers Electrostatic Precipitators (ESPs).

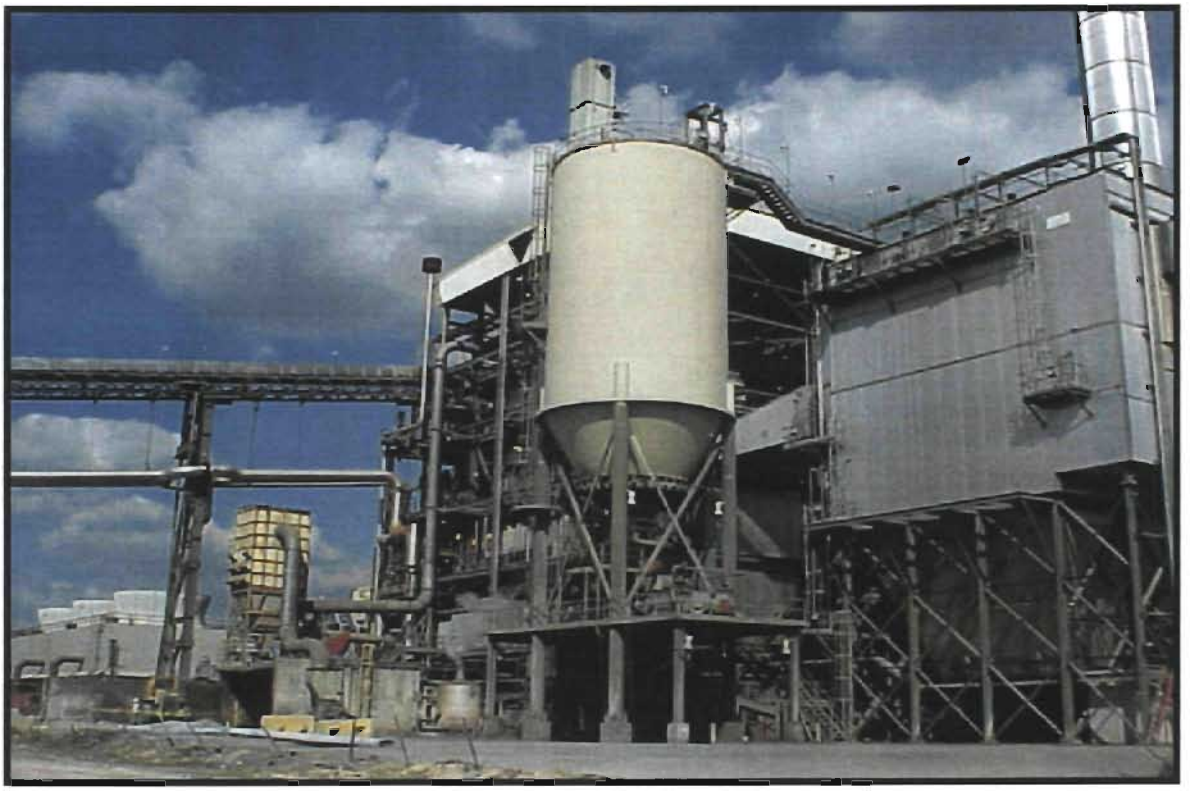
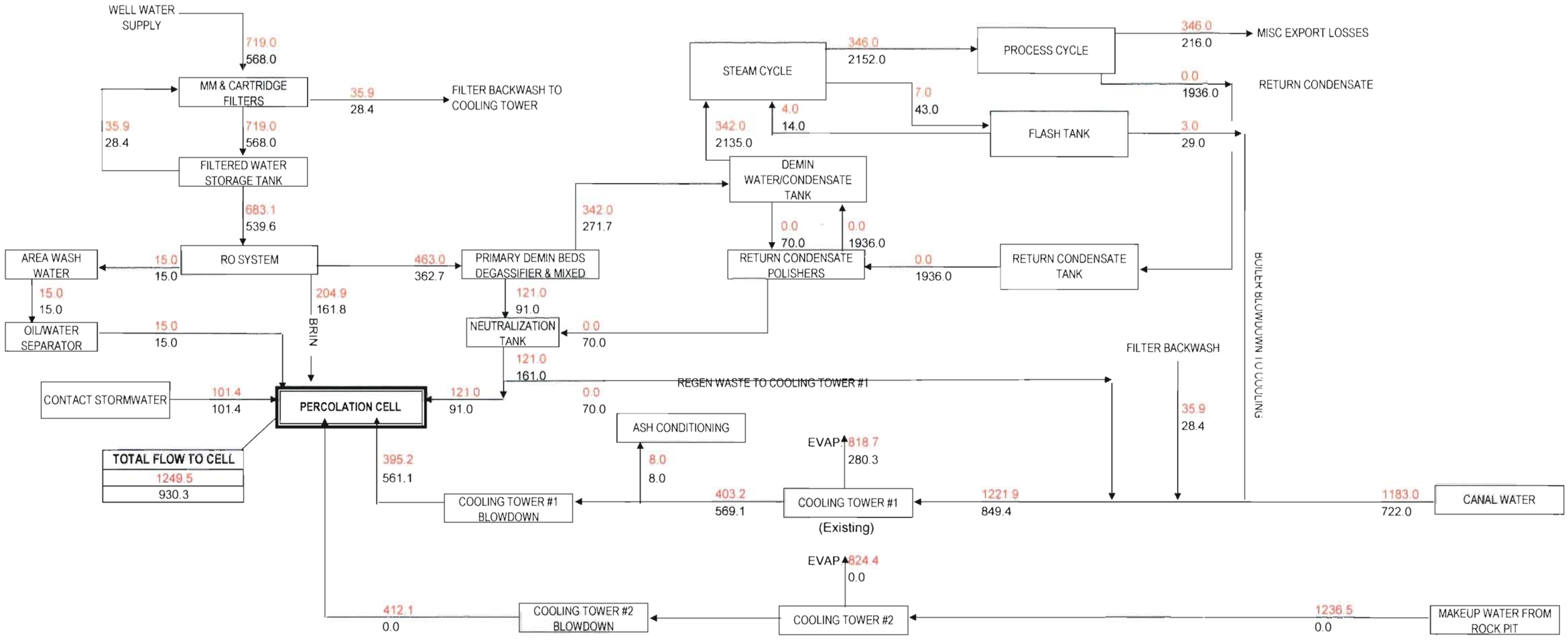


Figure 3.2-3f. NHPP Bottom Ash and Fly Ash Handling Area.



Note:
Flows are expressed in thousand gallons per day
Flow number on top are non-grinding season flows.
Flow number on bottom are grinding season flows.

Figure 3.5-1. NHPP Water Balance After Expansion Project

Source: Glenn A. Miller, P.E., 2003.

Golder Associates

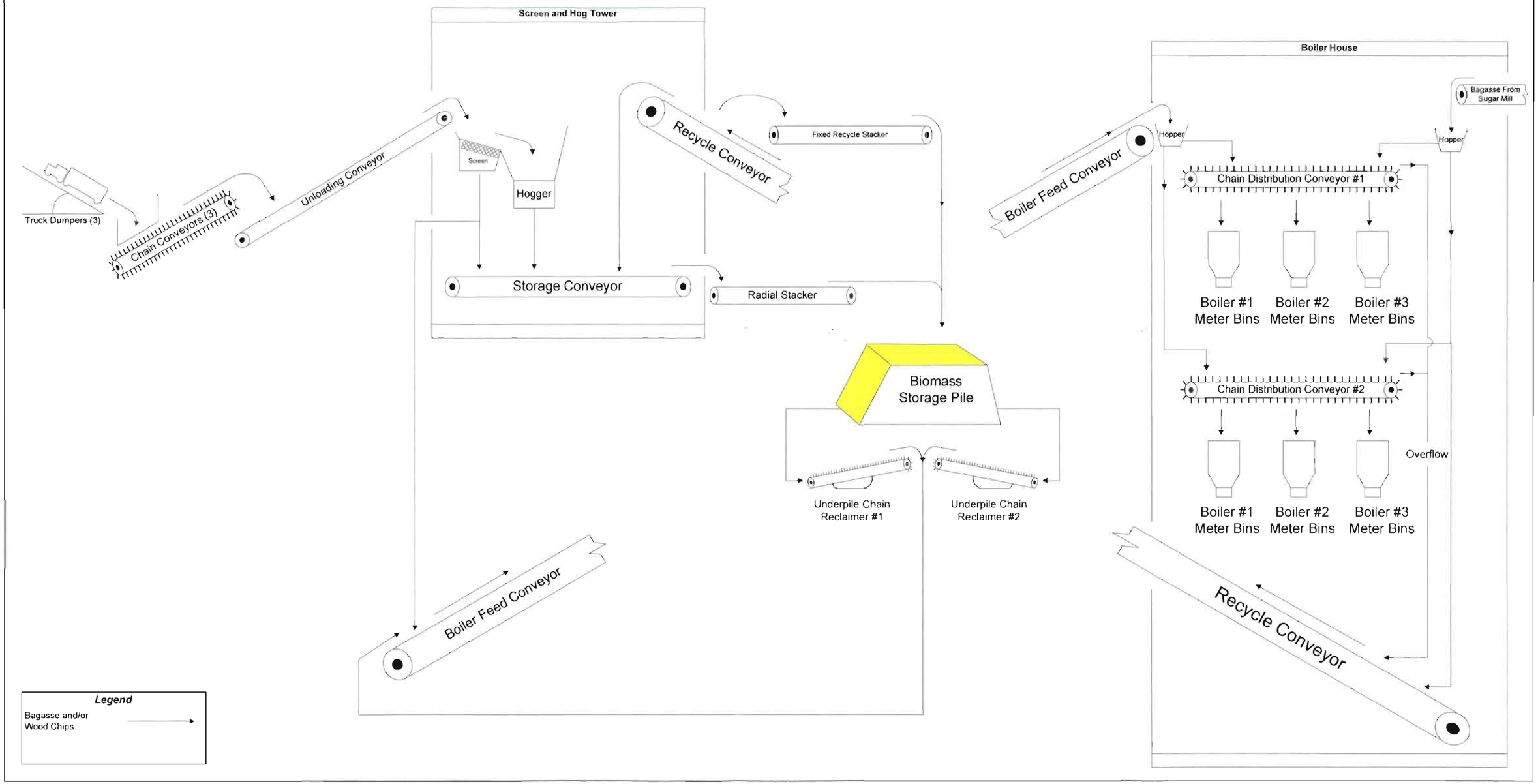


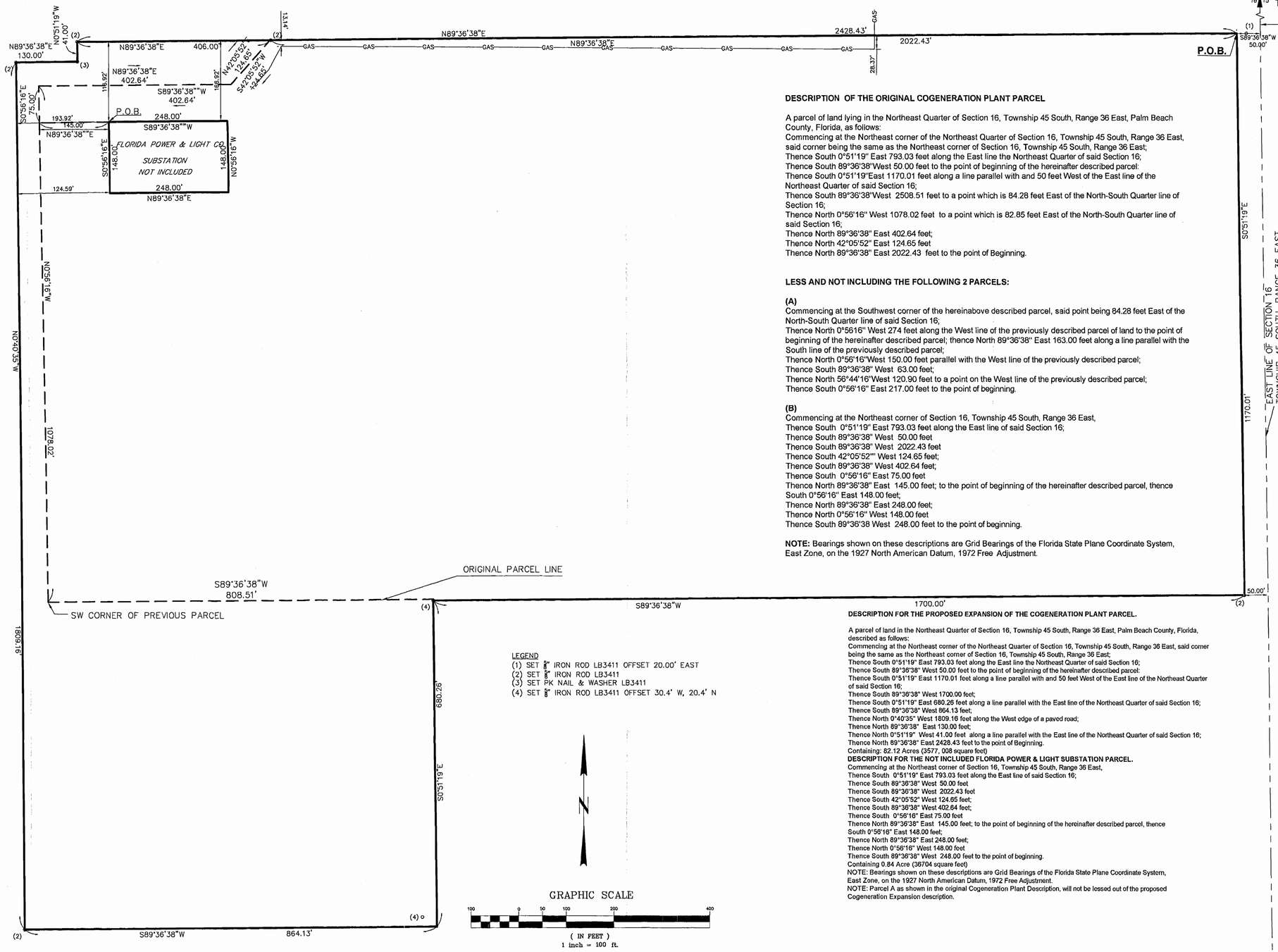
Figure 3.9-1. Materials Handling System

New Hope Power Partnership - South Bay, Florida

Golder Associates

0990332-017

(1)



LEGEND
(1) SET 5/8" IRON ROD LB3411 OFFSET 20.00' EAST
(2) SET 5/8" IRON ROD LB3411
(3) SET PK NAIL & WASHER LB3411
(4) SET 5/8" IRON ROD LB3411 OFFSET 30.4' W, 20.4' N

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

DESCRIPTION OF THE ORIGINAL COGENERATION PLANT PARCEL

A parcel of land lying in the Northeast Quarter of Section 16, Township 45 South, Range 36 East, Palm Beach County, Florida, as follows:
Commencing at the Northeast corner of the Northeast Quarter of Section 16, Township 45 South, Range 36 East, said corner being the same as the Northeast corner of Section 16, Township 45 South, Range 36 East;
Thence South 0°51'19" East 793.03 feet along the East line the Northeast Quarter of said Section 16;
Thence South 89°36'38"West 50.00 feet to the point of beginning of the hereinafter described parcel:
Thence South 0°51'19"East 1170.01 feet along a line parallel with and 50 feet West of the East line of the Northeast Quarter of said Section 16;
Thence South 89°36'38"West 2508.51 feet to a point which is 84.28 feet East of the North-South Quarter line of Section 16;
Thence North 0°56'16" West 1078.02 feet to a point which is 82.85 feet East of the North-South Quarter line of said Section 16;
Thence North 89°36'38" East 402.64 feet;
Thence North 42°05'52" East 124.65 feet
Thence North 89°36'38" East 2022.43 feet to the point of Beginning.

LESS AND NOT INCLUDING THE FOLLOWING 2 PARCELS:

(A)
Commencing at the Southwest corner of the hereinabove described parcel, said point being 84.28 feet East of the North-South Quarter line of said Section 16;
Thence North 0°5616" West 274 feet along the West line of the previously described parcel of land to the point of beginning of the hereinafter described parcel; thence North 89°36'38" East 163.00 feet along a line parallel with the South line of the previously described parcel;
Thence North 0°56'16"West 150.00 feet parallel with the West line of the previously described parcel;
Thence South 89°36'38" West 63.00 feet;
Thence North 56°44'16"West 120.90 feet to a point on the West line of the previously described parcel;
Thence South 0°56'16" East 217.00 feet to the point of beginning.

(B)
Commencing at the Northeast corner of Section 16, Township 45 South, Range 36 East,
Thence South 0°51'19" East 793.03 feet along the East line of said Section 16;
Thence South 89°36'38" West 50.00 feet
Thence South 89°36'38" West 2022.43 feet
Thence South 42°05'52"" West 124.65 feet;
Thence South 89°36'38" West 402.64 feet;
Thence South 0°56'16" East 75.00 feet
Thence North 89°36'38" East 145.00 feet; to the point of beginning of the hereinafter described parcel, thence South 0°56'16" East 148.00 feet;
Thence North 89°36'38" East 248.00 feet;
Thence North 0°56'16" West 148.00 feet
Thence South 89°36'38 West 248.00 feet to the point of beginning.

NOTE: Bearings shown on these descriptions are Grid Bearings of the Florida State Plane Coordinate System, East Zone, on the 1927 North American Datum, 1972 Free Adjustment.

DESCRIPTION FOR THE PROPOSED EXPANSION OF THE COGENERATION PLANT PARCEL.

A parcel of land in the Northeast Quarter of Section 16, Township 45 South, Range 36 East, Palm Beach County, Florida, described as follows:
Commencing at the Northeast corner of the Northeast Quarter of Section 16, Township 45 South, Range 36 East, said corner being the same as the Northeast corner of Section 16, Township 45 South, Range 36 East;
Thence South 0°51'19" East 793.03 feet along the East line the Northeast Quarter of said Section 16;
Thence South 89°38'38" West 50.00 feet to the point of beginning of the hereinafter described parcel:
Thence South 0°51'19" East 1170.01 feet along a line parallel with and 50 feet West of the East line of the Northeast Quarter of said Section 16;
Thence South 89°36'38" West 1700.00 feet;
Thence South 0°51'19" East 680.26 feet along a line parallel with the East line of the Northeast Quarter of said Section 16;
Thence South 89°36'38" West 864.13 feet;
Thence North 0°40'35" West 1809.16 feet along the West edge of a paved road;
Thence North 89°36'38" East 130.00 feet;
Thence North 0°51'19" West 41.00 feet along a line parallel with the East line of the Northeast Quarter of said Section 16;
Thence North 89°36'38" East 2428.43 feet to the point of Beginning.
Containing: 82.12 Acres (3577, 008 square feet)

DESCRIPTION FOR THE NOT INCLUDED FLORIDA POWER & LIGHT SUBSTATION PARCEL.
Commencing at the Northeast corner of Section 16, Township 45 South, Range 36 East,
Thence South 0°51'19" East 793.03 feet along the East line of said Section 16;
Thence South 89°36'38" West 50.00 feet
Thence South 89°36'38" West 2022.43 feet
Thence South 42°05'52" West 124.65 feet;
Thence South 89°36'38" West 402.64 feet;
Thence South 0°56'16" East 75.00 feet
Thence North 89°36'38" East 145.00 feet; to the point of beginning of the hereinafter described parcel, thence South 0°56'16" East 148.00 feet;
Thence North 89°36'38" East 248.00 feet;
Thence North 0°56'16" West 148.00 feet
Thence South 89°36'38" West 248.00 feet to the point of beginning.
Containing 0.84 Acre (36704 square feet)
NOTE: Bearings shown on these descriptions are Grid Bearings of the Florida State Plane Coordinate System, East Zone, on the 1927 North American Datum, 1972 Free Adjustment.
NOTE: Parcel A as shown in the original Cogeneration Plant Description, will not be lessed out of the proposed Cogeneration Expansion description.

ABBREVIATIONS:
(c) indicates computed quantity
(cl) indicates closure
(d) indicates description
(m) indicates measured quantity
(p) indicates plat
C/L indicates centerline
R/W indicates right-of-way
T indicates Township
R indicates Range
O.R.B. indicates Official Record Book
P.O.B.indicates point of beginning
P.O.C. indicates point of commencement
—P— indicates power line
—T— indicates telephone line

CURVE DATA
R indicates radius
T indicates tangent
C indicates chord
L indicates arc length
Δ indicates central angle

CERTIFICATION
(Unless it bears the signature and the original raised seal of a Florida licensed Surveyor and Mapper, this drawing is for informational purposes only and is not valid.)
I HEREBY CERTIFY that the property shown and described hereon was surveyed under my direction on August 18, 2003,as indicated on this plat.
I FURTHER CERTIFY that this survey meets the Minimum Technical Standards set forth by the Florida Board of Professional Surveyors and Mappers pursuant to Chapter 472.027 Florida Statutes and Chapter 61G17-6 Florida Administrative Code.

Fernando Gonzalez, P.S.M.
Florida License No. 4994

PAG SURVEYORS, INC. L.B. 3411
1016 SOUTHEAST 4TH STREET
BELLE GLADE, FL 33430-4330 PHONE (561) 996-6615

SEAL

DATE	8-18-03
SCALE	1"=100'
DRAWN	SB
FB No.	45-36-20
CHECKED	PAG

NO.	REVISIONS	BY	DATE

FIGURE 3.2-1. NHPP SITE BOUNDARY

NEW HOPE POWER PARTNERSHIP
P.O. BOX 9
PALM BEACH COUNTY, SOUTH BAY, FL 33493 FLORIDA

SHEET NO. 1 OF 1
WORK ORDER NO. 03-3-182

0337594\4\4.2\4.2.1\Figures\SiteSurveyDwgs

0990332-017 (2)

New Equipment

E19982.36
N11077.88

N11173.11

E21666.97
N11181.25

N11182.61

P.O.C.
NE CORNER OF SECTION 16,
T 45 S, R 36 E

PROPERTY LINE

N89°36'38"E 1300.00'

N89°36'38"E 406.00'

S0°51'19"E 793.03'

S89°36'38"W 50.00'

P.O.B.

N89°36'38"E 402.64'

S89°36'38""W 402.64'

E20376.60
N11004.64

STORM WATER DETENTION BASIN NO. 1

2428.43'

2022.43'

28.37'

S0°56'16"E 75.00'

93.92'

145.00'

N89°36'38""E

P.O.B.
248.00'
S89°36'38""W

FLORIDA POWER & LIGHT CO.
SUBSTATION
SUBSTATION
NOT INCLUDED

148.00'

N0°56'16"W

S0°56'16"E 146.00'

248.00'
N89°36'38"E

E20379.00
N10857.58

E22490.99
N11186.85

ELECT. RELAY & STATION BATTERY

STEP-UP TRANSF

4160V SWGR

124.60'

AUX. TRANSF

BUS DUCT

T-G 2

T-G 1

PIPE RACK

CONVEY LINE

N0°56'16"W 150.00'

E19991.98
N10573.03

E19991.98
N10491.44

E20093.08
N10425.13

E19995.53
N10274.47

E20156.08
N10425.56

E20158.53
N10275.58

BIOMASS PILE

STORM WATER DETENTION BASIN NO. 2

BAGASSE PILE

ORIGINAL PARCEL LINE

S89°36'38"W 808.51'

PROPERTY LINE

S89°36'38"W 1700.00'

SW CORNER OF PREVIOUS PARCEL

E738689.90
N811820.76
(FLORIDA STATE GRID REF)
E20000.00
N10000.00
(PLANT GRID REF)

1680.26'

S0°51'19"E 1170.01'

EAST LINE OF SECTION 16
TOWNSHIP 45 SOUTH, RANGE 36 EAST

E22507.70
N10067.05

E22508.45
N10017.05

E22513.18
N9699.98

THIS SITE PLAN WAS FURNISHED BY NEW HOPE POWER PARTNERSHIP

LEGEND
- INDICATES NEW PROPERTY LINE
- INDICATES OLD PROPERTY LINE
- INDICATES PROPOSED IMPROVEMENTS

N

GRAPHIC SCALE
100 0 50 100 200 400
(IN FEET)
1 inch = 100 ft.

PAG SURVEYORS, INC. L.B. 3411
1016 SOUTHEAST 4TH STREET
BELLE GLADE, FL 33430-4330 PHONE (561) 996-6615

SEAL

DATE	8-18-03				
SCALE	1"=100'				
DRAWN	SB				
FB No.					
CHECKED	PAG	NO.	REVISIONS	BY	DATE

FIGURE 3.2-2. PLOT PLAN OF NHPP SITE SHOWING PROJECT

NEW HOPE POWER PARTNERSHIP
P.O. BOX 9
SOUTH BAY, FL 33493

PALM BEACH COUNTY, FLORIDA

SHEET NO. 1 OF 1
WORK ORDER NO. 03-3-182

0337594\4\4.2\4.2.1\Figures\SiteSurveyDwgs

4.0 ENVIRONMENTAL EFFECTS OF SITE PREPARATION AND PLANT AND ASSOCIATED FACILITIES CONSTRUCTION

4.1 LAND IMPACTS

4.1.1 GENERAL CONSTRUCTION IMPACTS

Only a small portion of the 82-acre NHPP site will be affected by the construction of the Project. As described in Section 3.2, the NHPP site is comprised of about 82 acres of which only about 0.5 acre will be utilized for construction of the Project. The 0.5 acre will be associated with the additional steam turbine/electric generator, cooling tower, and electrical equipment. These area have been previously disturbed by development/operation activities. Construction laydown and parking areas will be onsite or located on previously disturbed areas of the adjacent Okeelanta Corporation sugar mill.

The areas that will be occupied by the Project have been previously cleared for existing NHPP Facility. The other areas affected by facilities construction require minimal clearing.

No explosives for blasting will be used during construction of the Project.

There will be no construction of new temporary or permanent roads that connect offsite or new onsite railroads. The existing plant entrance, located on US 27, will be used for Project construction traffic. Fugitive dust generation from traffic and/or excavations will be minimized through paving and/or the use of water sprinkling.

The existing grade is about 16.5 feet above mean sea level (ft-msl) in the Project area.

Excavation of soils in the areas where the steam turbine/electric generator and cooling tower will be located will be required. The removed material will be replaced, as necessary, by structural fill.

Foundations required to support heavy loads, such as the steam turbine/electric generator, will be supported by spread foundations, which were used successfully to support the existing power plant and ancillary facilities. In some instances, excavation could reach 5 feet below land surface (ft-bls).

Dewatering will only be required to remove standing water from excavated areas prior to placing structural fill. Any excess water will be routed to the percolation pond system. No offsite impacts to groundwater will occur (see Section 4.3).

Solid waste materials will be disposed of in accordance with applicable rules and regulations. Construction and demolition wastes, such as scrap wood and metal, will be transferred to a specified storage area on the site where they will be separated and stockpiled for salvage. General waste materials (i.e., typical of municipal solid wastes) will be collected in appropriate waste collection containers for disposal at an approved offsite location.

During construction, the construction labor force will use portable chemical toilets. All sanitary sewage will be pumped from the portable toilets as needed and transported to an approved disposal facility by a licensed contractor.

Potable water for consumption during construction will be obtained from bottled water.

Waste oil from construction vehicles and equipment will be collected in appropriate containers and transported offsite for recycling or disposal at an approved facility. The disposal facility will be permitted for commercial recycling or disposal of waste oils.

Individual contractors will be responsible for handling any hazardous materials required to perform their tasks and any resulting hazardous wastes. This responsibility includes the proper transportation, storage, handling, and offsite disposal of such wastes.

Onsite construction activities are scheduled to begin in the summer of 2005 and projected in-service date of the project is May 31, 2006. The peak employment will be about 125 construction workers. Construction employment will average about 70 workers during the construction period.

4.1.2 ROADS

Construction traffic will use US 27 and the main plant entrance road, which is an asphalt-paved road. A separate onsite road connected to the main plant entrance road will direct construction traffic to either the construction parking or to the laydown areas.

4.1.3 FLOOD ZONES

Based on the flood zones delineated by the FEMA, the entire proposed Project area is outside the 100-year flood zone. All proposed permanent facilities have been designed and located so that no adverse impacts on the 100-year flood elevations or flood flows are expected. The Project will not adversely impact adjacent surface water 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 Project area reflect past and present power plant related activities. The existing grade of the Project area is approximately 16.5 ft-msl. Several areas will be excavated to remove material unsuitable for foundations. A maximum of about 4,000 cubic yards (yd^3) will be removed from the area, and the area will be filled with structural fill (e.g., crushed limestone and/or rock) to raise the elevation to approximately 16.5 ft-msl at the highest point.

Construction related changes in site topography will not have any adverse effect on aesthetics. Since the elevations will not change after construction, no topographical changes will be observable from offsite locations.

No adverse impact is anticipated to soil stability or bearing strength because the foundations will be supported by spread footings; therefore, overall settling of the land area will be negligible. Sinkhole formation will not be enhanced as a result of construction.

The areas affected by construction do not include any areas designated as Prime and Unique Farmland.

Construction activities will slightly alter runoff in several parts of the site; however, no adverse effects are anticipated from this alteration (see Subsection 4.2.1.1).

Groundwater levels will not be affected by modifications to soil percolation from construction activities at the site due to the proximity of surface water and the interconnection between these surface water bodies and the surficial aquifer. Slight changes in percolation rates will have negligible impacts on water levels, because the surface infiltration affects only small localized areas of the existing Project area.

4.2 IMPACT ON SURFACE WATER BODIES AND USES

4.2.1 IMPACT ASSESSMENT

The surface waters near the Project area, which potentially could be affected by site preparation and construction activities, is an agricultural canal connected to the North New River Canal by a pump station.

4.2.1.1 Surficial Hydrology—Physical and Chemical Impacts

The primary potential impacts from site preparation and construction are erosion and sedimentation due to earthmoving and material placement associated with site preparation and plant construction. These impacts will be minimal given the small area where new equipment will be added (about 0.5 acre). Any potential impacts will be controlled and minimized through proper construction methods. Stormwater runoff from the Project area, not disturbed by construction activities, will continue to be directed to the existing drainage systems.

Erosion will be controlled by compaction of soils, construction of ditches and embankments, maintenance of relatively flat grades, and other appropriate erosion control techniques. Sedimentation will be controlled during construction by use of straw bales and other applicable devices, as appropriate.

Runoff from the construction laydown areas and parking will drain to existing retention areas. The existing stormwater systems have sufficient detention storage to hold the entire storm volumes from the runoff created on these areas.

Based on the limited discharge quantity and treated nature of runoff to surface water bodies associated with construction activities, adverse impacts to surface waters are anticipated to be negligible.

Dewatering required for the construction will be isolated in area and extent. Any dewatering releases will be excess rainwater in excavated areas prior to placing structural fill. The water quality of any dewatering release to the percolation pond system will essentially be identical to the groundwater and canal systems.

The potential for spillage of chemicals or oil and grease will be mitigated through proper handling and disposal practices. Construction contractors will be required to implement practices (e.g., designating specific areas for fueling and maintenance) to minimize any spills. These areas will be located so that any spills, if they do occur, will not be adjacent to any surface waters. If any spills occur, immediate cleanup will be performed with ultimate disposal in an approved facility. When appropriate, such materials will be handled as described in the existing Spill Prevention Control and Countermeasure (SPCC) plan.

4.2.1.2 Aquatic Systems

As described in Section 4.2.1.1, the potential for impacts to aquatic systems will be minimized through the use of appropriate construction techniques to control erosion, sedimentation, and surface runoff. No construction is proposed in surface waters of the state, including wetlands.

4.2.2 MEASURING AND MONITORING PROGRAMS

No surface water monitoring is proposed as part of the construction of the Project because no surface water discharges will occur.

4.3 GROUNDWATER IMPACTS

4.3.1 PHYSICAL AND CHEMICAL IMPACTS

Activities associated with site preparation and construction are not expected to produce any significant changes to groundwater quality, quantity, or levels in the site vicinity. Dewatering associated with construction will be limited to those excavated areas where excess rainfall may occur. The areas excavated will be small (no more than 0.5 acre). Structural fill will be placed in these excavated areas within a few weeks or less, resulting in only small amounts of water that will have to be diverted to the stormwater system. No adverse impacts to groundwater resources from dewatering activities are anticipated.

Construction workers will require an average of approximately 70 GPD of potable water, which will come from bottled water.

As discussed in Section 4.2.1.1, construction contractors will be required to implement practices to minimize spills. Maintenance and refueling will be performed only in designated areas. Any spills will be cleaned up promptly, and the waste materials will be disposed of properly.

4.3.2 MEASURING AND MONITORING PROGRAM

No groundwater monitoring is proposed as part of the construction of the Project because any dewatering activities will be minimal.

4.4 ECOLOGICAL IMPACTS

4.4.1 IMPACT ASSESSMENT

4.4.1.1 Terrestrial Systems

The Project area comprises approximately 0.5 acre, which has been affected by previous activities at the NHPP site. The new steam turbine/electric generator and cooling tower will occupy open area to the west of the existing boilers and steam turbine. This area has been surfaced with gravel and limerock. The construction laydown and parking areas will be located in areas already surfaced with limerock. All these areas have been cleared and maintained as a result of previous activities. The construction activities in these areas will not cause significant adverse ecological impacts. These terrestrial systems are highly altered systems either maintained as grassy or cultivated areas.

These altered terrestrial systems (see Section 2.3.6, Pre-Existing Stress, Terrestrial Systems) do not contain unique wildlife species and are not considered important wildlife habitats because of their disturbed nature. No significant adverse impacts to wildlife resources in the areas will occur as a result of construction in these areas.

Construction activities will not alter hydrologic surface water flows to any wetlands.

No significant impacts to federally or state listed terrestrial plants and animals are expected.

Fugitive dust generated by construction activities will be minimized through reasonable precautions. Any localized fugitive dust will not adversely affect the terrestrial systems surrounding the site.

Noise (including other human disturbance from construction activities) will not affect wildlife in the vicinity of the site. Presently, the site has noise associated with operation of the existing Facility, and wildlife that occurs in the site vicinity is acclimated to such activities.

4.4.1.2 Aquatic Systems

Based on the limited areas affected by construction and the measures to mitigate impacts of runoff, no adverse impacts to aquatic ecological systems resulting from construction-phase activities are anticipated. Erosion, sedimentation, and runoff control measures will mitigate the potential for water quality degradation; therefore, associated impacts to aquatic biological communities are not expected.

4.4.2 MEASURING AND MONITORING PROGRAMS

4.4.2.1 Terrestrial Systems

No monitoring programs will be undertaken because no important terrestrial systems will be affected by construction activities proposed for the site. No wetland impacts are expected as a result of construction activities.

4.4.2.2 Aquatic Systems

No fish or benthic invertebrates are expected to be affected by construction activities.

4.5 AIR IMPACTS

4.5.1 AIR EMISSIONS

Construction activities will result in the generation of small amounts of fugitive PM emissions and vehicle exhaust emissions. Fugitive PM emissions will result primarily from vehicular travel over paved and unpaved roads. Vehicular traffic will include heavy-equipment traffic and traffic due to construction workers entering and leaving the NHPP site. Construction personnel and equipment will enter the site over surfaced roadways. Exposed land areas may also generate fugitive dust due to wind erosion.

Emissions of fugitive PM from these activities are extremely difficult to quantify because of their variable nature. They can only be roughly estimated since emissions are dependent upon a number of factors, including specific activities conducted, level of activity, meteorological conditions, and control measures used.

During the 1-year construction period, the maximum PM_{10} emissions are estimated to average about 0.3 ton. An emission rate of 0.3 tons per year (TPY) of PM_{10} is much less than the PSD significant

emission rate of 15 TPY. As a result, the estimated fugitive emissions are not expected to significantly affect air quality outside the NHPP site boundary.

Emissions will also result from onsite construction equipment including cranes, trucks, compressors, etc., operating with diesel and gasoline engines. This equipment will produce emissions of CO, NO_x, VOC, PM, and SO_2. Exhaust emissions were estimated based on EPA emission factors (AP-42) for diesel engines. Based on these emission factors and number of vehicles, the CO, NO_x, VOC, PM, and SO_2 emissions are estimated to be 0.1, 0.5, 0.04, 0.4, and 0.3 TPY, respectively, over the 1-year construction period. These levels of emissions will not cause significant impacts to air quality in the vicinity of the NHPP site.

4.5.2 CONTROL MEASURES

A number of control measures will be implemented during the construction period to minimize air emissions and potential impacts. Clearing will be kept to a minimum due to the small areas impacted, thereby reducing air emissions due to wind erosion of exposed surfaces. Fugitive dust from highly traveled areas will be controlled by watering on an as-needed basis. The plant entrance road is currently paved, which minimizes dust emissions from vehicles entering the NHPP site.

4.6 IMPACT ON HUMAN POPULATIONS

4.6.1 TRANSPORTATION

The highway network will be temporarily impacted during the construction phase by construction-related traffic. The Project is expected to take about 1 year to complete and have an average construction employment of about 70 construction workers and management staff. During the peak month of construction, 125 construction employees are expected to be onsite during weekdays. All construction employees will use the main plant entrance, which currently has a full access opening to US 27.

Traffic associated with the construction of the Project represents a short-term use of Palm Beach County roadways. Construction workers and truck deliveries of equipment, materials and supplies will result in an increase in trip generation. A worst-case estimate of construction worker and truck traffic indicates that up to 135 trips could be expected in the peak hour. These impacts were evaluated for the year 2005.

The year 2005 non-project background volumes were determined to be the 2002 non-project background volumes increased by means of a growth rate. A generalized growth rate of 3 percent per year was applied to the 2002 non-project volumes to derive future volumes.

Trips associated with the Project construction assumed trip distribution coming from and going to the north on US 27.

The year 2005 non-project background volumes and construction traffic volumes were combined to provide a projection of year 2005 total traffic. The total traffic volume on US 27 in the vicinity of the plant was analyzed to determine the anticipated operating conditions. Based on this analysis, the roadway segment is anticipated to operate acceptably during construction (LOS C or better).

Access to the NHPP site is currently provided through a paved, 2-lane access road connected to US 27. No change in access is proposed. No permanent or temporary capacity-enhancing improvements to US 27 are necessary to accommodate the total traffic conditions associated with the average peak construction employment.

4.6.2 CONSTRUCTION NOISE IMPACTS

The impacts of construction-period noise on human populations are dependent upon the proximity of residences to the construction activities and the type and extent of noise sources. The nearest residence (i.e., critical receptor) to the construction area is located approximately 19,000 ft (about 3.6 miles) northeast of the NHPP site. The closest community is South Bay, which is located about 31,000 ft (about 6 miles) north-northeast of the NHPP site.

The Project construction will require installation of foundations and erection of major components of the steam turbine/electric generator and cooling tower. The use of construction equipment, such as cranes, bulldozers, graders, front-end loaders, and air compressors will likely be required. These sources have maximum sound pressure levels ranging from about 70 to 90 dBA (measured at a distance of 50 ft). Additionally, during final commissioning of the steam turbine, steam is used for cleaning and is referred to as "steam blows". These steam blows are of short duration with elevated sound levels.

Various types of construction equipment could be used during the construction of the Project. For the purpose of the construction noise impact analyses, five pieces of construction equipment were assumed to operate simultaneously at peak power with sound pressure levels between 84 and 87 dBA at a distance of 50 ft. These sound levels were obtained from *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliance* (EPA, 1971). It is unlikely that all the equipment would be operating simultaneously and continuously, and, therefore, this impact assessment is conservative. Only spherical spreading of the sound was assumed in the calculations.

The maximum calculated sound pressure levels are 42 and 37 dBA at the nearest residence and at the nearest community (South Bay). To put these sound levels in perspective, living room TV is about 70 dBA, insect noise at night is 58 dBA and bird calls are 44 dBA.

These heavy construction activities are expected to occur during the daytime hours. Most of the heavy construction activities will likely occur during the first few months of construction. Mechanical and electrical installation activities, which may occur at night (i.e., between 9 p.m. and 7 a.m.) will not involve the use of heavy equipment. These nighttime construction activities will have minimal sound levels. In conclusion, sounds generated by construction activities will not produce sound pressure levels at residential locations that would interfere with activities or otherwise cause a nuisance.

4.6.3 CONSTRUCTION EMPLOYMENT

It is estimated that the workforce during the 12-month construction phase of the Project will average 70 persons, with a peak workforce of 125 persons. A majority of these construction workers will be skilled tradesmen (cement masons, laborers, millwrights, iron workers, pipe fitters, carpenters, electricians, plumbers, etc.). There will also be several management personnel. The average duration of any particular trade onsite during construction will be approximately 3 months. It is estimated that these workers will travel to the job site from outside the immediate area and from surrounding communities.

Traditional practice is that the construction workers will not bring their families with them if they seek temporary housing. Therefore, the local permanent population is not expected to increase significantly during the construction period, as a result of the Project. Since construction workers

typically do not bring their families for short-term construction assignments, minimal impacts on local schools and other local infrastructure is expected.

Over 32,000 construction workers reside within Palm Beach County (FSA, 2002). Since a more-than-adequate labor supply exists within commuting distance, it is anticipated that most workers will be hired from within the region with minimal relocation required. Consequently, construction should have a small effect on permanent housing within the region or locally.

With the exception of the minor use of transient accommodations and related potable water and sanitary sewer services, 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 that 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 community services and facilities due to the small number of potential employees that may relocate into the area.

4.7 IMPACTS ON LANDMARKS AND SENSITIVE AREAS

There are no landmarks or sensitive areas within 5 miles of the NHPP site (refer to Section 2.2.5). The Project construction will not cause any changes in air quality, sound level, water quality, or visual characteristics in such areas.

Given the relatively far distances from the Project to residences and communities, construction sounds are not expected to be heard at these locations. Near the site, construction sounds may be heard but are anticipated to be infrequent and of short duration. Visual impacts will be minor because most of the construction activity and new structures are visually shielded from the closest public viewpoint (US 27), which is more than a mile away.

No use-related impacts are anticipated at public recreational facilities because these areas are a considerable distance from the NHPP site.

4.8 IMPACT ON ARCHAEOLOGICAL AND HISTORIC SITES

Based on an earlier evaluation of the NHPP site, the Florida Department of State, Division of Historical Resources determined that no significant archaeological or historical sites are recorded or likely to be present within the area evaluated (see Section 2.2.6). As a result, no construction impacts on historic properties listed, or eligible for listing, in the *National Register of Historic Places,* or otherwise of historical or archaeological value, are anticipated.

4.9 SPECIAL FEATURES

There will be no unusual products, raw materials, solid water disposal, incinerator effluents, or residues produced during construction of the Project that will have an influence on the environment or ecological systems of the Project area or adjacent areas.

4.10 BENEFITS OF CONSTRUCTION

The construction phase of the Project will contribute both short- and long-term economic benefits to the surrounding area. Construction benefits will include construction employment that will average about 70 over the 1-year construction period. Construction wages will increase the demand for goods and services in the area. Direct purchases of construction materials will have both direct and indirect economic benefits. This includes materials and services required as a direct result of construction activities. This includes construction materials (e.g., concrete and steel for foundations), rental equipment (e.g., construction cranes), food services, and transportation services. These economic benefits are discussed in Section 7.0, Economic and Social Effects of Plant Construction and Operation.

4.11 VARIANCES

No variances from applicable standards due to the construction of the Project are being sought as part of this SCA.

5.0 EFFECTS OF PLANT OPERATION

5.1 EFFECTS OF THE OPERATION OF THE HEAT DISSIPATION SYSTEM

Heat is a necessary by-product of the generation of electricity. While significant portion of the thermal energy produced from the fuel is converted to electrical energy by the turbine generators and the steam generators, a portion is absorbed by cooling water flowing through the condenser heat exchangers. The heat from steam generation is absorbed by the condenser cooling water and is dissipated to the atmosphere as the water is circulated through the cooling towers. The heat removal rate from the cooling towers is a function of the local climatic conditions and the heat load.

5.1.1 TEMPERATURE EFFECT ON RECEIVING BODY OF WATER

There are presently no surface water discharge of cooling water associated with the NHPP Facility. No discharges will occur with the Project. Therefore, there are no thermal impacts on any surface water body from the operations of the existing NHPP Facility, and no change is expected as a consequence of the Project.

5.1.2 EFFECTS ON AQUATIC LIFE

There will be no adverse impacts to aquatic life in waters of the state as a result of the NHPP Facility operations because there will be no surface water discharge of cooling water. Cooling water makeup comes from agricultural canals that are isolated from natural aquatic systems by pumping stations. No adverse impacts due to cooling water use will therefore occur.

5.1.3 BIOLOGICAL EFFECTS OF MODIFIED CIRCULATION

No detrimental effects on aquatic life in the waters of the state are expected to result from the Project or operation of the expanded NHPP Facility. The existing intake structures within agricultural canals will be used. Historically, operation of the pumping stations has caused no notable entrainment or impingement incidents of biota at the intake structures. Since withdrawals for the NHPP Facility will not exceed the allowable or designed pumping rates, no adverse impacts to the aquatic communities from impingement and entrainment are anticipated.

5.1.4 EFFECTS OF OFFSTREAM COOLING

The potential impacts of the proposed new mechanical draft cooling tower were addressed by performing plume dispersion analyses that predicted impacts with respect to:

- Plume Length,
- Plume Height,
- Plume Shadowing,
- Plume Fogging,
- Plume Icing, and
- Salt [from total dissolved solids (TDS)] Deposition.

Assessments of maximum seasonal and annual cooling tower impacts of potential plume-induced visibility effects, fogging and icing, and deposition of drift were predicted with the cooling tower impact model (SACTI), which was developed through the Electric Power Research Institute (EPRI, 1984). Standard hourly meteorological data of surface weather observations and coincident twice-daily mixing height data are used in the analysis and processed with cooling tower data (e.g., tower size, height, latitude/longitude) by a preprocessor program. The output meteorological record is used by the SACTI model to predict the increase in annual frequencies of meteorological events due to a particular cooling tower's design and configuration. Icing and fogging frequencies at a particular location are based on the prediction of the cooling tower's visible plume length under various ambient meteorological conditions. The impacts of the visible plumes are evaluated in the model through use of physical plume dispersion in conjunction with an algorithm to take into account the thermodynamic interactions of the plume as well as any potential wake effects. The SACTI model can also determine the potential drift and deposition frequencies by wind direction and distance category for a cooling tower.

The drift emissions from the new cooling tower were based on the maximum concentration of TDS in the circulating water. The maximum concentrations were based on an average TDS of 4,000 ppm based on data for 2001 and 2002.

Hourly surface meteorological data and twice-daily mixing height data from the West Palm Beach International Airport for the years 1987 through 1991 were used. This 5-year record coincides with the meteorological data used for other air impact analyses. Long-term monthly clearness indices and daily solar insulation values were also used.

Annual and seasonal impacts were predicted. The seasonal results are for winter (December, January, and February), spring (March, April, and May), summer (June, July, and August), and fall (September, October, and November).

The SACTI model calculations used a polar coordinate receptor grid system centered on the new cooling tower. Receptors were placed surrounding the source at 22.5-degree intervals and at varying distance intervals. For the drift deposition and plume length computations, 100-m intervals out to 10,000 m were used; for plume fogging and icing computations, 100-m intervals out to 1,600 m were used; for plume height, 10-m intervals up to 1,000 m were used; and for plume shadowing, 200-m intervals out to 8,000 m were used.

To estimate potential impacts conservatively, it was assumed that the new cooling tower operated year-round at maximum heat rejection. This would produce conservative estimates of plume length, fogging, icing, plume shadowing, and salt deposition.

5.1.4.1 Cooling Tower Visibility

The visible plume from a cooling tower is a result of the mixing of the saturated exhausts from the cooling tower with the ambient air, and the resultant mixture is beyond the air's ability to accommodate the entrained moisture as a gas. At this point, the moisture in the mixture condenses and forms a visible water vapor plume. The ability for air to accommodate water as a gas depends on the temperature. For example, at an ambient temperature of 90°F, the air is capable of accommodating almost 6 times more water vapor (as mass) than at 40°F. With wet cooling towers, plumes are typically more visible and at greater plume lengths during the winter months than during the summer.

The frequencies of visible plume length, height, and shadowing, and hours of fogging resulting from the new mechanical draft cooling tower are summarized in Table 5.1-1 for each season and annually. The table presents results for various increasing distances from the towers. The results indicate that the predicted frequency of an elevated visible plume is about the same during the winter as in the summer.

A maximum plume length of 300 m or less is predicted to occur about 7.9 percent of the time during the winter and about 4.8 percent during the summer, with an annual frequency of about 5.9 percent.

Plume lengths of 400 m and greater are predicted to occur less than 1.5 percent of the time on an annual basis.

The frequency for the heights of visible plumes is shown in Table 5.1-1. Plume heights during the winter are 50 m and less, about 21.7 percent of the time, Plume heights of 50 m and less occur about 14.1 percent of the time in the summer. Plume heights of 50 m and more were predicted to occur about 17 percent of the time on an annual basis. Plume heights of greater than 70 m (150 ft) were predicted to occur only about 2.6 percent of the time on an annual basis.

Plume shadowing was estimated to decrease significantly with increasing distance from the cooling tower. At 600 m (1,970 ft) from the tower and beyond, the annual average number of hours of plume shadowing in any direction is estimated to be less than 9.1 hours per year. Plume shadowing is the best indicator of a highly visible plume since it the indicator of a distinct shadow. As shown in the Table 5.1-1, this effect occurs primarily close to the cooling tower (i.e., <200 m from the tower).

The nearest public highway to the NHPP site is US 27, which runs in a north-south direction approximately 2.3 miles (3.7 km) to the east of the new cooling tower center. Ground level fogging on US 27 is not predicted to occur during plume fogging conditions for the tower. The total hours per year of induced fogging surrounding the cooling tower is estimated to be about 6.5 hours.

Rime icing is not predicted to occur from cooling tower drift.

5.1.4.2 Cooling Tower Deposition

Potential impacts to vegetation and soils may result from deposition of cooling tower drift. A majority of available research on the impacts of deposition from cooling towers is from the use of makeup water that contains appreciable quantities of salt [i.e., sodium (Na^+) and chloride (Cl^-)]. Several plant species are considered to have very low resistance to salt. These species are flowering dogwood (*Cornus florida*), American sycamore (*Platanus occidentalis*), sassafras (*Sassafras albidum*), and arrowwood (*Viburnum dentatum*). Several studies have been conducted with dogwood because it is a reliable bioindicator of salt damage. The leaf injury threshold of dogwood has been calculated to be 750 kilograms per square kilometer per month (kg/km^2-mo) (Curtis *et al.*, 1976), 517 kg/km^2-mo (Davis, 1979), and 375 kg/km^2-mo (Freudenthal and Beals, 1978). In addition to flowering dogwood, Townsend (1980) found that American sycamore was equally sensitive to

sodium chloride. McCune *et al.* (1977) found that white ash was more susceptible than dogwood to saline cooling tower drift.

Environmental factors other than salt drift concentration can affect species response to cooling tower drift. Grattan *et al.* (1981) reported that a low relative humidity increased the tolerance of pepper, soybean, and tomato plants to Na^+ and Cl^- uptake. No injury symptoms were apparent on any species at any salt deposition level when relative humidity was maintained at approximately 70 percent; however, in the presence of dew or 100-percent relative humidity, plant injury was linearly related to the amount of salt deposition on leaves.

Temperature influences ion absorption rates, with absorption rates decreasing as temperature decreases (Smith and Robinson, 1971). Rainfall amounts also influence symptomatic response of plants to salt drift. Mulchi and Armbruster (1981) observed that above-normal amounts of rainfall delayed the onset of foliar symptoms, whereas below normal amounts of rainfall tended to promote the onset of symptoms and to enhance the magnitude of symptom expression for both corn and soybeans.

Susceptibility to foliar injury from saline aerosols also varies with the developmental stage of the leaf. McCune *et al.* (1977) found that younger leaves of deciduous woody species were more sensitive to saline aerosols than older leaves, whereas year-old needles of conifers were more susceptible to saline aerosols. Grattan *et al.* (1981) reported that young tomato and pepper leaves (<3 cm in length) were more severely injured than older, fully developed leaves.

Predicted seasonal and annual deposition rates in kilograms per square kilometer per month (kg/km^2-mo) are summarized in Table 5.1-1. The area of maximum predicted deposition rates is anticipated within 200 m of the cooling towers. The majority of deposition will occur near the cooling pond, which has the same chemical constituents as the deposition particles. At 100 m from the towers, the annual rate of deposition is 11.3 kg/km^2-mo, and the highest average seasonal rate is 13.6 kg/km^2-mo. Taking together the low deposition rates, area of deposition impact and quality of the drift particles, no effect to onsite vegetation from cooling tower drift is anticipated. No offsite impacts will occur.

Vegetation may be affected by absorbing salts that accumulate in the soil. Accumulation will occur if the annual deposition rate of salt exceeds the rate at which salt is leached from the soil by rainfall.

However, it is difficult to predict which plant species would be most affected by soil salinity, as tolerance to salt spray does not necessarily parallel known plant tolerances to soil salinity, but is governed by the rate of foliar absorption (Grattan *et al.*, 1981). Given the low deposition rates and the type of compounds in the drift particles, impacts due to accumulation in the soils are not anticipated.

5.1.5 MEASUREMENT PROGRAM

Water withdrawals for cooling tower makeup will be monitored as required by the existing SFWMD consumptive use permits. Since no significant impacts to surface water quality is expect from the operation of the NHPP Facility, no additional monitoring is proposed. Because there are no significant adverse ecological impacts due to the proposed Project's heat dissipation system, no biological monitoring is proposed.

5.2 EFFECTS OF CHEMICAL AND BIOCIDE DISCHARGES

5.2.1 INDUSTRIAL WASTEWATER DISCHARGES

As discussed in Chapter 3, operations with the expanded NHPP Facility will generate additional industrial wastewater flows resulting from the addition of the Project. The following table presents flow rates during the sugarcane grinding season and the non-grinding season.

Operation	Avg. Flow (MGD) Grinding Season	Avg. Flow (MGD) Non-grinding Season	Treatment
Cooling Tower #1 (Existing) Blowdown	0.561	0.395	Oil/water Separator, Percolation
Cooling Tower #2 (New) Blowdown	0.000	0.412	Oil/water Separator, Percolation
R.O. Reject	0.162	0.205	Neutralization, Percolation
Demineralizer Reject	0.091	0.121	Evaporation, Percolation
Low Volume Wash Water	0.015	0.015	Percolation
Contact Stormwater	0.101	0.101	Percolation
TOTAL	0.930	1.250	

Grinding season is 212 days. Non-grinding season is 153 days.
Source: Miller, 2003

The difference in flows is a result of supplying process steam to the Okeelanta Corporation sugar mill during the grinding season and generating additional electric energy during the non-grinding season.

With the expanded NHPP Facility, all industrial wastewater and stormwater will be collected from the Facility and sent to the existing four-cell land application site, also referred to as a percolation basin or pond. The stormwater system, consisting of two existing ponds, and percolation basin are designed to contain all process flows, including contact storm water and all non-contact storm water runoff from a 100-year, 3-day storm event.

5.2.1.1 Surface Water Discharges

There will be no surface water discharge from the expanded NHPP Facility. All process wastewater and all storm water will be collected and be pumped to the percolation basin. Consequently, the Project is not expected to cause any constituent concentrations in surface waters to exceed applicable standards.

5.2.1.2 Groundwater Discharges

Groundwater discharge of treated industrial wastewater will occur through seepage from the percolation pond. The primary contaminants in the effluent, which are discharged to the percolation pond system are concentrated dissolved solids from the RO process and from cooling tower evaporation. Historical data for 2001 and 2002 from the existing Facility show an average TDS concentration of about 4,000 mg/L in the wastewater effluent. The existing 4-cell percolation system and the associated groundwater monitoring well system will not be physically changed. The annual average flow to the percolation pond system will be a maximum 1.10 MGD from 0.62 MGD (Miller, 2003). Miller (2003) demonstrated that the percolation pond has the hydraulic capacity to accommodate the additional flow. The annual average flow for the pond system of 1.1 MGD has been approved by FDEP (see Appendix 10.4.2).

Data from the quarterly monitoring program, which were collected between 2000 and 2003, show elevated levels of Total Dissolve Solids (TDS) in the groundwater in the vicinity of the percolation pond. However, concentrations in the up gradient background well (OKC-7) are greater than concentrations in the down gradient compliance well (OKC-1). This suggests that the elevated TDS is not caused by operation of the percolation pond, but rather from background conditions in the surficial aquifer.

5.2.2 COOLING TOWER BLOWDOWN

To maximize water reuse, regeneration waste from the neutralization tank and backwash water from the cartridge filters are used as partial make-up for the cooling towers. Furthermore, some of the cooling tower blowdown is used for ash conditioning.

Evaporative losses in the cooling tower will result in a concentration of constituents in the cooling tower circulation water. To prevent accumulation of constituents from exceeding acceptable limits, chemicals will be added to control water chemistry, and a stream of water (i.e., blowdown) will be removed from the tower and discharged to the percolation basin. The chemicals that may be added to the cooling towers include acids/bases for pH control, polyphosphates for corrosion and scale control, and biocides for microbial control. Oxidizing and non-oxidizing biocides may be used intermittently to prevent biofouling. To control discharge of residual biocides, cooling tower blowdown can be discontinued while this process is conducted.

5.2.3 MEASUREMENT PROGRAMS

The existing groundwater monitoring program for the percolation pond system will be continued. Additional monitoring of ground or surface waters is not recommended.

5.3 IMPACTS ON WATER SUPPLIES

As described in Section 2.3, most of the surface and groundwater used within 5 miles of the site is used for industrial purposes and agricultural irrigation. In general, impacts to water supplies may be caused by water withdrawals, point source discharges, groundwater discharges and storm water runoff.

Water withdrawals associated with the operation of the expanded NHPP Facility will be from the Miami/North New River canal system, the surficial aquifer, the Floridan aquifer and from the cooling pond/rock pit, which is part of the adjacent Okeelanta Corporation sugar processing facility. Makeup water for the cooling system associated with the Project (i.e., 65 MW addition) will come from the rock pit associated with the Okeelanta Corporation. The currently authorized consumptive water use (SFWMD Permits 50-01035-W and 50-03146-W) will not increase as a result of the NHPP Project.

5.3.1 SURFACE WATER

Currently authorized water allocations from the Miami and the North New River Canals will not increase as a consequence of the NHPP Project. All industrial process wastewater and all site storm water will be collected and routed to the percolation pond system. Consequently, no significant impacts on area surface water supplies from water withdrawal, surface or groundwater discharge, or stormwater runoff is anticipated.

5.3.2 GROUNDWATER

Potential impacts associated with the allocation of groundwater from wells in the surficial and Floridan aquifers have been evaluated previously as part of the consumptive use permitting process (SFWMD Permits 50-01035-W and 50-03146-W in Appendix 10.4.4). No adverse impacts were identified to the surface or groundwater water resources of the area; to existing legal users; to residential/legal domestic users; or to wetlands. Since additional water allocations are not required for the Project and operation of the expanded NHPP Facility, no adverse impact is expected due to water withdrawals.

The only potential groundwater impact from operation of the expanded NHPP Facility is from seepage through the percolation pond. Groundwater concentrations, however, are expected to be below background concentrations at the edge of the land application site and at the compliance well, which is adjacent to the percolation pond system. Therefore, no impacts to groundwater supplies are expected.

5.3.3 DRINKING WATER

There are no residential homes and no community water supplies in the project area. Therefore, no impact is expected to drinking water systems or water sources.

5.3.4 RUNOFF AND LEACHATE

The NHPP Project is not anticipated to generate leachate. The Facility has been designed to eliminate direct discharges to surface waters. All wastewater and all storm water will be collected and pumped to the percolation pond system. Therefore, no significant impacts to water supplies are expected from runoff or leachate.

5.4 IMPACTS FROM DISPOSAL OF BYPRODUCTS AND SOLID AND HAZARDOUS WASTES

5.4.1 SOLID WASTE

As discussed in Section 3.7.2, solid wastes generated during the operation of the NHPP Facility consist of mixed ash (bottom ash and fly ash). The mixed ash has been and will continue to be disposed of offsite in an FDEP approved and licensed landfill. There will be no adverse impacts resulting from solid waste generated by the expanded NHPP Facility.

5.4.2 HAZARDOUS WASTE

The NHPP Facility is considered a conditionally exempt small quantity generator of hazardous wastes. The Project will not change this status.

5.5 SANITARY AND OTHER WASTE DISCHARGES

No additional sanitary facilities are proposed as part of the Project.

5.6 AIR QUALITY IMPACTS

An air quality analysis was recently performed for the NHPP Facility as part of an Air Construction/PSD Permit Application (Golder, 2002). The air quality analysis was reviewed by FDEP as part of the issuance of the permit (see Appendix 10.1.5). FDEP concurred with the methods and results of the air impact analyses for the NHPP Facility. This section summarizes the results of the air impacts for the NHPP Facility, which evaluated operation at 100-percent load for 8,760 hours per year. The proposed Project will not involve the installation of a regulated emissions unit and will not increase maximum emissions from those already contemplated in the FDEP Air Construction/PSD Permit [Air Permit No. 0990332-16-AC/PSD-FL-196(O)].

5.6.1 IMPACT ASSESSMENT

5.6.1.1 Approach

The modeling approach followed the EPA and the FDEP modeling guidelines for determining compliance with AAQS and PSD increments. The Industrial Source Complex Short-term (ISCST3, Version 00101) dispersion model (EPA, 2000) was used to evaluate the pollutant impacts of the NHPP Facility in areas within 50 km of the NHPP Facility. This model is maintained by the EPA on its internet web site, Support Center for Regulatory Air Models (SCRAM), within the Technical Transfer Network (TTN). For predicting maximum impacts at the Everglades National Park (ENP)

PSD Class I area, the California Puff (CALPUFF) modeling system was used. CALPUFF, Version 5.5 (EPA, 2001), is a Lagrangian puff model that is recommended by the FDEP, in coordination with the Federal Land Manager (FLM) for the ENP, for predicting pollutant impacts at PSD Class I areas that are beyond 50 km from a Project site.

Meteorological data used in the ISCST3 model to determine air quality impacts consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the National Weather Service (NWS) office located at the Palm Beach International Airport (PBI). The 5-year period of meteorological data was from 1987 through 1991. The NWS weather office at PBI is located approximately 64 km east of the site and is the closest primary weather station to the study area considered to have meteorological data representative of the Project site. The PBI station meteorological data was approved by the FDEP for the NHPP impact analysis. These data have been previously used for numerous air modeling studies submitted as part of the air construction permit application for sources located in Palm Beach County. Meteorological data used with the CALPUFF model consisted of a CALMET-developed wind field covering all of south Florida.

For all criteria pollutants that will be emitted in excess of the PSD significant emission rate, a significant impact analysis is performed to determine whether the emission from the project alone will result in predicted impacts that are in excess of the EPA significant impact levels at any location beyond the plant's restricted boundaries. For the NHPP Facility, the emissions increases associated with the latest Air Construction/PSD Permit were above the significant emission rates for SO_2, PM_{10}, NO_2, and CO.

If the project-only impacts are above the significant impact levels in the vicinity of the facility, then two additional and more detailed air modeling analyses are required. The first analysis demonstrates compliance with federal and Florida ambient air quality standards (AAQS) and the second analysis demonstrates compliance with allowable PSD Class II increments. These analyses take into consideration the emissions of other major air pollution sources as well as PSD Increment consuming sources. For the impact analysis performed for the NHPP Facility, the impacts were less than the PSD significant impact levels for all pollutants except for SO_2. Therefore, a more refined analysis was conducted for SO_2 emissions from the NHPP Facility.

If the facility undergoing the modification is within 200 km of a PSD Class I area, then a significant impact analysis is also performed to evaluate the impact due to the project alone at the PSD Class I area. Because the ENP is a PSD Class I area that is located within 200 km of the NHPP site (i.e., 64 km) , the maximum predicted impacts at the ENP were compared to the EPA's proposed significant impact levels for PSD Class I areas.

If the project-only impacts at the PSD Class I area are above the proposed EPA PSD Class I significant impact levels, then an analysis is performed for the project and other PSD Increment consuming sources to demonstrate compliance with allowable PSD Class I impacts at the PSD Class I area. The impacts for NHPP were less than the PSD Class I significant impact levels for all pollutants except for SO_2. A more detailed analysis was conducted for the ENP with NHPP and other PSD Increment consuming sources.

In addition to the air quality impact analyses, a proposed project's maximum emission increase must be evaluated for potential impacts on the Air Quality Related Values (AQRVs) within the PSD Class I area and must include evaluations of regional haze degradation and nitrogen and sulfur deposition. These analyses were conducted for the NHPP Facility.

When using 5 years of meteorological data for the analysis, the highest annual and the HSH short-term concentrations are compared to the applicable AAQS and allowable PSD increments. Compliance with the 24-hour AAQS for PM is determined using the sixth highest predicted concentration in 5 years (i.e., H6H), instead of the HSH, for comparison to the applicable 24-hour AAQS.

The HSH concentration is calculated for a receptor field by:

1. Eliminating the highest concentration predicted at each receptor,
2. Identifying the second-highest concentration at each receptor, and
3. Selecting the highest concentration among these second-highest concentrations.

The HSH approach is consistent with air quality standards and allowable PSD increments, which permit a short-term average concentration to be exceeded once per year at each receptor.

To develop the maximum short-term concentrations for the NHPP, the modeling approach was divided into screening and refined phases to reduce the computation time required to perform the modeling analysis. For this impact analysis, the only difference between the two modeling phases is the density of the receptor grid spacing employed when predicting concentrations. Concentrations are predicted for the screening phase using a coarse receptor grid and a 5-year meteorological data record.

Refinements of the maximum predicted concentrations are typically performed for the receptors of the screening receptor grid at which the highest and/or HSH concentrations occurred over the 5-year period being evaluated. Generally, if the maximum concentrations from other years in the screening analysis are within 10 percent of the overall maximum concentration, then those other concentrations are refined as well. Typically, if the highest and HSH concentrations are in different locations, concentrations in both areas are refined.

5.6.1.2 Results

A summary of the predicted maximum SO_2, PM_{10}, NO_2, and CO concentrations for the NHPP Facility with increased heat input, compared to the EPA significant impact levels, is presented in Table 5.6-1. The modeling results indicated that maximum predicted concentrations due to the NHPP Facility were below the significant impact levels for all pollutants except SO_2. It was further determined that the significant impact area for SO_2 emissions extended out approximately 11 km from the NHPP site. As a result, additional modeling analyses were performed for SO_2 to address compliance with AAQS and PSD increments.

Annual, HSH 24-hour, and HSH 3-hour average SO_2 concentrations were predicted for NHPP and other appropriate sources using both a screening analysis and a refined modeling analysis required by FDEP. Based on the refined analysis, the maximum predicted annual, HSH 24-hour, and HSH 3-hour SO_2 concentrations were 25, 145, and 517 $\mu g/m^3$, respectively. These concentrations include ambient non-modeled annual, 24-hour, and 3-hour background concentrations of 5, 13, and 47 $\mu g/m^3$, respectively. The maximum predicted impacts are less than the annual, HSH 24-hour, and HSH 3-hour average SO_2 Florida AAQS of 60, 260, and 1,300 $\mu g/m^3$, respectively (see Table 5.6-1).

The maximum SO_2 PSD increment consumption predicted for the NHPP Facility and other PSD increment consuming sources was conducted using both a screening analysis and a refined analysis.

Based on the results of the refined modeling analysis, the maximum predicted annual, HSH 24-hour, and HSH 3-hour SO_2 increment consumption concentrations were 5.6, 62, and 218 $\mu g/m^3$, respectively, and are less than the allowable PSD Class II increments of 20, 91, and 512 $\mu g/m^3$, respectively.

The maximum SO_2, PM_{10}, and NO_2 concentrations predicted for the NHPP Facility at the ENP PSD Class I area are compared with the EPA's proposed PSD Class I significance levels in Table 5.6-2. All maximum predicted impacts were below the significant impact levels except for SO_2. The maximum 24-hour and 3-hour SO_2 impacts were 0.45 and 1.1 $\mu g/m^3$, respectively, which are above the proposed Class I significant impact levels of 0.2 and 1.0 $\mu g/m^3$, respectively. Therefore, a PSD Class I increment analysis for the NHPP Facility and other PSD increment sources was performed for SO_2. The results of this analysis determined that the maximum predicted HSH 24-hour and HSH 3-hour SO_2 increment consumption concentrations were 3.99 and 12.2 $\mu g/m^3$, respectively. These concentrations are below the allowable PSD Class I increments of 5 and 25 $\mu g/m^3$, respectively.

The evaluation of the AQRVs in the Everglades NP PSD Class I Area determined that the impacts of the NHPP Facility would meet the criteria established by the Federal Land Manager.

5.6.2 MONITORING PROGRAMS

Pre- and post-construction ambient air quality monitoring was not required for the NHPP Facility because the air quality analyses were less than the *de minimis* monitoring thresholds, and because ambient monitoring data representative of the NHPP site are measured in the region. Air quality concentrations in the region comply, and are anticipated to continue to comply, with all applicable ambient standards.

The NHPP boilers are required by FDEP to monitor emissions of various pollutants. Continuous emission monitoring (CEM) for SO_2, NO_x, and CO is conducted to demonstrate compliance with emissions limitations for these pollutants. Continuous opacity monitoring (COM) is used to monitor opacity of stack gases being emitted from each boiler. Annual testing is performed for PM, VOCs, and mercury. Testing of lead compounds is required prior to renewal of the Title V permit (air operation), which would occur every 5 years.

5.7 NOISE

The potential noise impacts for the NHPP Facility were determined based on the measured sound pressure level taken at Site 3, which was located near the facility while it was operating (see Section 2.3.3). The observed L_{eq} at Site 3 was 63.5 dBA and taken while the plant was operating. The observed sound pressure levels for all averaging times (L_{min}, L_{max}, L_{90}, and L_{eq}) were relatively consistent indicating constant sound levels from the NHPP Facility. Since the new steam turbine/electric generator and cooling tower will be substantially similar as the existing equipment, it was assumed that levels in proximity of the NHPP would increase by 3 dBA or a total L_{eq} of 66.5 dBA at 520 ft from the facility. This assumes a doubling of sound power levels, which would produce conservative sound level for the impact analysis. The noise impacts were determined by decreasing the far-field noise level for the expanded NHPP Facility by 6 dBA for each doubling of distance from the location of Site 3. This noise reduction accounts for hemispheric spreading, but does not account for molecular absorption, terrain, vegetation, and barriers (including portions of the NHPP Facility). Therefore, the estimated noise impacts are very conservative.

The nearest locations to the NHPP Facility where sound from the NHPP Facility can potentially have noise impacts are monitoring Sites 1 and 2, which are located 5.9 and 3.1 miles, respectively from the NHPP Facility. Site 1 in within a residential neighborhood in South Bay, and Site 2 is a residence located on US 27. Site 2 is the closest to the NHPP Facility, and the surrounding area is agricultural (primarily sugarcane). The predicted sound level impacts at these sites are compared with the minimum observed sound levels observed at these locations. The minimum sound pressure level, L_{min}, is the lowest 1-second sound pressure level observed during monitoring and generally excludes transient noise sources such as traffic. The sound level impacts of the NHPP Facility and a comparison to the L_{eq} are shown in the following table.

Monitoring Site	Description	Distance (Miles)	Predicted Impacts	Observed L_{min}	Combined Impacts
1	South Bay	5.9	31.3	48.9	49.0
2	Nearest Residence	3.1	35.6	52.2	52.3

Note: Distance is from NHPP Facility.

The maximum predicted impacts increase sound levels by about 0.1 dBA, which cannot be either measured or observed. This level of impact is a result of the considerable distance of the NHPP

Facility to the sites evaluated. Since sound levels in dBA are logarithmic, the actual difference in sound energy between the predicted impacts and observed background sound levels is greater than that suggested by the difference in sound pressure level shown in dBA. The predicted impacts in sound energy is over 40 times less than the observed background. Also, the human ear cannot discern noise level differences less than 3 dBA. The maximum predicted noise levels are numerically much less than Palm Beach county's 60 dBA sound level limit for sound from fixed mechanical equipment to residential receiving land use (see Section 2.3.8).

Figure 5.7-1 shows a comparison of the predicted impact at the nearest residence to the sound levels of various common sources of noise. As shown in the figure, the predicted impacts are low compared to common noise sources.

5.8 CHANGES TO NON-AQUATIC SPECIES POPULATION

5.8.1 IMPACTS

5.8.1.1 Flora

Potential impacts to onsite and regional vegetation due to plant operation will be minimal due to the lack of any large areas of native vegetation. The area surrounding the NHPP Facility for many miles is cultivated in sugarcane. The air impacts of the expanded NHPP Facility will meet the Florida AAQS, which have been promulgated to protect public health and welfare. The AAQS protection of welfare specifically includes the protection of vegetation and wildlife.

5.8.1.2 Fauna

The surface water from agricultural canals will be used. While these canals may be used for foraging by birds, mammals, reptiles, and amphibians, no adverse impacts will occur to fauna utilizing the canals as a result of the expanded NHPP Facility.

As mentioned in Sections 2.3.6 and 4.4, the Project is located within the existing operating cogeneration facility. Thus, any wildlife species present in the area are generally those that tolerate human proximity. No populations of recreational or commercially important species will be affected by operation of the expanded NHPP Facility.

5.8.2 MONITORING

Because no impacts to non-aquatic species populations are anticipated, no monitoring program is proposed.

5.9 OPERATIONS TRAFFIC

Traffic associated with the operation of the NHPP Facility represents a long-term use of Palm Beach County roadways. Although there will be no additional employees required to operate the Plant, additional truck deliveries carrying bagasse or wood would result in a slight increase in trip generation. A worst-case estimate of truck traffic indicates that up to 10 round trips per peak hour could be expected. These impacts were evaluated for a year 2006 buildout that represents the first full year of commercial operation.

The year 2006 non-project background volumes were determined to be the 2002 non-project background volumes increased by means of a growth rate. A generalized growth rate of 3 percent per year was applied to the 2002 non-project volumes to derive future volumes.

Trips associated with the operating conditions at the Facility assumed trip distribution split between north and southbound directions on US 27.

The year 2006 non-project background volumes and operations traffic volumes were combined to provide a projection of year 2006 total traffic. The total traffic volume on US 27 in the vicinity of the Facility was analyzed to determine the anticipated operating conditions. Based on the analysis, the roadway segment is anticipated to operate acceptably at project buildout (LOS C or better). No improvements are required to accommodate the traffic impacts from operation traffic of the expanded NHPP Facility.

5.10 ARCHAEOLOGICAL SITES

No sites of historic or archaeological significance will be impacted due to operation of the Project. The Project site has been impacted by previous activity and the site location has received clearance previously from the Division of Historical Resources (see Appendix 10.5.1)

Table 5.1-1. Predicted Plume Characteristics and Drift Deposition from New Mechanical Draft Cooling Tower

	Distance from Tower (meters)	Winter		Spring		Summer		Fall		Annual	
		For Sector	For All Sectors	For Sector	For All Sectors	For Sector	For All Sectors	For Sector	For All Sectors	For Sector	For All Sectors
		Maximum	Sum	Maximum	Sum	Maximum	Sum	Maximum	Sum	Maximum	Sum
Plume Length	100	13.4	87.7	13.3	93.6	16.2	95.2	17.6	93.7	14.5	92.6
(Units = Percent)	200	7.5	47.0	6.1	38.3	4.9	35.3	5.0	35.7	4.5	39.1
	300	1.6	7.9	0.8	5.3	0.6	4.8	1.1	5.7	0.9	5.9
		Maximum	Sum	Maximum	Sum	Maximum	Sum	Maximum	Sum	Maximum	Sum
Plume Height	10	13.4	87.2	13.3	93.6	16.2	95.3	17.6	93.7	14.5	92.6
(Units = Percent)	30	7.9	57.2	7.6	49.4	7.0	45.6	6.2	46.9	5.9	49.8
	50	4.5	21.7	1.8	14.6	1.7	14.1	3.2	15.5	2.6	16.5
		Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average
Plume Shadowing	200	241.4	82.6	166.0	72.4	144.3	57.5	202.6	59.7	629.7	272.2
(Units = Hours)	400	32.9	8.8	24.0	6.4	55.9	10.2	27.1	7.0	103.3	32.4
	600	13.6	2.2	11.1	1.8	29.3	3.6	14.5	1.5	35.6	9.1
		Maximum	Sum	Maximum	Sum	Maximum	Sum	Maximum	Sum	Maximum	Sum
Plume Fogging	100	0.2	0.2	0.2	0.7	0.2	0.2	0.9	1.8	0.9	2.8
(Units = Hours)	200	0.5	0.5	0.5	1.5	0.5	0.5	2.0	4.0	2.0	6.5
	300	0.2	0.2	0.5	1.5	0.5	0.5	2.0	2.9	2.0	5.1
		Maximum	Sum	Maximum	Sum	Maximum	Sum	Maximum	Sum	Maximum	Sum
Rime Icing	100	0	0	0	0	0	0	0	0	0	0
(Units = Hours)	200	0	0	0	0	0	0	0	0	0	0.0
	300	0	0	0	0	0	0	0	0	0	0
		Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average
Deposition	100	46.0	10.4	47.2	10.9	58.6	12.4	64.0	11.6	53.9	11.3
(Units = $kg/km^2/month$)	200	52.4	12.0	52.8	13.0	58.2	13.6	71.8	13.5	58.8	13.1
	300	43.9	7.0	45.1	7.8	49.8	7.5	61.2	8.2	50.0	7.7

Table 5.6-1. Summary of Maximum Pollutant Concentrations Compared to the EPA Class II Significant Impact Levels and Florida AAQS

Pollutant	Averaging Time	Maximum Predicted Impact of NHPP ($\mu g/m^3$)	EPA Class II Significant Impact Levels ($\mu g/m^3$)	Additional Modeling Necessary?	Maximum Predicted Impact All Sources ($\mu g/m^3$)	Florida AAQS ($\mu g/m^3$)
SO_2	Annual	0.31	1	Yes	25	60
	24-Hour	9.29	5	Yes	145	260
	3-Hour	31.84	25	Yes	517	1,300
PM_{10}	Annual	0.16	1	No	NA	50
	24-Hour	1.2	5	No	NA	150
NO_2	Annual	0.55	1	No	NA	100
CO	8-Hour	4.6	500	No	NA	10,000
	1-Hour	21.5	2,000	No	NA	40,000

Note: AAQS = Ambient Air Quality Standards.

Source: Golder, 2003.

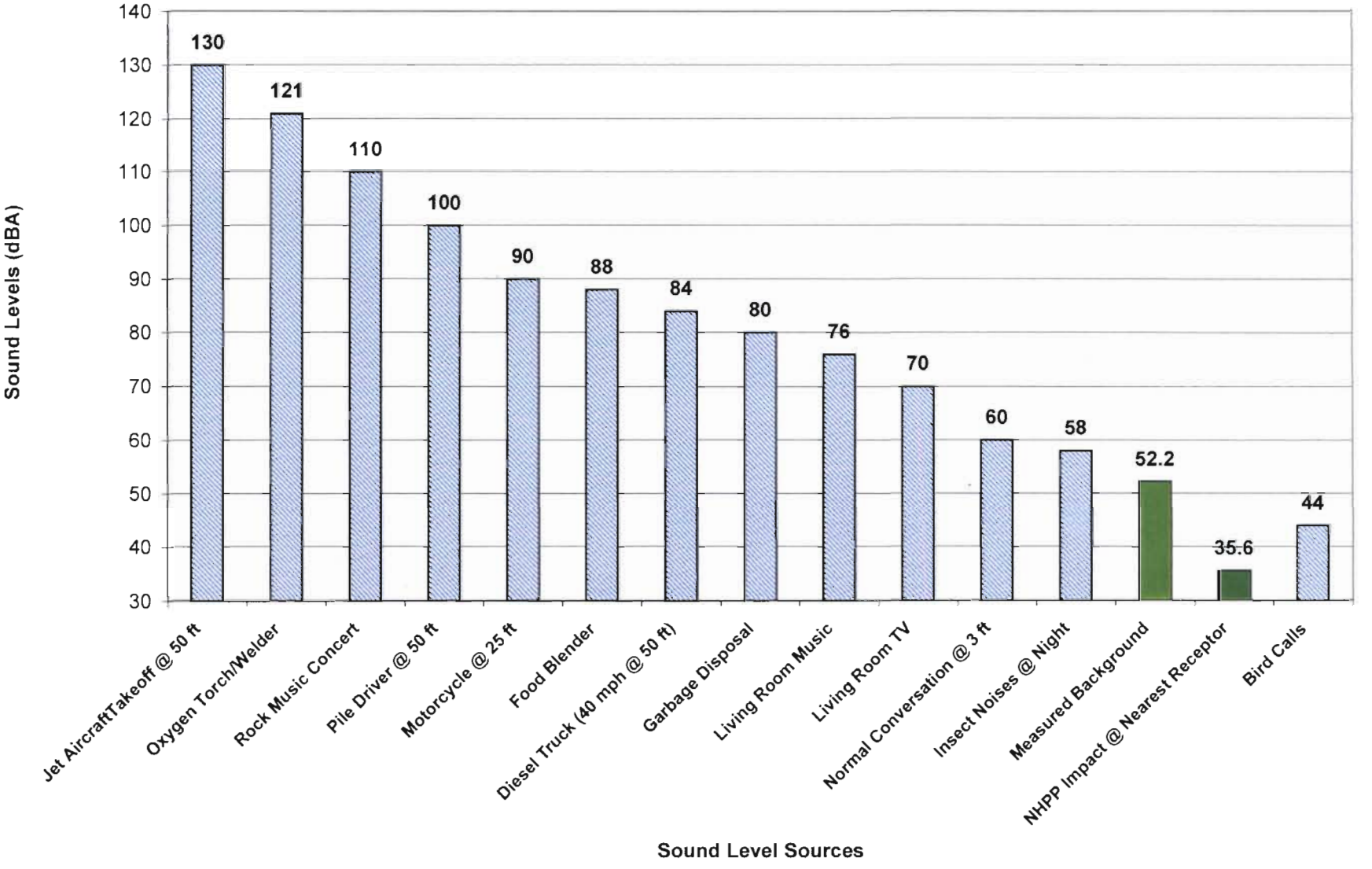
Table 5.6-2. Summary of Maximum Pollutant Concentrations Predicted for the Project Only Compared to the EPA Class I Significant Impact Levels and PSD Class I Increments New Hope Power Partnership

Pollutant	Averaging Time	Maximum Impact of NHPP ($\mu g/m^3$)	EPA Class I Significant Impact Levels ($\mu g/m^3$)	Additional Modeling Necessary?	Maximum Impact All Sources ($\mu g/m^3$)	Allowable PSD Class I Increments ($\mu g/m^3$)
SO_2	Annual	0.0044	0.1	No	NA	2
	24-Hour	0.45	0.2	Yes	3.99	5
	3-Hour	1.10	1.0	Yes	12.16	25
PM_{10}	Annual	0.0024	0.2	No	NA	4
	24-Hour	0.064	0.3	No	NA	8
NO_2	Annual	0.0047	0.1	No	NA	2.5

[a] Highest concentration predicted with CALPUFF model and CALMET South Florida Domain, 1990.

Source: Golder, 2003.

Figure 5.7-1
Sound Level Comparisons
New Hope Power Partnership-Noise Impact



6.0 TRANSMISSION LINES

The operation of the expanded NHPP Facility will not require construction of any associated linear facilities, such as electrical transmission lines or rail lines. Therefore, Chapter 6.0 is not necessary for this application.

7.0 ECONOMIC AND SOCIAL EFFECTS OF PLANT CONSTRUCTION AND OPERATION

The purpose of this chapter is to:

- Identify the economic and social effects of construction and operation of the Project.
- Quantify the Project benefits and costs to the groups affected in the area surrounding the site as well as other people and businesses in Palm Beach County and the state.

Socio-economic effects can be classified as either direct or indirect effects. Direct effects are those that are the direct result of the construction of the Project and operation of the expanded NHPP Facility. Indirect costs and benefits affect people and business interests in the vicinity of the Project who, because of their proximity to the site, may experience changes in their local environment, such as increased spending by the Project construction and operation personnel. Many of these effects are difficult to measure, and qualitative assumptions must be made to assess the relative values of expected costs and benefits.

This chapter is divided into two parts. Section 7.1 deals with socio-economic benefits and consists of an analysis of the plant construction and operational expenditures. Section 7.2 addresses temporary and long-term indirect costs involving the construction and operational personnel's use of private and public services in the vicinity of the site. All cost and benefit values are based on present (2003) dollar values.

7.1 SOCIO-ECONOMIC BENEFITS

7.1.1 DIRECT SOCIO-ECONOMIC BENEFITS

The Project is expected to benefit the economies of Palm Beach County and surrounding communities. Direct benefits from the Project include employment opportunities created by the construction and of the Project. Construction of the Project is anticipated to begin in 2005 and conclude in 2006. The peak construction workforce is estimated to be 125 people with an average construction workforce estimated at 70 employees over a 1-year period. Employment opportunities will result from construction job opportunities as well as jobs indirectly generated through the purchase of goods and services in the area. No additional employment is anticipated during operation.

Among the primary direct benefits of the Project will be the increase in skilled job opportunities within the region associated with plant construction. The total construction payroll for this Facility is estimated at $3.5 million, which will be paid over the 1-year construction period. The approximate type of workers over the construction period includes carpenters, ironworkers, pipefitters, electricians, supervisors, and laborers.

The labor demands associated with the construction of the Project will not create labor shortages. Due to the proximity of the NHPP site to the large labor markets in the South Florida metropolitan areas, the labor demand for construction is expected to be met by workers in these areas. Population and housing impacts will be minimal because little migration into the area is anticipated.

The construction cost for the Project will be about $10 million. The major cost associated with construction will be labor (about $3.5 million). Remaining cost will be associated with equipment, materials, engineering, licensing, contingencies, and other miscellaneous costs.

Sales and income tax benefits will accrue to the State of Florida and Palm Beach County as a result of the construction and operation of the Project. Local revenues will also be derived from property taxes paid on the property and the onsite facilities.

7.1.2 INDIRECT ECONOMIC BENEFITS

The purchases of goods and services to support the construction of the Project are anticipated to occur over a 1-year period beginning in 2005 and ending in 2006. It is expected that the majority of the construction wages paid by for the Project will be spent within Palm Beach County and the surrounding region. These wages will create additional demands for goods and services. As this money is spent, it will create a multiplier effect within the area, thereby generating additional jobs and earnings. These earnings are indirect or secondary benefits of the Project, which will be enjoyed by other companies whose payroll will increase from the construction of the Project. Materials such as concrete, and other building materials are normally manufactured or produced in the region. Rental of construction equipment would also be obtained locally.

Although operation employment will not increase, the direct wages from ongoing plant operations will generate indirect economic benefits. The direct wages will be spent mostly within the region and will increase the demand for goods and services.

7.1.3 OTHER ECONOMIC BENEFITS

The additional costs of operating the expanded NHPP Facility is associated with additional fuel and water treatment chemicals. These costs not only include the cost of the commodity but the cost of transportation to the site. Some of the payments for both the commodity and transportation will benefit the region through additional employment, taxes, and materials.

7.1.4 RECREATIONAL AND ENVIRONMENTAL VALUES

Construction of the Project will not impact the recreational value and visual qualities of the facilities in the vicinity of the NHPP site. There are no recreational facilities located within 5 miles of the Project site. Disturbance during construction of the proposed facilities will be insignificant to non-existent since the closest recreational facilities are located outside of the area and will not be affected by facility construction and operation. Aesthetic and visual impact is expected to be minimal since the Project is low profile and the NHPP site is remote from public view.

7.1.5 OTHER ENVIRONMENTAL BENEFITS

The expanded NHPP Facility will provide a wide variety of environmental benefits for Palm Beach County and the State of Florida. The Project maximizes the beneficial use of an existing power plant site to generate additional steam and electrical power. An additional steam turbine electrical generator, condenser and cooling tower minimizes the potential environmental impacts associated with the generation of electrical power by using existing facilities (i.e., developed site, access roads, substation and transmission lines, and natural gas pipeline). The Project directly avoids impacts to wetlands or wildlife habitat.

The expanded NHPP Facility will use efficient and low-air emission technology to generate electricity. This will reduce the overall amount of potential emissions associated with electricity consumed in Palm Beach County and Florida and increase the amount of electricity delivered to the Florida grid.

The fuel source for the incremental generation (as well as the existing generation) will be almost exclusively locally sourced, renewable biomass material. The biomass fuel will consist of clean agricultural byproducts and clean wood waste collected and processed within a 100-mile radius of the Facility. The expansion will use approximately an additional 230,000 TPY of biomass fuel, which represents about a 20 percent increase in the total biomass fuel used by the Facility. The Project diversifies Florida's fuel supply for electrical power production and provides a modest reduction in

Florida's dependence on fossil fuel for electrical power generation. The bagasse fuel used by the NHPP Facility is a renewable resource and is replaced every year with each annual crop of sugarcane.

The combustion of biomass fuels does not increase the net amount of CO_2 accumulated in the atmosphere. The CO_2 released by combustion of biomass is offset on a contemporaneous basis by the CO_2 captured when the plant material is growing. By contrast, the combustion of fossil fuels does increase the net accumulation of CO_2.

The expanded NHPP Facility will displace approximately 280,000 barrels of oil equivalent per year (assuming 6.2 MMBtu/bbl and a heat rate of 10,000 Btu/kwh), which in turn will reduce oil imports by about $8.4 million per year, based on a price of $30 per barrel. Over a 20 year period, the cumulative displacement will amount to 5.6 million barrels of oil equivalent and nearly $170 million.

Recycling biomass material into boiler fuel is an important element in the overall management and disposal of solid waste in South Florida. In most cases, the only other alternative is to landfill the biomass material, which is not a beneficial use and consumes finite landfill space.

NHPP has clean wood waste supply agreements with more than 30 public and private recyclers, including the Palm Beach County Solid Waste Authority and Montenay Power Corp., which operates a resource recovery facility on behalf of Miami-Dade County. The incremental biomass fuel for the expansion will come from these supplies and from bagasse. The Facility also uses melaleuca that is generated by nuisance species land clearing activities funded in part by SFWMD.

7.1.6 SUMMARY OF BENEFITS

Impacts to the economy associated with construction of the Project and the operation of the expanded NHPP Facility are expected to be positive. Labor demands associated with the construction of the Project are not expected to create any labor shortages. Expenditures for construction materials and supplies will boost incomes to some businesses in Palm Beach and the surrounding counties. Population and housing impacts associated with the Project will be negligible since no new operational employees will be required.

Construction activities will increase tax revenues to county and state governments due to sales and income taxes from the purchase of equipment and material to support construction activities. Once the Project is operational, county and state governments are expected to receive considerably more

dollars in tax revenues than expenditures on public services due to the minimum requirements for public service facilities needed to support the Project.

Transportation impacts are expected to be limited primarily to increased traffic associated with the daily commute of construction workers to and from the Project site. Construction worker traffic will vary with the Project staging. Once operational, transportation impacts will be limited to an anticipated increase of 10 trips per peak hour. Truck traffic for service and maintenance activities and automobile traffic from operations and maintenance workers should not impact other traffic using roadways or impact levels of service on local roadways.

Overall, land use impacts from the construction and operation of the Project are expected to be minor. No new land use impacts are anticipated to be associated with the operation and maintenance of the expanded NHPP Facility.

Visual impacts from the construction of the Project will be minimal and localized due to the low profile. The NHPP site location is more than 2 miles west of the nearest public road and only the tallest structures are visible (existing stacks and boilers).

Cultural and historical resources in the vicinity of the area are not expected to be affected. No sites of historic or cultural significance will be impacted due to the construction and operation of the Project.

Overall, socioeconomic impacts associated with the construction of the Project and the operation of the expanded NHPP Facility will be favorable from an economic, community infrastructure, and human resource perspective.

7.2 SOCIO-ECONOMIC COSTS

7.2.1 TEMPORARY EXTERNAL COSTS

Over 32,000 construction workers reside within Palm Beach County. Since ample labor supply exists within commuting distance, and since a labor surplus exists within the region, it is anticipated that many workers will be hired from within the region, with minimal relocation required. Consequently, construction should have no adverse effect on permanent housing.

Some workers commuting from longer distances may choose to live in transient accommodations (motels, hotels) on a weekly basis, returning to their permanent homes and families on weekends. Transient accommodations are plentiful in the area.

Since workers will mostly be commuting and not relocating permanently into the region, it is not anticipated that construction will create any new or unusual impacts or demands on public facilities or services.

Temporary external costs include the generation of construction traffic and noise from delivery trucks each day. Construction will last approximately 1 year, thereby limiting the duration of the cost.

7.2.2 LONG-TERM EXTERNAL COSTS

The Project's external cost impacts will be minimal and localized. The Project is located in the central portion of vast sugarcane fields and about 2 miles from any public right-of-way. The operation of the expanded NHPP Facility will not cause any impairment to recreational values, result in any deterioration of aesthetic and scenic values, or restrict access to areas of scenic values. The Project also will not displace persons from the land, cause loss of income, or result in any significant costs to local government.

Since there will be no increase in operational workforce resulting from the Project, the impacts to local services (e.g., schools, police) are expected to be minimal.

8.0 SITE AND DESIGN ALTERNATIVES

This optional chapter of the SCA is not being submitted as part of this application because an EIS under the National Environmental Policy Act (NEPA) is not required for the Project.

9.0 COORDINATION

State, regional, and local governmental agencies were contacted by NHPP representatives to inform these agencies about the Project and to solicit input regarding the Project. The Agencies contacted are listed below:

- Florida Department of Environmental Protection (Tallahassee)
  - Siting Coordination Office
  - Bureau of Air Regulation
- Florida Department of Environmental Protection (Fort Myers – South Florida District)
  - Industrial Wastewater Section
- Palm Beach County
- South Florida Water Management District

REFERENCES

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APPENDIX 10.1.5

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) PERMIT AND CURRENT TITLE V PERMIT FOR NEW HOPE POWER PARTNERSHIP

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF FINAL PERMIT

In the Matter of an
Application for Permit by:

New Hope Power Partnership
Okeelanta Cogeneration Plant
8001 U.S. Highway 27 South
South Bay, FL 33493

Authorized Representative:
Mr. Rodney Williams, Plant Manager

Project No. 0990332-016-AC
Air Permit No. PSD-FL-196(O)
Okeelanta Cogeneration Plant
Increased Heat Input Rates
Palm Beach County, Florida

Enclosed is Final Air Permit No. PSD-FL-196(O), which authorizes increases to the hourly and annual heat input rates for the three existing boilers at the Okeelanta Cogeneration Plant, which is located off U.S. Highway 27 approximately six miles south of South Bay in Palm Beach County, Florida. As noted in the attached Final Determination, only minor changes and clarifications were made.

This permit is issued pursuant to Chapter 403, Florida Statutes. Any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within thirty (30) days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida.

Trina L Vielhauer

Trina Vielhauer, Chief
Bureau of Air Regulation

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Notice of Final Permit (including the Final permit) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 10/29/03 to the persons listed:

Mr. Rodney Williams, New Hope Power*
Mr. James Meriwether, New Hope Power
Mr. David Buff, Golder Associates Inc.
Mr. David Dee, Landers & Parsons
Mr. James Stormer, PBCHD
Mr. Ron Blackburn, SD Office
Mr. Gregg Worley, EPA Region 4 Office
Mr. John Bunyak, NPS

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Victoria Gibson / October 29, 2003
(Clerk) (Date)

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

PERMITTEE

New Hope Power Partnership
Okeelanta Cogeneration Plant
8001 U.S. Highway 27 South
South Bay, FL 33493

Authorized Representative:
Mr. Rodney Williams, Plant Manager

Air Permit No. PSD-FL-196(O)
Project No. 0990332-016-AC
Okeelanta Cogeneration Plant
SIC No. 4911
Palm Beach County

PROJECT AND LOCATION

The original PSD permit authorized the construction of a biomass and fossil fuel-fired 74.9 MW cogeneration plant adjacent to Okeelanta Corporation's sugar mill and refinery. The original PSD permit expired on July 1, 1996. The permittee obtained several previous permit modifications that extended some construction-related activities as well as revised specific conditions of the permit. This permit modification authorizes an increase in the hourly heat input rate from 715 to 760 MMBtu per hour per boiler and removes the previous limit on the annual heat input rate ($11.5 \times 10^{+06}$ MMBtu per year) for the three boilers combined. As a result of the changes, BACT determinations were required for emissions of carbon monoxide, fluorides, lead, nitrogen oxides, particulate matter, sulfur dioxide, sulfuric acid mist, and volatile organic compounds. In addition, Condition No. 15 was revised to simply require permanent shutdown of the existing Okeelanta sugar mill boilers, which were part of the netting analysis for the original project.

The cogeneration plant is located off U.S. Highway 27 approximately six miles south of South Bay in Palm Beach County, Florida. The UTM coordinates are Zone 17, 524.90 km East, and 2940.10 km North. The map coordinates are latitude 26° 35' 00" N and longitude 80° 45' 00" W.

STATEMENT OF BASIS

This PSD air pollution construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.) and Title 40, Part 52, Section 21 of the Code of Federal Regulations. Specifically, this permit is issued pursuant to the requirements for the Prevention of Significant Deterioration (PSD) of Air Quality, Rule 62-212.400, F.A.C. The permittee is authorized to perform the proposed work and operate the installed equipment in accordance with the conditions of this permit, the conditions of the Title V operation permit, and as described in the application, approved drawings, plans, and other documents on file with the Department.

CONTENTS

Section I. General Information
Section II. Administrative Requirements
Section III. Emissions Units Specific Conditions
Section IV. Appendices

Michael G. Cooke, Director
Division of Air Resources Management

10/27/03
Effective Date

"More Protection, Less Process"

FACILITY DESCRIPTION

The facility consists of two adjacent plants. Okeelanta Corporation (ARMS ID No. 0990005) operates a sugar mill (SIC No. 2061) and sugar refinery (SIC No. 2062) including packaging and transshipment activities. New Hope Power Partnership (ARMS ID No. 0990332) operates a 74.9 net MW cogeneration plant that provides process steam for the sugar mill/refinery and generates electricity for sale to the power grid (SIC 4911). The cogeneration plant, sugar mill, and sugar refinery are all considered a single facility for purposes of the PSD and Title V regulatory programs. This permit addresses the cogeneration plant, which consists of the following emissions units.

ID	Emission Unit Description
001	Cogeneration Boiler A (760 MMBtu per hour)
002	Cogeneration Boiler B (760 MMBtu per hour)
003	Cogeneration Boiler C (760 MMBtu per hour)
004	Material handling and storage

REGULATORY CLASSIFICATION

Title III: The existing facility is a potential major source of hazardous air pollutants (HAPs).

Title IV: The existing facility does not operate any units subject to the acid rain provisions of the Clean Air Act.

Title V: The existing facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

PSD: The existing facility is a PSD major source of air pollution with respect to Rule 62-212.400, F.A.C.

PPSC: The existing facility is not subject to Chapter 62-17, F.A.C. for Power Plant Site Certification because it produces less than 75 MW of steam-generated electrical power.

NSPS: The existing facility operates units subject to the New Source Performance Standards in 40 CFR 60, including Subparts Da and Db (boilers) and Subpart Kb (fuel storage tanks).

PERMITTING AUTHORITY

All documents related to PSD applications for permits to construct or modify shall be submitted to the Bureau of Air Regulation of the Florida Department of Environmental Protection (DEP) at 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate the cogeneration plant shall be submitted to the Air Resource Section of the Department's South District Office at P.O. Box 2549, Fort Myers, Florida 33902-2549. Copies of all such documents shall be submitted to the Air Pollution Control Section of the Palm Beach County Health Department at P.O. Box 29, West Palm Beach, Florida 33402-0029.

COMPLIANCE AUTHORITY

All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Pollution Control Section of the Palm Beach County Health Department at P.O. Box 29, West Palm Beach, Florida 33402-0029. Copies of all such documents shall be submitted to the Air Resources Section at the South District Office of the Florida Department of Environmental Protection (DEP) at 2295 Victoria Avenue, Suite 364 in Fort Myers, Florida 33902-2549.

RELEVANT DOCUMENTS

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action and are on file with the Department.

- Air Permit No. PSD-FL-196 issued September 27, 1993 and all subsequent modifications.
- Permit application received on September 6, 2002 and all related correspondence to make complete.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix A. Citation Format
Appendix B. General Conditions
Appendix C. Standard Requirements
Appendix D. Final BACT Determinations
Appendix E. Continuous Monitor Requirements

CITATION FORMAT

Appendix A of this permit describes the format used to cite applicable rules, regulations, and permitting actions.

1. General Conditions: The permittee is subject to, and shall operate under, the attached General Conditions listed in Appendix B of this permit. General Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]

2. Applicable Regulations, Forms and Application Procedures: Unless otherwise indicated in this permit, the construction and operation of each subject emissions unit shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403 of the Florida Statutes (F.S.); Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.); and the Title 40, Parts 51, 52, and 60 of the Code of Federal Regulations (CFR), adopted by reference in Rule 62-204.800, F.A.C. The terms used in this permit have specific meanings as defined in the applicable chapters of the Florida Administrative Code. The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations. [Rules 62-204.800, 62-210.300 and 62-210.900, F.A.C.]

3. Permit Expiration: The original expiration date for the construction of this plant was July 1, 1996. Construction of the cogeneration plant is complete and commercial operation has commenced. This revised permit does not authorize any additional construction. The expiration date of this revised permit is September 1, 2004 strictly for the purpose of processing a Title V air permit revision to incorporate these changes. All physical construction is complete. [Rule 62-4.210(2), F.A.C.]

4. Effective Date: The effective date of the modified PSD permit is specified on the placard page (page 1).

5. Relaxations of Restrictions on Pollutant Emitting Capacity: If a previously permitted facility or modification becomes a facility or modification which would be subject to the preconstruction review requirements of this rule if it were a proposed new facility or modification solely by virtue of a relaxation in any federally enforceable limitation on the capacity of the facility or modification to emit a pollutant (such as a restriction on hours of operation), which limitation was established after August 7, 1980, then at the time of such relaxation the preconstruction review requirements of this rule shall apply to the facility or modification as though construction had not yet commenced on it. [Rule 62-212.400(2)(g), F.A.C.]

6. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

7. Modifications: No emissions unit or facility subject to this permit shall be constructed or modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

8. Title V Permit Revision: Pursuant to Rule 62-213.420(1)(a)2, F.A.C., the permittee shall submit an application for a revised Title V air operation permit at least ninety (90) days before the expiration of this permit, but no later than 180 days after commencing operation. In accordance with Rule 62-213.412(2), F.A.C., the permittee may immediately implement the changes authorized by this air construction permit after submitting the application for a revised Title V air operation permit to the Permitting Authority and providing copies of the application to EPA Region 4 and each Compliance Authority. To apply for a revised Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. As necessary, the application shall include a Compliance Assurance Monitoring Plan. The application shall be submitted to the Department's South District Office with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220, 62-213.412, and 62-213.420, F.A.C.]

This section of the permit addresses the following emissions units.

Emissions Units 001, 002, and 003: Cogeneration Boilers A, B, and C

Description: Each unit is a biomass-fired spreader stoker steam boiler manufactured by Zurn and designed to produce approximately 506,100 pounds per hour of steam at 1500 psig and 975° F.

Fuels and Capacity: The primary fuel is biomass (760 MMBtu per hour), which includes bagasse from the adjacent sugar mill and clean wood material delivered to the plant by area subcontractors. Auxiliary fuels include natural gas (605 MMBtu per hour) and very low sulfur distillate oil (490 MMBtu per hour).

Controls: Pollution control equipment includes low-NOx burners for gas firing, a selective non-catalytic reduction system to reduce nitrogen oxides emissions, mechanical dust collectors and an electrostatic precipitator to reduce particulate matter emissions, and an activated carbon injection system to reduce potential mercury emissions. Good operating practices and the efficient combustion of clean, low-sulfur fuels minimizes emissions of carbon monoxide, sulfuric acid mist, sulfur dioxide, and volatile organic compounds.

Stack Parameters: Exhaust gases exit a 10 feet diameter stack that is at least 199 feet tall and with a volumetric flow rate of approximately 319,000 acfm at 352° F.

Emissions Unit 004: Material handling and storage including unloading operations, stockpiles, transfer operations, conveyors, screens, crushers, hoppers, silos, and storage tanks.

CONSTRUCTION DETAILS

1. Generating Capacity: Construction of the proposed cogeneration plant shall reasonably conform to the plans described in the application. The plant shall be designed, constructed, and operated such that the generating capacity does not exceed 74.9 net megawatt (MW) based on a 1-hour average. The owner or operator shall not modify the cogeneration plant in any way that would cause the plant to exceed the limit on maximum net generating capacity. The hourly average net generation rate shall be recorded and retained for at least 5 years.

2. Boiler Design: The cogeneration boilers shall consist of spreader stoker units designed to fire biomass as the primary fuel with pipeline natural gas and distillate oil as auxiliary fuels. Natural gas and distillate oil are fired at startup and shutdown, when necessary to ensure good combustion, to supplement biomass fuel, and for periods when the biomass fuel supply is interrupted. No other fuels are authorized. *{Permitting Note: Each boiler was originally designed to fire low sulfur coal as an emergency backup fuel, but no transfer, crushing, or storage systems were ever installed. The permittee shall obtain a permit modification before firing any other fuel (including coal) not specifically authorized by this permit.}*

3. Stack: Each boiler shall have an individual stack that is at least 199 feet tall. The permanent stack sampling facilities for each stack must comply with Rule 62-297.345, F.A.C.

4. Process Monitors: Each boiler shall be equipped with instruments to measure the fuel feed rate, heat input, steam production, steam pressure, and steam temperature. Appendix E identifies minimum requirements for monitoring equipment.

5. Control Equipment: Each boiler shall be equipped with:
   - Low-NOx natural gas burners rated for no more than 0.15 pounds of NOx per MMBtu of heat input. Four burners are installed with one in each corner of the boiler. The maximum heat input rate from all four burners is 605 MMBtu per hour.
   - Mechanical dust collectors consisting of four, large diameter, multi-tube modules with airfoil vanes or equivalent equipment. The mechanical dust collectors shall be installed and maintained as pre-control devices prior to each electrostatic precipitator and designed for a removal efficiency of at least 85% of the particulate matter greater than 10 microns in size (assuming a specific gravity of 2.00).
   - An electrostatic precipitator (ESP) designed for at least 98 percent removal of particulate matter.

- A selective non-catalytic reduction (SNCR) system designed for at least 40 percent removal of NOx.
- A carbon injection system (or equivalent) for potential control of mercury emissions.

6. Continuous Monitors: For each cogeneration boiler, the permittee shall install, calibrate, maintain, and operate continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS) to measure and record emissions of carbon monoxide (CO), nitrogen oxides (NOx), opacity, oxygen (O_2), and sulfur dioxide (SO_2) in a manner sufficient to demonstrate compliance with the standards of this permit. The opacity monitor shall be placed in the ductwork between the electrostatic precipitator and the stack or in the stack. Appendix E identifies minimum requirements for monitoring systems.

7. Good Combustion Practices: An oxygen meter shall be installed for each unit to continuously monitor a representative sample of the flue gas. The oxygen monitor shall be used with automatic feedback or manual controls to continuously optimize air/fuel ratio parameters. Depending on the fuel quality and existing combustion conditions, the operator shall provide sufficient excess air to ensure good combustion within the boiler. The application to revise the Title V operation permit shall identify "good combustion practices" for the cogeneration boilers to minimize pollutant emissions during startup, operation, and shutdown. The document "Use of Flue Gas Oxygen Meter as BACT for Combustion Controls" shall be used as a guide. Good combustion controls shall also include the following:

   - Maintain improved combustion controls to provide efficient tuning of air/fuel control instrumentation.
   - Maintain rotary pocket-style wood feeders with efficient air seal to minimize intrusion of ambient air.
   - Maintain effective water level controls in bottom ash system to prevent intrusion of ambient air.
   - Mix biomass fuel to provide a consistent fuel blend.
   - Maintain the flue gas oxygen content to provide efficient combustion for the existing conditions.
   - When necessary to enhance poor combustion, reduce the biomass feed rate below the maximum rate.
   - When necessary to enhance poor combustion, co-fire natural gas or distillate oil.

8. O&M Plans: The application to revise the Title V operation permit shall include an operation and maintenance plan consisting of at least the following items.

   a. For the cogeneration boilers, electrostatic precipitators (ESP), selective non-catalytic reduction (SNCR) systems, activated carbon injection (ACI) mercury control systems, and silo fabric filters, identify: the capacities, design efficiencies, pollutant emission rates, general operational description of equipment, key design and operating parameters, expected operating range of each key parameter, monitoring of key parameters, frequency of monitoring (instantaneous, continual, or continuous), and actions taken to return key parameters to within the expected operating ranges. The plan shall also specify good operating practices to promote efficient boiler combustion, startup and shutdown procedures for the boilers and control systems to minimize emissions, and precautions to prevent fugitive particulate matter emissions. *{Permitting Note: Operation outside of the specified operating range for any monitored parameter would not be a violation by itself. However, continued operation outside of a specified operating range without corrective action may be considered circumvention of the air pollution control equipment or methods.}*

   b. For the selective non-catalytic reduction (SNCR) systems identify an alternate NOx emissions control plan based on previous monitoring data that shall be implemented in case the NOx monitoring system is down. The plan shall identify the minimum urea injection rate that has demonstrated continuous compliance with the NOx emissions standard at various load conditions.

9. Materials Handling Controls: For the fly ash handling and mercury control system reactant storage systems:

   a. The particulate matter filter control system for the storage silos shall be designed to achieve an outlet dust loading of no greater than 0.01 grains per actual cubic feet of exhaust.

   b. The fly ash handling system (including transfer points and storage bin) shall be enclosed. The ash shall

be wetted in the ash conditioner to minimize fugitive dust prior to discharging to the disposal bin.

OPERATIONAL RESTRICTIONS

10. Permitted Capacity: The cogeneration boilers shall be constructed and operated in accordance with the capabilities and specifications described in the application. The maximum heat input rate to each cogeneration boiler shall not exceed 760 MMBtu/hr when burning 100 percent biomass, 605 MMBtu/hr when burning 100 percent natural gas, and 490 MMBtu/hr when burning 100 percent very low sulfur distillate oil. The steam production of each boiler shall not exceed an average of 506,100 pounds per hour at 1,500 psig and 975°F. The operating hours of the cogeneration boilers are not restricted (8760 hours per year).

11. Primary Fuel: The primary fuel for the plant shall be biomass, which shall consist of bagasse and authorized wood material. Bagasse is the fibrous vegetative residue remaining after the sugarcane milling process. Authorized wood material is clean construction and demolition wood debris, yard trash, land clearing debris, and other clean cellulose and vegetative matter. Each cogeneration boiler shall combust no more than 30% by weight yard waste (yard trash) on a calendar quarter basis that is defined as a municipal solid waste (MSW) in 40 CFR 60.51a. The biomass fuel used at the cogeneration plant shall not contain hazardous substances, hazardous wastes, biomedical wastes, or garbage. The fuel used at the cogeneration plant shall not contain special wastes, except wood, lumber, trees, tree remains, bagasse, cane tops and leaves, and other clean vegetative and cellulose matter. The permittee shall perform a daily visual inspection of any wood material or similar vegetative matter that has been delivered to the plant for use as fuel. Any shipment observed to contain prohibited materials shall not be used as fuel, unless such materials can be readily segregated and removed from the wood material and vegetative matter.

    The permittee shall design and implement a management and testing program for the wood material and other materials delivered to the plant for fuel. The program shall be designed to keep painted and chemically treated wood, household garbage, toxic or hazardous non-biomass and non-combustible waste material, from being burned at this plant. The program shall provide for the routine inspection and/or testing of the fuel at the originating wood yard sites as well as at the cogeneration site, to ensure that the quantities of painted or chemically treated wood in the fuel are minimized. Based on the analysis of a composite sample, wood material containing more than 70.7 ppm arsenic or 83.3 ppm chromium or 62.8 ppm copper shall not be burned. Fuel scheduled for burning shall be inspected daily. At a minimum, the fuel management program shall include the following sampling and analyses:

    a. At least twice each month, the permittee shall have separate analyses conducted on an as-fired wood sample and an as-fired bagasse sample for the following: heating value (modified ASTM D3286, Btu/lb, dry), carbon content (modified ASTM D5373, percent by weight, dry), sulfur content (modified ASTM D4239 Method C, percent by weight, dry), and moisture content (modified ASTM D3173, percent by weight). In addition the wood sample shall be analyzed for copper, chromium, and arsenic in accordance with Methods 3050/6010 (EPA Method SW-846) and reported in ppm by weight, dry. Samples shall be taken at least two weeks apart.

    b. At least once each month, the permittee shall have an analysis conducted on a composite sample of fly ash and bottom ash for arsenic, copper, and chromium in accordance with the procedures described in EPA Method SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (40 CFR 261, Appendix III). The analytical results from ash testing shall be used in conjunction with those from the as-fired wood samples to evaluate the effectiveness of the fuel management program in removing chemically treated wood from the biomass fuel.[3] The permittee shall dispose of all ash generated on site in accordance with the applicable state and federal regulations.

    c. Analytical results of the as-fired biomass fuels and ash sampling shall be summarized and provided in the quarterly report to the Compliance Authority.

    The ash and fuel management program shall become part of the Title V operation permit.

12. Auxiliary Fuel: The cogeneration boilers shall fire only distillate oil and pipeline natural gas as auxiliary fuels. Distillate oil shall be new No. 2 oil with a maximum sulfur content of 0.05 percent sulfur by weight as determined by the appropriate test method listed in 40 CFR 60.17. "New" oil is oil that has been refined from crude oil and that has not been used in any manner that may contaminate it. Each boiler may startup solely on pipeline natural gas or distillate oil.

13. Fossil Fuel Limitation: The firing of fossil fuels (distillate oil and natural gas) shall be less than 25 percent of the total heat input to each cogeneration boiler during any calendar quarter.

14. Fuel Records: The permittee shall maintain a daily log of the amounts and types of fuels used. The amount, heating value, and sulfur content of each fuel oil delivery shall be kept in a log for at least five years. For each calendar month, the actual monthly SO_2 emissions and the 12-month rolling total SO_2 emissions shall be determined and kept in a log.

15. Permanent Shutdown: Sugar mill boiler Nos. 4, 5, 6, 10, 11, 12, 14, and 15 shall remain permanently shutdown and rendered incapable of operation. *{Permitting Note: Okeelanta Corporation's Boiler No. 16 may operate in accordance with modified Permit No. PSD-FL-169(A).}* [Rule 62-212.400, F.A.C.]

EMISSIONS LIMITING STANDARDS

16. Emissions Standards: Based on the maximum permitted heat input to each cogeneration boiler, stack emissions shall not exceed the standards specified in the following table:

Pollutant	Averaging Period	Emissions Standards per Boiler [i]	
		lb/MMBtu	lb/hr
Carbon Monoxide (CO) [a]	30-day rolling CEMS avg.	0.50	380.0
	12-month rolling CEMS avg.	0.35	
Nitrogen Oxides (NOx) [b]	30-day rolling CEMS avg.	0.15	114.0
Sulfur Dioxide (SO_2) [c]	24-hour rolling CEMS avg.	0.20	152.0
	30-day rolling CEMS avg.	0.10	
	12-month rolling CEMS avg.	0.06	
Stack Opacity [d]	6-minute block COMS avg. (Alternative: EPA Method 9)	≤ 20% opacity, except for one 6-minute block per hour that is ≤ 27% opacity	
Particulate Matter (PM/PM_{10}) [e]	3-run test avg.	0.026	19.8
Volatile Organic Compounds (VOC) [f]	3-run test avg.	0.05	38.0
Mercury [g]	3-run test avg.	5.4×10^{-06}	NA
Lead and Fluorides [h]	The BACT determination for lead and fluoride emissions is the use of fuels containing low levels of these compounds (bagasse, wood, distillate oil, and natural gas) and prospective removal with the fly ash by the mechanical dust collectors and electrostatic precipitators.		

a. Compliance shall be determined by data collected from the required CO CEMS in terms of "lb/MMBtu of heat input". The 30-day rolling average shall be determined by calculating the arithmetic average of all hourly emission rates for 30 successive boiler operating days and be consistent with the NOx monitoring requirements below. Compliance with the 12-month standard shall be based on the rolling average for each consecutive 12-month period. In addition, the CO CEMS shall record CO emissions in terms of "ppmvd corrected to 3% oxygen" for each 1-hour block average and each 24-hour block average (daily average). *{Permitting Note: CO emissions data recorded and reported in terms of "ppmvd corrected to 3% oxygen" are for informational purposes only.}*

b. Compliance shall be determined by data collected from the required NOx CEMS in terms of "lb/MMBtu of heat input". The 30-day rolling average shall be determined by calculating the arithmetic average of all hourly emission rates for 30 successive boiler operating days and the requirements of 40 CFR 60.13, 60.44a, 60.46a, 60.47a, 60.48a, and 60.49a. A boiler-operating day is any day in which any authorized fuel is fired.

c. Compliance with the SO_2 standards shall be determined by data collected from the required SO_2 CEMS in terms of "lb/MMBtu of heat input". The 24-hour average shall be determined by calculating the arithmetic average of all valid hourly emission rates for 24 successive boiler-operating hours. The 30-day rolling average shall be determined by calculating the arithmetic average of all hourly emission rates for 30 successive boiler-operating days and the requirements of 40 CFR 60.13, 60.43a, 60.46a, 60.47a, 60.48a, and 60.49a. Compliance with the 12-month standard shall be based on the rolling average for each consecutive 12-month period. Valid SO_2 hourly averages shall not be excluded from any compliance average. *{Permitting Note: Potential emissions of sulfuric acid mist are minimized by the effective control of SO_2 emissions with the firing of low sulfur fuels. For reporting purposes, sulfuric acid mist emissions shall be estimated as 6% of the total measured SO_2 emissions.}*

d. Continuous compliance with the opacity standard shall be determined by data collected from the required COMS in terms of "percent opacity" based on 6-minute block averages. Alternatively, compliance may also be determined by conducting EPA Method 9 observations.

e. Compliance with the particulate matter standards shall be determined by the average of three test runs conducted in accordance with EPA Method 5. For purposes of reporting PM_{10} emissions, it shall be assumed that all particulate matter emitted is PM_{10}.

f. Compliance with the VOC standards shall be determined by the average of three test runs conducted in accordance with EPA Method 25A based on propane. In addition, the permittee may choose to conduct EPA Method 18 concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions. Otherwise, all emissions measured by EPA Method 25A shall be considered "volatile organic compounds".

g. Compliance with the mercury standards shall be determined by the average of three test runs conducted in accordance with EPA Method 101A or 29. Emissions in excess of this standard shall be a violation of the permit. In addition, if two or more cogeneration boilers exceed the annual mercury emission limit, the permittee shall reactivate the carbon injection system for all three units within 30 days of the stack test report due date. The minimum carbon injection rate shall be at least 7 pounds per hour. Within 60 days of the stack test report due date, the permittee shall submit to the permitting and compliance authorities a mercury testing protocol designed to establish an effective carbon injection rate to control mercury emissions. Within 60 days of receiving approval for the mercury testing protocol by the permitting authority, the permittee shall begin the approved testing program. At a minimum, the permittee shall submit a full engineering report summarizing the uncontrolled emissions, controlled emissions, fuels, operating capacities, and recommending a minimum activated carbon injection rate to control mercury emissions.

h. The particulate matter standard is also a surrogate standard for lead emissions. *{Permitting Note: For reporting purposes, average lead emissions are expected to be 2.6×10^{-05} lb/MMBtu and average fluoride emissions are expected to be 1.9×10^{-04} lb/MMBtu when firing bagasse/wood.}*

i. Each boiler shall comply with the standards when firing any combination of authorized fuels. The "lb/hour" rates are based on the highest emission standard shown for that pollutant. Required compliance tests shall be performed in accordance with the requirements of Condition No. 19. The cogeneration boilers are also subject to the new source performance standards (NSPS Subpart Da) for new electric utility steam generating units. These requirements include the general provisions of Subpart A in 40 CFR 60, as well as the following source-specific applicable requirements: 60.40a

(Applicability and Designation of Affected Facility); 60.41a (Definitions); 60.42a (Standards for Particulate Matter); 60.43a (Standard for Sulfur Dioxide); 60.44a (Standard for Nitrogen Oxides); 60.46a (Compliance Provisions); 60.47a (Emissions Monitoring); 60.48a (Compliance Determination Procedures and Methods); and 60.49a (Reporting Requirements). The cogeneration boilers are also subject to Rule 62-296.405(2), F.A.C. (Fossil Fuel Steam Generators with more than 250 MMBtu per Hour of Heat Input), Rule 62-296.410, F.A.C. (Carbonaceous Fuel Burning Equipment), and Rule 62-296.570, F.A.C. (Reasonably Available Control Technology Requirements for Major VOC and NOx Facilities).

{Permitting Note: Appendix D identifies the final BACT determinations for the cogeneration boilers.}

17. Material Handling: The following conditions apply to the biomass, ash, and activated carbon handling facilities.

    a. All conveyors and conveyor transfer points shall be enclosed to preclude PM emissions (except those directly associated with the stacker/reclaimer, for which enclosure is operationally infeasible).

    b. Water sprays, chemical wetting agents, and/or stabilizers shall be applied to storage piles, handling equipment, unenclosed transfer points, etc. during dry periods and as necessary to prevent visible emissions. When adding, moving or removing material from the storage pile, visible emissions of no more than 20% opacity are allowed.

    c. The mercury control system reactant storage silos shall be maintained at a negative pressure while operating with the exhaust vented to a filter control system. Visible emissions from any storage silo shall not exceed 5 percent opacity based on a 6-minute block average. A visible emissions test (EPA Method 9) shall be performed at least annually for each silo that is loaded with carbon during the federal fiscal year.

STARTUP, SHUTDOWN, AND MALFUNCTION

18. Startup, Shutdown, and Malfunction Requirements: The permittee shall comply with the following requirements regarding periods of startup, shutdown, and malfunction for each cogeneration boiler.

    a. *Definitions*

        1) Excess emissions are emissions of pollutants in excess of those allowed by any applicable air pollution rule of the Department, or by a permit issued pursuant to any such rule or Chapter 62-4, F.A.C. The term applies only to conditions that occur during startup, shutdown, or malfunction. [Rule 62-210.200(106), F.A.C.]

        2) Startup is the commencement of operation of a boiler which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which may result in excess emissions. Periods of startup for each boiler shall end once steam generation reaches 150,000 pounds per hour. A cold startup is a startup after the boiler has been shutdown for 24 hours or more. A warm startup is a startup after the boiler has been shutdown for less than 24 hours.

        3) Shutdown is the cessation of the operation of a boiler for any purpose after steam generation drops below 150,000 pounds per hour.

        4) Malfunction is any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner. [Rule 62-210.200(160), F.A.C.]

    b. *Prohibition*: Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. Emissions data recorded during such preventable periods shall be included in the compliance averages. [Rule 62-210.700(4), F.A.C.]

c. *Monitoring Data Exclusion*: Each continuous monitoring system shall operate and record data during all periods of operation (including startup, shutdown, and malfunction) except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. Provided the operators implement best operational practices to minimize the amount and duration of emissions, the following conditions apply. Pursuant to Rules 62-210.700(1) and (5), F.A.C., these conditions consider the variations in operation of the cogeneration boilers.

1) Natural gas or distillate oil shall be fired during startup prior to energizing the electrostatic precipitator (ESP). Once the operating temperature recommended by the ESP manufacturer is maintained (approximately 340° F to 350 ° F), it shall be placed on line and the boiler shall comply with the opacity standard specified in Condition No. 16. The ESP shall be on line and functioning properly before firing any biomass. The opacity limit does not apply when the ESP is off line due to warm startup, cold startup, or shutdown. No more than twenty 6-minute block averages of opacity monitoring data shall be excluded in a 24-hour period due to documented malfunctions.

2) Hourly CO and NOx emission rate values collected during startup, shutdown, or documented malfunction may be excluded from the 30-day and/or 12-month compliance averages. No more than six hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a cold startup. No more than three hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a warm startup. No more than two hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a malfunction. No more than two hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a shutdown. For each cogeneration boiler, no more than 183 hourly emission rate values shall be excluded during any calendar quarter.

3) All valid hourly SO_2 emission rate values shall be included in all of the compliance averages. [40 CFR 60.46a and 60.49a]

4) To "document" a malfunction, the operator shall notify the Compliance Authority within one working day of the malfunction by phone, facsimile, or electronic mail. The notification shall include the date and time of malfunction, a description of the malfunction and probable cause, steps to taken to minimize emissions, and actions taken to correct the problem. [Rules 62-210.700(6) and 62-4.130, F.A.C.]

d. *Reporting*: In conjunction with the annual operating report, the permittee shall identify the number of startups, the number of shutdowns, and the number of malfunctions that occurred during the year for each boiler. For each boiler's CO and NOx monitors, the report shall identify the annual hours of emission data excluded from the compliance determination due to each type of incident (startups; shutdowns; and documented malfunctions).

[Rule 62-210.700, F.A.C.; Rule 62-4.070(3), F.A.C.; 40 CFR 60.8; and 40 CFR 60.46a]

COMPLIANCE METHODS AND REPORTING

19. Stack Test Requirements

a. *Initial Tests*: Initial tests were initially required for emissions of mercury, particulate matter, and volatile organic compounds. The Department may require these initial tests to be repeated if major physical or operational changes are made that affect main components such as the boiler, fuels, and/or pollution control equipment.

b. *Annual Tests*: At least once during each federal fiscal year, the permittee shall conduct compliance tests for emissions of mercury, particulate matter, and volatile organic compounds.

c. *Renewal Tests*: Within the 12-month period prior to submitting an application to renew the Title V air operation permit, the permittee shall conduct compliance tests for emissions of, mercury, particulate matter, and volatile organic compounds. Tests shall be conducted at five-year intervals.

d. *Test Procedures*: The emission compliance tests shall be conducted in accordance with the provisions of Chapter 62-297, F.A.C., 40 CFR 60.46a (NSPS Subpart Da), and as summarized in Appendix C of this permit. The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. The biomass fuel feed for each test run shall consist of at least 45% wood materials by weight. Testing of emissions shall be conducted with each cogeneration boiler operating at permitted capacity, which is defined as a heat input rate between 684 and 760 MMBtu/hour and firing 100% biomass. If it is impracticable to test at permitted capacity, a cogeneration boiler may be tested at less than the maximum permitted capacity; in this case, subsequent operation is limited to 110 percent of the test rate until a new test is conducted. Within three days of completing a test below permitted capacity, the permittee shall provide written notification of the restricted operational capacity to the Compliance Authority. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(7)(a)9, F.A.C. and 40 CFR 60.7, 60.8]

e. *Test Methods*: Compliance with the emission limits specified in this permit shall be demonstrated using EPA Methods, as contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources), or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

EPA Method	Description
1	Selection of sample site and velocity traverses
2	Stack gas flow rate when converting concentrations to or from mass emission limits
3A	Gas analysis when needed for calculation of molecular weight or percent O_2
4	Moisture content when converting stack velocity to dry volumetric flow rate for use in converting concentrations in dry gases to or from mass emission limits
5	Particulate matter emissions
6 or 6C	Sulfur dioxide emissions
7 or 7E	Nitrogen oxide emissions
9	Visible emissions determination of opacity *{Permitting Note: Although each unit is required to monitor opacity with a COMS, visible observations may also be used to demonstrate compliance.}*
10	Carbon monoxide emissions
12	Inorganic lead emissions
19	Calculation of sulfur dioxide and nitrogen oxide emission rates
25A	Volatile organic compounds emissions *{Permitting Note: EPA Method 18 may be conducted concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions. Otherwise, all emissions measured by EPA Method 25A shall be considered "volatile organic compounds".*
29	Multiple metals emissions
101A	Particulate and gaseous mercury emissions

No other methods may be used to demonstrate compliance unless prior written approval is received from the Department. Other applicable testing requirements are included in Appendix C of the permit. The permittee shall use CEMS and COMS data to demonstrate compliance with the emissions standards for CO, NOx, opacity, and SO_2. [Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A]

20. Continuous Monitor Requirements: The permittee shall demonstrate compliance with the emissions standards for CO, NOx, opacity, and SO_2 based on data collected from the continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS) required for each cogeneration boiler.

Appendix E specifies the minimum requirements for monitoring equipment.

21. Quarterly Reports: For each cogeneration boiler, the permittee shall submit a quarterly report for each required continuous emissions and opacity monitoring system in accordance with the requirements specified in Appendix E of this permit. The permittee shall also submit a quarterly summary of the fuel analyses, fuel usage, and equipment malfunctions. For each malfunction, the report shall identify the cause (if known), and corrective actions taken. The quarterly reports and summaries shall be submitted to the Compliance Authority no later than 30 days following each calendar quarter.

22. Annual Operating Report: The permittee shall submit an annual report that summarizes the actual operating rates and emissions from this facility. Annual operating reports shall be submitted to the Compliance Authority by March 1st of each year. Along with this report, the permittee shall also submit a summary of CO emissions from each cogeneration boiler in terms of "ppmvd corrected to 3% oxygen based on a 24-hour average (day)" for each operational day. [Rule 62-210.370(2), F.A.C.]

NOTICE OF FINAL TITLE V AIR OPERATION PERMIT REVISION

March 18, 2004

CERTIFIED MAIL 7003 1010 0004 1396 8393
RETURN RECEIPT REQUESTED

In the Matter of an
Application for Permit Revision by:

Mr. Ricardo A. Lima
Vice President and General Manager
Okeelanta Corporation
21250 U.S. Highway 27
South Bay, Florida 33493

FINAL Permit Project No.: 0990005-012-AV
Okeelanta Corporation
Palm Beach County

Dear Mr. Ricardo A. Lima:

Enclosed is the FINAL Permit, No. 0990005-012-AV, for the Title V Air Operation Revision. The purpose is to incorporate the terms and conditions of Construction Permits 0990005-005-AC, 0990005-008-AC, 0990005-009-AC/PSD-FL-169A, 0990005-010-AC, 0990005-013-AC, 0990332-013-AC/PSD-FL-196L, 0990332-014-AC/PSD-FL-196M, and 0990332-015-AC/PSD-FL-196N In accordance with Section II, Specific Condition 15. and Appendix SO-1 of the Title V Permit the revision removed the "old mill boilers", Emissions Units 003, 004, 005, 009, 010, 011, 012, and 013 from the Title V Permit. The application indicated that these emissions units are incapable of operation and will be dismantled.

The facility is located in Palm Beach County. This permit revision is issued pursuant to Chapter 403, Florida Statutes (F.S.). There were no comments received from Region 4, U.S. EPA, regarding the PROPOSED Permit.

Any party to this order (permit revision) has the right to seek judicial review of the permit revision pursuant to Section 120.68, F.S., by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Legal Office; and, by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 (thirty) days from the date this Notice is filed with the Clerk of the Department.

Executed in Fort Myers, Florida.

Sincerely,

Jon M. Iglehart
Acting Director of
District Management

JMI/MGN/jw
Enclosures

PERMITTEE:
Okeelanta Corporation
Post Office Box 86
South Bay, Florida 33493

Final Permit No.: 0990005-012-AV
Facility ID No.: 0990005 and 0990332
SIC No.: 2061, 2062, & 4911
Project: Title V Air Operation Permit Revision

This permit revision is being issued for the purpose of incorporating the terms and conditions of air construction permits, 0990005-005-AC, 0990005-008-AC, 0990005-009-AC/PSD-FL-169A, 0990005-010-AC, 0990332-013-AC/PSD-FL-196L, 0990332-014-AC/PSD-FL-196M, 0990332-015-AC/PSD-FL-196N. Construction Permit 0990005-005-AC involved construction of a sugar refinery production operation, process equipment, and a building addition. Construction Permit 0990005-008-AC authorized construction of a transshipment facility, including package lines, a sugar dryer/cooler, sugar grinder, and an increase in building size. The change in the process flow of baghouse E.U. 045 as mentioned above will also be incorporated. Construction Permit 009-AC/PSD-FL-196A allows Boiler No.16 to operate on natural gas or very low sulfur fuel oil. Construction Permit 0990005-010-AC involved the construction of a paint booth used to paint farm equipment, this permit and the modification, as mentioned above, that allows for flexibility in product substitution will be incorporated into this revision. Construction Permit 0990332-013-AC/PSD-FL-196L authorizes the power generation facility to use natural gas as a supplemental fuel. Construction Permit 0990332-014-AC/PSD-FL-169M revises emissions limiting and monitoring provisions for emissions of carbon monoxide, fluorides, lead, mercury, sulfur dioxide, and sulfuric acid mist; removes the authority to fire low sulfur coal as a backup fuel; and removes the requirement to conduct stack testing on chromium, copper, and arsenic. The permit also incorporated all previous permit modifications into a single document. Construction Permit 0990332-014-AC/PSD-FL-169N corrected minor typographical errors from Construction Permit 0990332-014-AC/PSD-FL-169M. In accordance with Section II, Specific Condition 15. and Appendix SO-1 of the Title V Permit the applicant also requested the removal of the "old mill boilers", Emissions Units 003, 004, 005, 009, 010, 011, 012, and 013 from the Title V Permit. The applicant has indicated that these emissions units are incapable of operation and will be dismantled. This permit revision is also being issued for the purpose of changing several Specific Conditions established in the Title V Air Operation Permit based on an Air Construction permitting action, No. 0990005-013-AC. Okeelanta Corporation's Sugarcane Processing (AIRS ID NO. 0990005), Sugar Refining (AIRS ID NO. 0990005) and New Hope Power Partnership (AIRS ID NO. 0990332) facilities are located approximately 6 miles south of South Bay on U.S. Highway 27, Palm Beach County, FL; UTM Coordinates Zone 17, 524.9 km East and 2940.1 km North; Latitude: 26° 35' 00" North and Longitude: 80° 45' 00" West.

This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statutes (FS), and Florida Administrative Code (F.A.C.), Chapters 62-4, 62-210, and 62-213. The above named permittee is hereby authorized to operate the facilities shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this NOTICE OF FINAL TITLE V AIR OPERATION PERMIT REVISION (including the FINAL Determination and the FINAL Permit) was sent by certified mail before the close of business on _____ to the persons listed or as otherwise noted:

Ricardo A. Lima, Okeelanta Corporation
James Meriwether, New Hope Power Partnership

The undersigned duly designated deputy agency clerk hereby certifies that a copy of this NOTICE OF FINAL TITLE V AIR OPERATION PERMIT REVISION was sent by U.S. Mail before the close of business on _____ to the persons listed or as otherwise noted:

David A. Buff, P.E., Golder Associates, Inc.
Al Linero, Bureau of Air Regulation (INTERNET E-mail Memorandum)
James Stormer, Palm Beach County Air Program Administrator
USEPA, Region 4 (INTERNET E-mail Memorandum)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

_____ _____
(Clerk) (Date)

FINAL Determination

Title V Air Operation Permit Revision
FINAL Permit Project No.: 0990005-012-AV
Revision to Title V Air Operation Permit No.: 0990005-003-AV
Okeelanta Corporation

I. Comment(s).

No comments were received from the USEPA during their 45-day review period of the PROPOSED Permit.

II. Conclusion.

In conclusion, the permitting authority hereby issues the FINAL Permit.

OKEELANTA CORPORATION
Okeelanta Corporation and New Hope Power Partnership Facilities
Facility ID Nos.: 0990005 and 0990332
Palm Beach County

Title V Air Operation Permit Revision

Final Permit No.: 0990005-012-AV
Revision to Title V Air Operation Permit No.: 0990005-003-AV

Permitting Authority:
State of Florida Department of Environmental Protection
Post Office Box 2549
Fort Myers, Florida 33902-2549
Telephone: (239) 332-6975
Fax: (239) 332-6969

Compliance Authority:
Palm Beach County Health Department
Post Office Box 29 (901 Evernia Street)
West Palm Beach, Florida 33402-0029
Telephone: 561-355-3136
Fax: 561-355-2442

Title V Air Operation Permit Revision
Final Permit No.: 0990005-012-AV

Revision to Title V Air Operation Permit No.: 0990005-003-AV

Table of Contents

Section	Page Number
Placard Page	1 - 2
I. Facility Information	3 - 6
A. Facility Description	
B. Summary of Emissions Unit ID Nos. and Brief Descriptions	
C. Relevant Documents	
II. Facility-wide Conditions	7 - 11
III. Emissions Units and Conditions	
A. Mill Boiler No.16	12 - 18
B. Sugar Mill NSPS Storage Tanks (3) and Cogeneration Facility NSPS Tank	19 - 20
C. Central Vacuum System, Packaging Lines, Sugar Grinder and Hopper, and Sugar Silos (3)	21 - 25
D. Central Dust Collection Systems No.1 and No.2 and Coolers No.1 and No.2	26 - 31
E. Cogeneration Facility – Materials Handling/Storage Operation	32 - 37
F. Cogeneration Boilers No.1, No.2, and No.3	38 - 51
G. Paint Booth for Farm Equipment	52 - 55
H. Common Conditions	56 - 66

IV. Attachments:

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix AMP-001, Ash Management Plan
Appendix CO-001, Consent Order - OGC FILE No. 99-2079-50-AP
Appendix FMP-001, Fuel Management Plan
Appendix FMTP-001, Wood-Waste and Ash Inspection and Testing Plan
Appendix H-1, Permit History/ID Number Changes
Appendix OMP-001, Operation and Maintenance Plan for the Fly Ash Silo Baghouse
Appendix OMP-002, Operation and Maintenance Plan for the Mercury Control Agent Silo Baghouse(s)
Appendix OMP-003, Operation and Maintenance Plan for the Cogeneration Facility Boilers' Air Quality Control Systems (AQCSs)
Appendix R-1, Rule Applicability
Appendix RBL-001, RACT, BACT and LAER Determinations
Appendix SS-1, Stack Sampling Facilities
Appendix SO-1, Simultaneous Operations for the Co-Generation and Sugar Mill Boilers
Appendix TV-4, Title V CONDITIONS (version dated 02/12/02)
Appendix U-1, List of Unregulated Emissions Units and/or Activities
Figure 1, Summary Report – Gaseous and Opacity Excess Emission and Monitoring System Performance
Table 1-1, Summary of Air Pollutant Standards and Terms
Table 2-1, Summary of Compliance Requirements

Referenced attachments made a part of this permit:

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix AMP-001, Ash Management Plan
Appendix CO-001, Consent Order - OGC FILE No. 99-2079-50-AP
Appendix FMP-001, Fuel Management Plan
Appendix FMTP-001, Wood-Waste and Ash Inspection and Testing Plan
Appendix H-1, Permit History/ID Number Changes
Appendix OMP-001, Operation and Maintenance Plan for the Fly Ash Silo Baghouse
Appendix OMP-002, Operation and Maintenance Plan for the Mercury Control Agent Silo Baghouse(s)
Appendix OMP-003, Operation and Maintenance Plan for the Cogeneration Facility Boilers' Air Quality Control Systems (AQCSs)
Appendix RBL-001, RACT, BACT and LAER Determinations
Appendix SS-1, Stack Sampling Facilities
Appendix SO-1, Simultaneous Operations for the Co-Generation and Sugar Mill Boilers
Appendix TV-4, Title V CONDITIONS (version dated 02/12/02)
Appendix U-1, List of Unregulated Emissions Units and/or Activities
Figure 1, Summary Report – Gaseous and Opacity Excess Emission and Monitoring System Performance
Table 1-1, Summary of Air Pollutant Standards and Terms
Table 2-1, Summary of Compliance Requirements

Effective Date: March 18, 2004
Renewal Application Due Date: April 24, 2005
Expiration Date: October 24, 2005

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

_____

Jon M. Iglehart
Acting Director of
District Management

JMI/MGN/jw

SECTION I. Facility Information.

Subsection A. Facility Description.

This facility consists of the sugarcane processing and sugar refining operations conducted by Okeelanta Corporation (AIRS ID No. 0990005) and the adjacent power generating operations conducted by Okeelanta Power L.P. (AIRS ID No.: 0990332) under the common control of the Okeelanta Corporation. The facilities have been combined into a single major Title V Source in accordance with Rule 62-210.200(126), F.A.C. based on the location of the two facilities.

The Title V Source includes Steam Generating Units, Materials Handling and Storage Operations, and Volatile Organic Liquid Handling and Storage Operations associated with the processing and refining of sugarcane and the cogeneration of power.

The Title V Source is classified as a modified-major source under the Prevention of Significant Deterioration (PSD) and New Source Review for Nonattainment Area (NSR-NAA) programs. The source includes existing, modified and new emissions units having undergone PSD review. The source is a major facility under the category "Fossil fuel fired boilers (or combinations thereof) totaling more than 250 million Btu/hr of heat input" as listed in Table 212.400-1, F.A.C. Facility-wide restrictions are addressed within Section II, Facility-wide Conditions.

The Title V Source is classified as a major VOC and NOx emitting facility and is subject to the Reasonably Available Control Technology (RACT) requirements of Rule 62-296.570, F.A.C. for the existing boilers. The RACT requirements are addressed within Section III, Emissions Unit Conditions.

The Title V Source includes several emissions units subject to New Source Performance Standards (NSPS) including 40 CFR 60 Subparts A, Da, Db, Ea, Kb and Y. The NSPS requirements are addressed within Section III, Emissions Unit Conditions.

The Title V Source does not include any emissions units subject to a National Emission Standard for Hazardous Air Pollutants (NESHAP). The source may have emissions of individual hazardous air pollutants (HAPs) at levels greater than 10 tons per year and emissions of total HAPs greater than 25 tons per year. Other HAPS, are listed as regulated based on a Best Available Control Technology (BACT) determination under the PSD program.

Subsection B. Summary of Emission Unit ID Nos. and Brief Descriptions

Subsection B. Summary of Emission Unit ID Nos. and Brief Descriptions for Okeelanta Corporation (AIRS ID No. 0990005)

E.U. ID No.	Status	Brief Description
001	N/A	Shutdown
002	N/A	Shutdown
003	N/A	Shutdown
004	N/A	Shutdown
005	N/A	Shutdown
006	N/A	Shutdown
007	N/A	Shutdown
008	N/A	Shutdown

E.U. ID No.	Status	Brief Description
009	N/A	Shutdown
010	N/A	Shutdown
011	N/A	Shutdown
012	N/A	Shutdown
013	N/A	Shutdown
014	Regulated	Mill Boiler No. 16
015	Regulated	Sugar Mill NSPS Storage Tank
016	Regulated	Sugar Mill NSPS Storage Tank
017	Regulated	Sugar Mill NSPS Storage Tank
018	Regulated	Central Vacuum System for the Transshipment Facility
019	Regulated	Packaging Lines
020	Regulated	Sugar Grinder and Hopper
021	Regulated	Central Dust Collection System No. 1 (Wet Rotoclone #1)
022	Regulated	Central Dust Collection System No. 2 (Wet Rotoclone #2)
023	Regulated	Cooler No. 1 (Cyclone No. 1)
024	Regulated	Cooler No. 2 (Cyclone No. 2)
025	Regulated	Fluidized Bed Dryer/Cooler
026	Regulated	Sugar Silo (S1101)
027	Regulated	Sugar Silo (S1102)
028	Regulated	Sugar Silo (S1103)
034	Regulated	Bulk Load-Out Operation
035	Unregulated	Transfer Bulk Load-Out Operation
036	Unregulated	Shop Operations
037	Unregulated	Sugar Mill Boiler House
038	Unregulated	Sugar Cane Dumping Area
039	Unregulated	Sugar Cane Processing Facility
040	Unregulated	Sugar Mill Fuel Farm
041	Unregulated	Sugar Mill Potable Water System
042	Unregulated	Sugar Mill Sewer Plant
043	Unregulated	Sugar Refinery
045	Unregulated	Main Sugar Receiver at Transshipment Facility
046	Unregulated	Sugar Grinder with Baghouse
047	Unregulated	Packaging lines to fill sugar packages
048	Regulated	Paint Booth for Farm Equipment

Summary of Emission Unit ID Nos. and Brief Descriptions for New Hope Power Partnership (AIRS ID No.: 0990332)

001	Regulated	Cogeneration Boiler No. 1
002	Regulated	Cogeneration Boiler No. 2
003	Regulated	Cogeneration Boiler No. 3
004	Regulated	Materials Handling and Storage Operations (Cogeneration Facility)
005	Unregulated	Cogeneration Facility NSPS Storage Tank

Please reference the Permit No., Facility ID No., and appropriate Emission Unit ID No., on all correspondence, test report submittal, applications, etc.

Subsection C. Relevant Documents
The documents listed below are not a part of this permit, however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:
Table 1-1, Summary of Air Pollutant Standards and Terms
Table 2-1, Summary of Compliance Requirements
Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix H-1, Permit History / ID Number Changes

These documents are on file with the permitting authority:

Title V Operating Permit
Initial Title V Permit Application received June 17, 1996
Amended Title V Permit Application received March 10, 2000
Title V Permit Revision Application received November 4, 2002

Mill Boiler No. 16 (E.U. ID No. 014)
AC50-191876 & PSD-FL-169, Initial Air Construction Permits
AC50-191876 & PSD-FL-169, 2/18/93 Modification
AC50-191876 & PSD-FL-169, 3/19/93 Modification
AC50-191876 & PSD-FL-169, 3/7/94 Modification
AO50-257065, Initial Operating Permit
0990005-009-AC/PSD-FL-196A, PSD Construction Permit

Sugar Mill NSPS Storage Tanks (E.U. ID Nos.: 015, 016, & 017)
AC50-265485, Initial Air Construction Permit (After-the-Fact)

Central Vacuum System for the Transshipment Facility (E.U. ID No. 018)
0990005-001-AC, Initial Construction Permit (After-the-Fact)
0990005-008-AC, Construction Permit

Packaging Lines (E.U. ID No. 019)
0990005-001-AC, Initial Construction Permit (After-the-Fact)
0990005-008-AC, Construction Permit

Sugar Grinder & Hopper (E.U. ID No. 020)
0990005-001-AC, Initial Construction Permit (After-the-Fact)
0990005-008-AC, Construction Permit

Central Dust Collection System No. 1 (E.U. ID No. 021)
0990005-002-AC, Initial Construction Permit (After-the-Fact)
0990005-005-AC, Construction Permit

Central Dust Collection System No. 2 (E.U. ID No. 022)
0990005-002-AC, Initial Construction Permit (After-the-Fact)
0990005-005-AC, Construction Permit

Cooler No. 1 (Cyclone No. 1) (E.U. ID No. 023)
0990005-002-AC, Initial Construction Permit (After-the-Fact)
0990005-005-AC, Construction Permit

Cooler No. 2 (Cyclone No. 2) (E.U. ID No. 024)
0990005-002-AC, Initial Construction Permit (After-the-Fact)
0990005-005-AC, Construction Permit

Fluidized Bed Dryer/Cooler (E.U. ID No. 025)
0990005-002-AC, Initial Construction Permit
0990005-005-AC, Construction Permit

Sugar Silos S1101, S1102, & S1103 (E.U. ID Nos. 026, 027, & 28)
0990005-001-AC, Initial Construction Permit (After-the-Fact)
0990005-008-AC, Construction Permit

Materials Handling and Storage Operations (Cogeneration Facility) (E.U. ID No. 029)
AC50-219413 & PSD-FL-196, Initial Air Construction Permits

Cogeneration Facility Boilers (E.U. ID Nos. 030, 031, & 032)
AC50-219413 & PSD-FL-196, Initial Air Construction Permits
AC50-219413 & PSD-FL-196A-F, Permit Amendments
0990332-013-AC/PSD-FL-196L
0990332-013-AC/PSD-FL-196M
0990332-013-AC/PSD-FL-196N

Cogeneration Facility NSPS Storage Tank (E.U. ID No. 033)
AC50-219413 & PSD-FL-196, Initial Air Construction Permits

Bulk Load-out Operation (E.U. ID 034)
0990005-005-AC, Construction Permit

Transfer Bulk Load-Out Operation (E.U. ID 035)
0990005-005-AC, Construction Permit

Main Sugar Receiver at Transshipment Facility (E.U. 045)
0990005-008-AC, Construction Permit
0990005-013-AC, Construction Permit

Sugar Grinder with baghouse (E.U.46)
0990005-008-AC, Construction Permit

New Packaging lines with baghouse (E.U.047)
0990005-008-AC, Construction Permit

Paint Booth (E.U.048)
0990005-010-AC, Construction Permit
0990005-013-AC, Construction Permit

SECTION II. Facility Wide Conditions.

The following conditions apply facility-wide.

1. APPENDIX TV-4, TITLE V CONDITIONS, is a part of this permit.
{Permitting Note: APPENDIX TV-4, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided one copy when requested, or otherwise appropriate.}

2. **Not federally enforceable.** General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited: The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants, which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C.]

{Permitting note: An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance.
[Rule 62-210.200, F.A.C.]

3. General Particulate Emission Limiting Standards: General Visible Emissions Standard.

   (a) No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as No. 1 on the Ringelmann Chart (20 percent opacity).
   [Rule 62-296.320(4)(b)1., F.A.C.]

   (b) If the presence of uncombined water is the only reason for failure to meet the visible emissions standards given in Rule 62-296.320(4)1, F.A.C., such failure shall not be a violation of the rule.
   [Rule 62-296.320(4)(b)3, F.A.C.]

   (c) All visible emissions test performed pursuant to the requirements of Rule 62-296.320(b)(4)1, F.A.C. shall use EPA Method 9, and shall meet all applicable requirements of Chapter 62-297, F.A.C.
   [Rule 62-296.320(4)(b)4, F.A.C.]

{Permitting Note: The general opacity standard applies in all cases except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit.}

4. Prevention of Accidental Releases (Section 112(r) of CAA).

   (a) As required by Section 112(r)(7)(B)(iii) of the CAA and 40 CFR 68, the owner or operator shall submit a Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center.

   (b) As required under Section 252.941(1)(c), F.S., the owner or operator shall report to the appropriate representative of the Department of Community Affairs (DCA), as established by department rule, within one working day of discovery of an accidental release of a regulated substance from the stationary source, if the owner or operator is required to report the release to the United States Environmental Protection Agency under Section 112(r)(6) of the CAA.

(c) The owner or operator shall submit, if applicable, the required annual registration fee to the DCA on or before April 1, in accordance with Part IV, Chapter 252, F.S. and Rule 9G-21, F.A.C.

Any required written reports, notifications, certifications, and data required to be sent to the DCA, should be sent to:

Department of Community Affairs
Division of Emergency Management
2555 Shumard Oak Boulevard
Tallahassee, FL 32399-2100
Telephone: 850/413-9921, Fax: 850/488-1739

Any Risk Management Plans, original submittals, revisions, or updates to submittals, should be sent to:

RMP Reporting Center
Post Office Box 3346
Merrifield, VA 22116-3346
Telephone: 703/816-4434

Any required reports to be sent to the National Response Center, should be sent to:

National Response Center
EPA Office of Solid Waste and Emergency Response
USEPA (5305 W)
401 M Street, SW
Washington, D.C. 20460
Telephone: 1/800/424-8802

Send the required annual registration fee using approved forms made payable to:

Cashier
Department of Community Affairs
State Emergency Response Commission
255 Shumard Oak Boulevard
Tallahassee, FL 32399-2149

[Part IV, Chapter 252, F.S.: and, Rule 9G-21, F.A.C.]

5. Unregulated Emissions Units and/or Activities: Appendix U-1, List of Unregulated Emissions Units and/or Activities, is a part of this permit.
[Rule 62-213.440(1), F.A.C.]

{Permitting note: Within the initial Title V permit application, the applicant grouped all insignificant and unregulated emissions units and activities into a single-unregulated emissions unit. The application did not identify any exempt activities.}

6. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions: The permittee shall allow no person to store, pump, handle, process, load, unload, or use in any process or installation, volatile organic compounds (VOC) or organic

solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
[Rule 62-296.320(1)(a), F.A.C.]

{Permitting Note: As of July 1, 2000, the Department has not deemed necessary or ordered the use of any vapor emission control devices or systems for the Title V Source.}

7. When appropriate, any recording, monitoring, or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.
[Rule 62-213.440, F.A.C.]

8. The permittee shall submit all compliance-related notifications and reports required by this permit to South District Office of the Department of Environmental Protection and the Palm Beach County Health Department at:

Department of Environmental Protection
South District Office
Post Office Box 2549
Fort Myers, Florida 33902-2549
Telephone: (239) 332-6975
Fax: (239) 332-6969

Palm Beach County Health Department
Air Pollution Control Section
Post Office Box 29
West Palm Beach, Florida 33402-0029
Telephone: (561) 355-3136
Fax: (561) 355-2442

9. Any reports, data, notification, certifications, and requests required to be sent to the United States Environmental Protection Agency (EPA) should be sent to:

United States Environmental Protection Agency
Region 4
Air, Pesticides & Toxics Management Division
Air and EPCRA Enforcement Branch
Air Enforcement Section
61 Forsyth Street
Atlanta, Georgia 30303-8960
Telephone: 404/562-9155; Fax: 404/562-9163

10. Excess Emissions Requirements:

(a) Excess emissions resulting from startup, shutdown, or malfunction of any emission unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration.
[Rule 62-210.700(1), F.A.C.]

(b) Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited.
[Rule 62-210.700(4), F.A.C.]

(c) Considering operational variations in types of industrial equipment operations affected by this rule, the Department may adjust the maximum and minimum factors to provide reasonable and practical regulatory controls consistent with the public interest.
[Rule 62-210.700(5), F.A.C.]

(d) In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Compliance Authority in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted to the Compliance Authority in a quarterly report, if requested by the Permitting or Compliance Authority.
[Rule 62-210.700(6), F.A.C.]

{Permitting note: The permittee requested authorization for periods of excess emissions greater than 2 hours in any 24-hour period for specific emissions units within the Initial Title V application. The applicant has been advised that the request is outside the scope of the Title V program and has been instructed to obtain approval from the Department's Bureau of Air Regulation. Once approval is granted, the Title V permit can be revised to reflect the change. For the steam generators at the Co-Generation Facility the Department has authorized a longer duration as described in **Specific Condition F.19.** of this permit.}

11. Air Emissions Bubble: Within Attachment OC-FA-7 of the initial Title V application, the permittee notified the Permitting Authority of its intent to use an air emissions bubble to locate a temporary steam generator at the source. The permittee's intent would be to use the temporary steam generator during major malfunctions of the existing steam generators. The permittee shall submit a complete application and receive a permit in accordance with the requirements of Rule 62-212.710, F.A.C. prior to implementing any changes.
[Rule 62-210.300(1) and 62-212.710, F.A.C.]

12. Compliance Plan. Based on the application, Emissions Units 014, 015, 016, 017, 018, 021, 022, 023, 024, 025, 026, 027, 028, 029, 034, 035, 045, 046, 047, and 048 were not in compliance. Appendix CP-1, Compliance Plan, is a part of this permit.
[Rule 62-213.440(2), F.A.C. Effective Date: March 18, 2004]

13. Statement of Compliance: The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2.,F.A.C., shall be submitted to the Department and EPA within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), F.A.C.
[Rules 62-213.440(3) and 62-213.900, F.A.C.]

{Permitting Note: This condition implements the requirements of Rules 62-213.440(3)(a)2. & 3., F.A.C. (see Condition 51. of Appendix TV-4, TITLE V CONDITIONS)}

14. Facility Wide Recordkeeping and Monitoring Requirements: The following facility wide recordkeeping and monitoring requirements apply:
[Rule 62-213.440(1)(b), F.A.C]

(a) The permittee shall generate a daily operations report for each day that a regulated emissions unit operates.

(b) The permittee shall monitor and record the daily electrical power generation (1-hour block averages) from the cogeneration facility for each day of operation.

(c) The permittee shall monitor and record the steam production rates of the sugar mill boilers (24-hour block average, 8:00 a.m. to 8:00 a.m.) and the cogeneration facility boilers (24-hour average) for each day of operation.

(d) The permittee shall monitor and record the fuel oil consumption rates for the sugar mill boilers on a daily basis for each day of operation.

(e) The permittee shall monitor the type of fuels fired in the mill boilers and the cogeneration boilers for each day of operation.

15. Facility Wide Operating Restrictions

A. The following multi-unit operating restrictions apply to Emissions Units 001, 002, and 003 (Cogeneration Boilers) and the Cogeneration Facility (Facility ID 0990332).
[PSD-FL-196 and AC50-219413, as amended]

(a) Electrical power generation from the cogeneration facility shall not exceed 74.9 (gross) megawatts on any 1-hour average, except during emission compliance tests.

(b) Total heat input to Emissions Units 001, 002, and 003 shall not exceed 11.5×10^{12} Btu/year.

16. Certification by Responsible Official (RO). In addition to the professional engineering certification required for applications by Rule 62-4.050(3), F.A.C., any application form, report, compliance statement, compliance plan and compliance schedule submitted pursuant to Chapter 62-213, F.A.C., shall contain a certification signed by a responsible official that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. Any responsible official who fails to submit any required information or who has submitted incorrect information shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary information or correct information.
[Rule 62-213.420(4), F.A.C.]

SECTION III. Emissions Units and Conditions.

Subsection A. This section addresses the following emissions unit.

E.U ID No.	Emission Unit Description
014	Mill Boiler No. 16 is a 211/202 MMBtu per hour package boiler fired with natural gas/distillate oil.

Description: This unit is Babcock and Wilcox Model No. FM 120-97 package boiler with a maximum steam production rate of 150,000 pounds per hour (24-houraverage). The design heat release rate for this unit is greater than 70,000 BTU/hour-ft^3.

Fuels: This unit is fired with pipeline-quality natural gas or very low sulfur distillate oil.

Capacity: The heat input rate is 211 MMBtu per hour when firing natural gas, which is approximately 0.207 million cubic feet of gas per hour based on a heat content of 1020 MMBtu per million SCF. The heat input rate is 202 MMBtu per hour when firing very low sulfur distillate oil, which is approximately 1433 gallons per hour based on a heat content of 141 MMBtu per thousand gallons.

Controls: The efficient combustion of clean fuels minimizes emissions of CO, PM/PM10, SO2, and VOC. Emissions of NOx are reduced with low NOx burners and flue gas recirculation (approximately 15%).

Stack Parameters: Exhaust gases exit a 75 feet tall stack that is 5.0 feet in diameter with a volumetric flow rate of approximately 88,200 acfm at 410° F.

{Permitting notes: BACT: The emissions standards specified for this unit represent determinations of the Best Available Control Technology (BACT) for nitrogen oxides (NOx), particulate matter (PM/PM10), and sulfur dioxide (SO2). Appendix BD of this permit lists the final BACT determinations for this project. [Rules 62-212.400(BACT) and 62-296.406 (BACT for small boilers), F.A.C.] The boiler has been reviewed under the PSD Program for sulfur dioxide (SO_2) and nitrogen oxides (NOx), and as a synthetic minor source for particulate matter (PM), volatile organic compounds (VOC), and carbon monoxide (CO). As a synthetic minor source of VOC and NOx, the unit is subject to the Reasonably Available Control Technology (RACT) emission limiting standards of Rule 62-296.570, F.A.C. The unit is classified as a new facility under the New Source Performance Standards (40 CFR 60 Subpart Db) and Rule 62-296.406, F.A.C., Fossil Fuel Fired Steam Generators with less than 250 MMBtu/hr of Heat Input.}

A.1. Permitted Capacity. The maximum design heat input rates to the boiler are 211 MMBtu per hour when firing natural gas and 202 MMBtu per hour when firing very low sulfur distillate oil. The maximum steam production rate shall not exceed 150,000 pounds per hour based on a 24-hour block average of the last 24 boiler operating hours. The boiler shall be equipped with integrating fuel flow meters to monitor the consumption of natural gas and distillate oil. The boiler shall be equipped with instruments to continuously monitor the steam production rate (pounds per hour), steam temperature (° F), and steam pressure (psig).
[Rule 62-210.200(PTE), F.A.C. and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

A.2. Authorized Fuel. The boiler shall fire only pipeline-quality natural gas or very low sulfur No. 2 distillate oil with a maximum sulfur content of 0.05% sulfur by weight.
[Rules 62-210.200(PTE) and 62-212.400(BACT), F.A.C. and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

A.3. Hour of Operation. The hours of operation are not limited (8760 hours per year). The boiler shall fire no more than 10,000,000 gallons of very low sulfur distillate oil during any consecutive 12 months.
[Rule 62-210.200(PTE), F.A.C. and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

A.4. Low NOx Burners: The permittee is authorized to install, tune, maintain and operate a modified burner system to include Coen low-NOx burners (or equivalent) with flue gas recirculation capable of achieving the emissions standards specified in this permit. The system shall be capable of firing pipeline-quality natural gas and very low sulfur distillate oil.
[Rule 62-212.400(BACT), F.A.C. and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

Emission Limitations and Standards

A.5. Emissions from the boiler shall not exceed the following limits for carbon monoxide (CO), nitrogen oxides (NOx), opacity, particulate matter (PM/PM10), sulfur dioxide (SO2), and volatile organic compounds (VOC). *(Permitting Note: Appendix BD lists the BACT determinations for this project.)*

Pollutant	Natural Gas Firing		Distillate Oil Firing		Rule Citation (F.A.C.)
	lb/MMBtu	lb/hour [g]	lb/MMBtu	lb/hour [g]	
CO [a]	0.10	21.1	0.11	22.2	Avoid Rule 62-212.400 (BACT)
NOx [b]		12.7		24.2	
24-hour block	0.10	NA	0.20	NA	Rule 62-212.400 (BACT)
30-day rolling	0.06	NA	0.12	NA	Rule 62-212.400 (BACT)
30-day rolling	0.20	NA	0.20	NA	NSPS Subpart Db
Opacity [c]	10% opacity, except for one 6-minute period per hour that does not exceed 27%opacity				Rule 62-212.400 (BACT)
PM/PM10 [d]	Efficient combustion of natural gas		Firing of very low sulfur distillate oil		Rule 62-212.400 (BACT), and Rule 62-296.406 (BACT)
SO2 [e]	Firing of natural gas		Firing of very low sulfur distillate oil		Rule 62-296.406 (BACT)
VOC [f]	Efficient combustion of natural gas		Efficient combustion of very low sulfur distillate oil		Avoid Rule 62-212.400 (BACT)

a. Compliance with the CO standards shall be based on the average of three test runs conducted at permitted capacity as determined by EPA Method 10.

b. As determined by the certified NOx CEMS, compliance with the 24-hour NOx standards shall be based on the block average of the last 24 boiler operating hours. The 30-day average NOx emissions shall be calculated at the end of each steam generating unit operating day from the measured hourly NOx emission rates for the preceding 30 steam generating unit operating days.

c. The opacity standard is based on a 6-minute block average, as determined by the certified continuous opacity monitoring system (COMS). EPA Method 9 may also be used to determine compliance with the opacity standard.

d. When firing natural gas, the expected maximum PM emissions are 0.002 lb/MMBtu (0.4 lb/hour). When firing very low sulfur distillate oil, the maximum expected PM emissions are 0.03 lb/MMBtu (6.1 lb/hour). Compliance with the CO and opacity standards shall serve as indicators of good combustion. No testing is required.

e. The fuel specifications of this permit effectively limit the potential SO2 emissions. No testing is required. When firing natural gas, the expected maximum SO2 emissions are 0.001 lb/MMBtu (0.2 lb/hour). When firing very low sulfur distillate oil, the expected maximum SO2 emissions are 0.06 lb/MMBtu (12.1 lb/hour).

f. When firing natural gas, the expected maximum VOC emissions are 0.03 lb/MMBtu (6.3 lb/hour). When low sulfur distillate oil, the expected maximum VOC emissions are 0.03 lb/MMBtu (6.1 lb/hour). Compliance with the CO and opacity standards shall serve as indicators of good combustion. No testing is required.

Maximum hourly emissions are based on the emissions standards and the maximum allowable heat input from each fuel.
[Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

Excess Emissions

A.6. Excess Emissions – Prohibited. Excess emissions caused entirely or in part by poor maintenance, poor operation or any other equipment or process failure that may reasonably be prevented during startup, shutdown or malfunction shall be prohibited. All such emissions shall be included in the calculation of the continuous compliance averages for opacity and NOx emissions.
[Rule 62-210.700(4), F.A.C. and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

A.7. Startup, Shutdown and Malfunction Plan: n accordance with Rule 62-210.700(5), F.A.C., the following permit conditions define alternate opacity standards and allow the exclusion of NOx monitoring data during specified periods of startup, shutdown, and unavoidable malfunction. These conditions shall only apply if operators employ the best operational practices to minimize the amount and duration of emissions during these incidents.

a. *Visible Emissions*: Opacity shall be recorded by the COMS during all episodes of startup, shutdown and malfunction. During startup and shutdown, visible emissions shall not exceed 20% opacity except for one 6-minute period per hour that does not exceed 27% opacity, based on 6-minute block averages.

b. *CEM System Data Exclusion*: NOx emissions data shall be recorded by the CEMS during all episodes of startup, shutdown and malfunction. When determining compliance with the 24-

hour block and 30-day rolling NOx BACT standards, up to two 1-hour averages due to startups, shutdowns, or unavoidable malfunctions may be excluded from each 24-hour period. The 30-day rolling NOx NSPS standard applies at all times and data may not be excluded.

c. *Notification*: Within three days of recording emissions in excess of a standard, the permittee shall notify the Compliance Authority by telephone or facsimile.

These conditions are established in place of the provisions specified in Rule 62-210.700(1), F.A.C.

[Design; Rules 62-4.070(3), 62-4.130, 62-210.700(5), and 62-212.400 (BACT), F.A.C. and [Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

Test Methods and Procedures

A.8. Annual Compliance Tests: During each federal fiscal year (October 1st to September 30th), the boiler shall be tested to demonstrate compliance with the CO emission standards for each authorized fuel that is fired for more than 400 hours. Data collected by the certified continuous opacity and NOx monitors shall be summarized for each CO test run and submitted as part of each test report. Compliance with the opacity and NOx standards are determined by data collected from the continuous monitors and separate annual performance tests for these pollutants are not required. Emissions of CO and NOx shall be reported in terms of "pounds per MMBtu of heat input" and "pounds per hour" using the appropriate F-factors for each fuel. The annual test report shall also indicate the date the annual NOx RATA was performed and summarize the results. If no fuel is fired for more than 400 hours, the permittee shall submit a summary of the opacity and NOx emissions data within 30 days of the end of the federal fiscal year.
[Rules 62-212.400 (BACT) and 62-297.310(7)(a)4, F.A.C. and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

A.9. Test Methods: As required, tests shall be performed in accordance with the following reference methods.

EPA Method	Description of Method and Comments
7E	Determination of Nitrogen Oxide Emissions from Stationary Sources
9	Visual Determination of the Opacity of Emissions from Stationary Sources
10	Determination of Carbon Monoxide Emissions from Stationary Sources • The method shall be based on a continuous sampling train.

In addition, it may be necessary to perform EPA Methods 1 through 4 as part of the above test methods. These test methods are specified in 40 CFR 60, Appendix A, and adopted by reference in Rule 62-204.800, F.A.C. No other methods may be used to demonstrate compliance unless prior written approval is received from the administrator of the Department's Emissions Monitoring Section in accordance with an alternate sampling procedure pursuant to 62-297.620, F.A.C. Other applicable testing requirements are included in Appendix SC of the permit.
[Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A, and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

Continuous Monitoring Requirements

A.10. NOx CEMS: The permittee shall install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) to measure and record the emissions of NOx from the boiler in a manner sufficient to demonstrate continuous compliance with the emission standards of this permit. The emission rate (pounds per MMBtu) shall be calculated by the CEMS using F-factors that are appropriate for each fuel fired. For purposes of determining compliance with the emission standards of this permit, missing or excluded data shall not be substituted. The monitoring system shall be installed, calibrated, and properly functioning prior to the initial emissions compliance tests and shall be used to demonstrate continuous compliance with the specified NOx emissions standards. [Rule 62-212.400(BACT), F.A.C.]

a. *Monitor Certification.* The NOx CEMS shall: be certified in accordance with Performance Specification 2 in Appendix B of 40 CFR 60; comply with the monitoring requirements of 40 CFR 60.13; have dual span capability with a "low" span no greater than "0.18 pounds per MMBtu" (or equivalent) and a "high" span no greater than 0.60 pounds per MMBtu" (or equivalent); and comply with the quality assurance procedures in Appendix F of 40 CFR 60. The required RATA test shall be performed prior to the initial emissions compliance tests using EPA Method 7E of Appendix A in 40 CFR 60.

b. *Data Collection.* The NOx CEMS shall be designed and operated to sample, analyze, and record data evenly spaced over the hour. Each hourly value shall be computed using at least one data point in each fifteen-minute quadrant of an hour, where the unit combusted fuel during that quadrant of an hour. Notwithstanding this requirement, an hourly value shall be computed from at least two data points separated by a minimum of 15 minutes (where the unit operates for more than one quadrant of an hour). The permittee shall use all valid measurements or data points collected during an hour to calculate the hourly averages.

c. *Emission Rate*: Compliance with the 24-hour NOx standards shall be based on the average of the CEMS data collected during each block of 24 boiler-operating hours. Data for each 24-hour block shall be exclusive from data in other 24-hour blocks. A "boiler operating hour" means a 1-hour block of time during which the boiler combusted any fuel. It is not necessary for fuel to have been combusted continuously for the entire hour. Compliance with the 30-day NOx standards shall be based on the average of the CEMS data collected during the last 30 boiler operating days, rolled for each new boiler operating day in accordance with 40 CFR 60.49a. A "boiler operating day" means a 24-hour period between 12:00 midnight and the following midnight during which any fuel is combusted at any time in the boiler. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.

d. *Data Exclusion.* NOx emissions data shall be recorded by the CEMS during all episodes of startup, shutdown, and malfunction. Individual NOx hourly average emission rate values may be excluded only in accordance with Condition No. 11. The permittee shall minimize the duration of data excluded for startup, shutdown and malfunctions, to the extent practicable. Data recorded during startup, shutdown or malfunction events shall not be excluded if the startup, shutdown or malfunction episode was caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure, which may reasonably be prevented. Best operational practices shall be used to minimize hourly emissions that occur during episodes of startup, shutdown and malfunction.

{Permitting Note: Compliance with these requirements will ensure compliance with other applicable CEMS requirements, such as: Rule 62-297.520, F.A.C.; 40 CFR Part 51, Appendix P; 40 CFR 60.7(a)(5); 40 CFR 60.13; 40 CFR 60.48b; 40 CFR 60.49b; 40 CFR 60, Appendix B; and 40 CFR 60, Appendix F.}
[40 CFR 60.48b; Rule 62-212.400(BACT), F.A.C. and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

A.11. Opacity COMS: The permittee shall install, calibrate, maintain, and operate continuous opacity monitoring system (COMS) to measure and record the opacity from the boiler in a manner sufficient to demonstrate continuous compliance with the emission standards of this permit. The COMS shall: be certified in accordance with Performance Specification 1 in Appendix B of 40 CFR 60; comply with the monitoring requirements of 40 CFR 60.13; and comply with the quality assurance procedures in Appendix F of 40 CFR 60. It shall be installed and functioning properly prior to the initial emissions compliance tests. The COMS shall be used to demonstrate continuous compliance with the corresponding opacity standards specified in this permit based on a 6-minute average.
[40 CFR 60.48b; Rule 62-212.400(BACT), F.A.C. and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

A.12. Monitor Availability: The availability of each required monitor shall not be less than 95% in any calendar quarter. The quarterly report required in Appendix XS shall be used to demonstrate monitor availability. In the event 95% availability is not achieved, the permittee shall submit a report to each Compliance Authority that identifies the problems in achieving 95% availability and a plan of corrective actions that will be taken to achieve 95% availability. The permittee shall implement the reported corrective actions within the next calendar quarter. The Department may require additional testing for failure to maintain at least 95% monitor availability. [40 CFR 60.48b; Rules 62-4.070(3) and 62-212.400(BACT), F.A.C. and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

Recordkeeping and Reporting Requirements

A.13. Fuel Sulfur Records: Compliance with the distillate oil sulfur limit shall be demonstrated by taking an initial sample, analyzing the sample for fuel sulfur, and reporting the results with the initial emissions compliance test report. Sampling and analyzing the fuel oil sulfur content shall be conducted in accordance with ASTM D4057-88, Standard Practice for Manual Sampling of Petroleum and Petroleum Products, and one of the following test methods for sulfur in petroleum products: ASTM D129-91, ASTM D1552-90, ASTM D2622-94, or ASTM D4294-90. More recent versions of these methods may be used. For each subsequent distillate oil delivery, the permittee shall maintain a permanent file of the certified fuel sulfur analysis from the vendor. At the request of a Compliance Authority, the permittee shall perform additional sampling and analysis for the fuel sulfur content.

[Rules 62-4.070(3), 62-4.160(15), and 62-297.310(7)(b), F.A.C. and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

A.14. Monthly Operations Summary: By the seventh calendar day of each month, the permittee shall record the following information in a written or electronic log.

- Hours and gallons of distillate oil firing for the previous month and the previous 12 months;
- Hours and SCF of natural gas firing for the previous month and the previous 12 months; and
- Maximum and average steam production (pounds per hour) for the previous month.

Information recorded and stored as an electronic file shall be available for inspection and printing within at least three days of a request from the Department or a Compliance Authority.
[Rules 62-4.160(15) and 62-4.070(3), F.A.C. and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

A.15. Continuous Monitor System Quarterly Report: Within thirty (30) days following each calendar quarter, the permittee shall submit a report to each Compliance Authority summarizing emissions in excess of a permit standard, periods of data exclusion, and monitor availability for the previous calendar quarter. The report shall also identify and describe any malfunctions causing emissions in excess of a permit standard. The report shall be submitted for each required monitoring system and shall generally follow the NSPS format provided in Appendix XS of this permit. If necessary, the report shall include a corrective action plan to achieve at least 90% monitor availability.
[Rules 62-4.130, 62-204.800, 62-210.700(6), F.A.C., 40 CFR 60.7, and Construction Permit 0990005-009-AC/PSD-FL-196A, dated October 30, 2001, Effective Date: March 18, 2004]

A.16. Common Conditions: This emissions unit is also subject to **Specific Conditions H.1. through H.20.** contained in **Subsection H. Common Conditions.**

Subsection B. This section addresses the following emissions units.

E.U. ID No.	Brief Description
-015	Volatile Organic Liquid Storage Tank (Sugar Mill)
-016	Volatile Organic Liquid Storage Tank (Sugar Mill)
-017	Volatile Organic Liquid Storage Tank (Sugar Mill)
-033	Volatile Organic Liquid Storage Tank (Cogeneration Facility)

Emissions Units Details

Emissions Units 015, 016, and 017 are fixed-cone-roof double-walled storage tanks each having an approximate capacity of 29,500 gallons. Emissions Unit 033 has a capacity of approximately 50,000 gallons. The tanks were constructed after July 23, 1984 and are subject to specific recordkeeping requirements of 40 CFR 60 Subpart Kb. The tanks store No. 2 distillate fuel oil for Mill Boiler No.16 (E.U. ID Nos. 15, 16, & 17) and for the Co-Generation Boilers (E.U. ID No. 33).

{Permitting notes: The units are classified as new facilities under the New Source Performance Standards (40 CFR 60 Subpart Kb) and subject to the recordkeeping requirement of 40 CFR 60 Subpart Kb.}

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

{Permitting note: The operating restrictions which are identified as "Not Federally Enforceable" have been placed in the permit to identify the capacity of the unit for purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity, to establish emission limits, and to aid in determining future rule applicability.}

B.1. Permitted Capacity. The permittee shall not allow, cause, suffer, or permit the operation of Emissions Units 015, 016, and 017 in excess of the following total capacity without prior authorization from the Permitting Authority:

(a) Annual Throughput: 9,344,600 gallons (12-month rolling total) of No. 2 distillate oil.

[Rules 62-4.160(2), 62-210.200(228), 62-210.300, F.A.C. and Construction Permit AC50-265485 dated May 22, 1995]

B.2. Methods of Operation: The permittee shall not allow, cause, suffer or permit any change in the method of operation of Emissions Units 015, 016, and 017 without prior authorization from the Permitting Authority. The authorized methods of operation include the following:

(a) Fuel Type(s): The permittee is authorized to store No. 2 distillate oil.

(b) Fuel Vapor Pressure: The permittee shall not store or handle any fuels within the units with a maximum true vapor pressure greater than 15.0 kPa (2.176 psi).
[Construction Permit AC50-265485 dated May 22, 1995 and 40 CFR 60.110b(c)]

[Rules 62-4.160(2), 62-210.200(228), 62-210.300, F.A.C., 40 CFR 60.110b(c), and AC50-265485 dated May 22, 1995]

B.3. Hours of Operation: The permittee is authorized to operate the units continuously.
[Construction Permit AC50-265485 dated May 22, 1995]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

B.4. Volatile Organic Compounds (VOC): The permittee shall not allow VOC emissions greater than 217 pounds per year from Emissions Units 015, 016, and 017.
[Construction Permit AC50-265485 dated May 22, 1995]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

Compliance Demonstrations and Periodic Monitoring

B.5. Compliance Demonstrations: The permittee shall demonstrate compliance with the emissions limitation of Specific Condition **E.4.** based on record keeping and emission estimates calculated using the latest version of AP-42 or the TANKS Software Package.
[Rule 62-297.310(7), F.A.C.]

B.6. Operating Parameters: The permittee shall implement the following periodic monitoring requirements to ensure compliance with the Specific **Conditions B.1**, **B.2.** and **B3.** of this permit:

(a) Monthly Throughput: The permittee shall monitor and record the monthly throughput of volatile organic liquids through each tank.

(b) Volatile Organic Liquid Types: The permittee shall monitor and record the type (Name and True Vapor Pressure at 80°F) of volatile organic liquids stored and handled in each tank.

[Rule 62-213.440(1)(b), F.A.C and Construction Permit AC50-265485 dated May 22, 1995]

New Source Performance Standards (NSPS)

{Permitting note: All the units are subject to the recordkeeping requirements of 40 CFR 60 Subpart Kb provided the permittee complies with the requirements of 40 CFR 60.110b, Applicability.}

B.7. 40 CFR 60 Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or Modification Commenced after July 23, 1984: The permittee shall comply with the applicable requirements of 40 CFR 60 Subpart Kb contained in Appendix NSPS-Kb. Specifically:

(a) 40 CFR 60.110b, Applicability,

(b) 40 CFR 60.111b, Definitions,

(c) 40 CFR 60.116b, Monitoring of Operations

[40 CFR 60.40b(a), Rule 62-204.800(7)(b), F.A.C.]

B.8. Common Conditions: This emissions unit is also subject to **Specific Conditions H.12. , H.18, and H.19.** contained in Subsection **H. Common Conditions.**

Subsection C. This section addresses the following emissions units.

E.U. ID No.	Trans-Shipment Facility Brief Description
-018	Central Vacuum System for Trans-Shipment Facility
-019	Packaging Lines
-020	Sugar Grinder & Hopper
-026	Sugar Silo S1101
-027	Sugar Silo S1102
-028	Sugar Silo S1103

Emissions Units Details

Central Vacuum System, designated Emissions Unit 018, used periodically for house keeping purposes. The system includes various pick-up points throughout the Trans-Shipment Facility and is equipped with a cyclonic separator followed by a baghouse manufactured by Ross Cook (Model No. RC30HBFBX-PJ). The baghouse exhausts through an 8' stack. The system also includes a new baghouse to control a new powdered sugar dryer and cooler, a new sugar grinder with baghouse and new packaging lines with baghouse.

Packaging Lines, designated Emissions Unit 019, consisting of ten (10) packaging lines, which are used to package sugar in bags ranging in size from 5 pounds to several hundred pounds. The packaging lines are connected to a single baghouse manufactured by MAC Filter (Model 55AVSC640). The baghouse exhausts through a 27' stack. The Emissions Unit also includes several new packaging lines with baghouse.

Sugar Grinder and Hopper, designated Emissions Unit 020 used to reduce the sugar solids to a desired particle size including powered sugar. The grinder has a design capacity of 4 tons per hour. The grinder and interconnected hopper are connected to baghouse manufactured by Reimelt Corporation. The baghouse exhausts through a 39' stack. The Emissions Unit also includes a new baghouse to control a new powdered sugar dryer and cooler and a new sugar grinder with baghouse.

Sugar silo numbers S1101, S1102, and S1103, designated Emissions Units 026, 027, and 028, used to store and handle refined sugar prior to packaging and/or grinding. Each silo has a net capacity of 4,600 cubic feet, a diameter of 12 feet, a height of 68 feet and is equipped with a baghouse manufactured by Reimelt Corporation (Model No. JF795-14P-7.5-5). Each baghouse exhausts through an individual 65' stack.

{Permitting note: The units are classified as synthetic minor sources under the PSD Program and considered as "Regulated Emissions Units" because they are subject to unit-specific federally enforceable emission limitations for particulate matter and visible emissions.}

Construction Restrictions

The following specific conditions apply to the emissions units listed above:

{Permitting notes: The following construction restrictions are "Not Federally Enforceable" and have been placed in the permit to identify the capacity of the unit to aid in determining future rule

applicability. For the Refinery Operations, activities, which are completely enclosed and vented within the building, are not classified as air pollution sources.}

C.1. Design Specifications: The permittee shall not allow, cause, suffer or permit changes to the following Air Quality Control System (AQCS) specifications without prior authorization from the Permitting Authority.

E.U.	Design Flows[1]		AQCS Fabric Filter Specifications[1]			Potential Emissions[1]	
ID No.	(ACFM)	(DSCFM)	Filtering Material	Filtering Area	A/C Ratio	gr/scf[2]	lb/hr[2]
-018	284	280	PF Bags	72	3.9	0.01	0.024
-019	10,000	9,868	PP Bags	3,520	2.84	0.01[3]	0.857
-020	3,000	2,960	GTP Bags	800	3.75	0.0005	0.013
-026	521	500	SPF Bags	81 sq. ft.	6.17	0.02	0.0857
-027	521	500	SPF Bags	81 sq. ft.	6.17	0.02	0.0857
-028	521	500	SPF Bags	81 sq. ft.	6.17	0.02	0.0857

A/C Ratio – Air to Cloth Ratio (dscfm/sq. ft)
N/A – Not Applicable
PF – Polyfelt
Specifications
PP – Polyester Pleated
GTP – Gore-Tex Polyester
SPF – Standard Polyester Felt
PE 550 – Filter Quality per Manufacturer's

[1] - Not Federally Enforceable.
[2] - Potential Emissions include PM and PM10.
[3] - Units are in grains per actual cubic foot.

[Rules 62-4.160(2), 62-210.200(228), and 62-210.300, F.A.C.]

Essential Potential to Emit (PTE) Parameters

{Permitting note: The operating restrictions which are identified as "Not Federally Enforceable" have been placed in the permit to identify the capacity of the unit for purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity, to establish emission limits, and to aid in determining future rule applicability.}

C.2. Permitted Capacities: The permittee shall not allow, cause, suffer or permit the operation of a unit in excess of the following capacities without prior authorization from the Permitting Authority.

E.U. ID No.	Process Rates		Regulation/Permit
	TPH	Tons/day	
-018	N/A	N/A	Not Federally Enforceable, 0990005-001-AC
-019	81.5(1)	865	Federally Enforceable, 0990005-008-AC
-020	4(2)	N/A	Not Federally Enforceable, 0990005-001-AC
-026	87.5	N/A	Not Federally Enforceable, 0990005-001-AC
-027	87.5	N/A	Not Federally Enforceable, 0990005-001-AC
-028	87.5	N/A	Not Federally Enforceable, 0990005-001-AC

Note(s): (1) Maximum Loading to all packaging lines.
(2) Daily Average.

[Rules 62-4.160(2), 62-210.200(228), and 62-210.300, F.A.C. and Construction Permit 0990005-008-AC dated May 10, 2001, Effective Date: March 18, 2004]

C.3. Methods of Operation: The permittee shall not allow, cause, suffer, or permit any change in the method of operation without prior authorization from the Permitting Authority. The authorized methods of operation include the following:

(a) *Central Vacuum System*: The permittee is authorized to use the system for housekeeping purposes and vent the exhaust to the outside air through the AQCS. The system has no restrictions on the number or types of pick-up points. [Not Federally Enforceable; Construction permit 0990005-001-AC dated January 24, 1996]

(b) *Packaging Lines*: The permittee is authorized to operate a total of ten (10) packaging lines and vent the exhaust to the outside air through the AQCS. The permittee may operate all ten (10) packaging lines simultaneously at the maximum feed rate specified in **Specific Condition C.2**. [Federally Enforceable; Construction Permit 0990005-008-AC dated May 10, 2001]

(c) *Sugar Grinder & Hopper*: The permittee is authorized to operate a sugar grinder and associated interconnected hopper and vent the exhaust to the outside air through the AQCS. [Not Federally Enforceable; Construction Permit 0990005-001-AC dated January 24, 1996]

(d) *Storage Silos*: The permittee is authorized to unload sugar from two refinery trucks at a time into a single silo using mechanical conveyors and vent the exhaust to the outside air through the AQCS. [Not Federally Enforceable; Construction Permit 0990005-001-AC dated January 24, 1996]

[Rules 62-4.160(2), 62-210.200(228), and 62-210.300, F.A.C., Effective Date: March 18, 2004]

C.4. Hours of Operation: The permittee is authorized to operate the Central Vacuum System, Packaging Lines, Sugar Grinder and Hopper, and Storage Silos continuously
[Construction Permit 0990005-001-AC dated January 24, 1996].

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

C.5. Visible Emissions: The permittee shall not allow visible emissions greater than 5 percent opacity (6-minute average) from the Central Vacuum System (E.U. ID No. 018), the Packaging Lines (E.U. ID No. 019), or the Storage Silos (E.U. ID Nos. 026, 027, & 028) baghouse exhausts.
[Rule 62-297.620(4), F.A.C., Construction Permits 0990005-001-AC dated January 24, 1996 and 0990005-008-AC dated May 10, 2001, Effective Date: March 18, 2004]

C.6. Particulate Matter (PM): The permittee shall not allow particulate matter emissions from each unit greater than the following without prior authorization from the Permitting Authority:

E.U. ID No.	Allowable Emission Tons Per Year (TPY)	Regulation/Permit
-018	0.105	0990005-008-AC
-019	6.009	0990005-008-AC
-020	4.115	0990005-008-AC
-026	0.375	0990005-008-AC
-027	0.375	0990005-008-AC
-028	0.375	0990005-008-AC
Total	11.352	0990005-008-AC

[Rules 62-4.160(2), 62-210.200(228), and 62-210.300, F.A.C. and Construction Permits 0990005-001-AC, dated January 24, 1996 and 0990005-008-AC, dated May 10, 2001, Effective Date: March 18, 2004]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

C.7. Visible Emissions: All visible emissions tests performed pursuant to the requirements of this permit shall comply with the following provisions:

(a) *Test Method*: The test method for visible emissions shall be EPA Method 9, incorporated in Rule 62-297.401(9) F.A.C. and the required minimum period of observation for a compliance test shall be thirty (30) minutes. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.
[Rules 62-297.401 and 62-297.310(4)(a)2., F.A.C., and Construction Permits 0990005-001-AC dated January 24, 1996 and 0990005-008-AC, dated May 10, 2001]

(b) *Test Procedures*: Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.
[Construction Permits 0990005-001-AC dated January 24, 1996 and 0990005-008-AC, dated May 10, 2001, Effective Date: March 18, 2004]

C.8. Particulate Matter (PM): All particulate matter tests performed pursuant to the requirements of this permit shall comply with the following:

(a) *Test Method*: The test methods for particulate matter shall be EPA Methods 1, 2, 3, 4, and 5 described in 40 CFR 60, Appendix A, Rules 62-297.401(1) through (5), F.A.C.
[Rule 62-297.401, F.A.C., Construction Permits 0990005-001-AC dated January 24, 1996]

(b) *Test Procedures*: The test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.
[Rule 62-297.401, F.A.C.]

Compliance Demonstrations and Periodic Monitoring

C.9. Compliance Demonstrations: The permittee shall have a formal compliance test conducted for visible emissions from each emissions unit annually during each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, for the following pollutants.
[Rule 62-297.310(7), F.A.C]

C.10. Waiver of Compliance Test Requirements: For particulate matter (PM), the Permitting Authority has waived the particulate matter compliance test requirements and specified the alternative standard of 5% opacity (Specific Condition **C.5.**). If the Compliance Authority has reason to believe that either the design specifications of Specific Condition **C.1.** or the emissions rates are not being met, it shall require that compliance be demonstrated by the test methods specified in Specific Condition **C.8.**
[Rule 62-297.620(4), F.A.C., Construction Permits 0990005-001-AC dated January 24, 1996 and 0990005-008-AC, dated May 10, 2001, Effective Date: March 18, 2004]

C.11. Operating Parameters: The permittee shall implement the following periodic monitoring requirements to ensure compliance with the Specific Conditions **C.2.** and **C.3.** of this permit:

(a) *Central Vacuum System (E.U. ID No. 018)*: None

(b) *Packaging Line (E.U. ID No. 019)*: The permittee shall monitor and record the date, amount of sugar packaged, number of packaging lines operated, and hours of operation on a daily basis.

(c) *Sugar Grinder & Hopper (E.U. ID No. 020)*: The permittee shall monitor and record the date and amount of sugar processed on a daily basis.

(d) *Storage Silos (E.U. ID Nos. 026, 027, & 028)*: The permittee shall monitor and record the date, silo loaded, and the amount transferred.

[Rule 62-213.440(1)(b), F.A.C]

C.12. Common Conditions: This emissions unit is also subject to **Specific Conditions H.1. through H.20.** contained in **Subsection H. Common Conditions.**

Subsection D. This section addresses the following emissions units.

E.U. ID No.	Sugar Refinery Brief Description
021	Central Dust Collection System No. 1 (Rotoclone No. 1)
022	Central Dust Collection System No. 2 (Rotoclone No. 2)
023	Cooler No. 1 (Wet Cyclone No. 1)
024	Cooler No. 2 (Wet Cyclone No. 2)
025	Fluidized Bed Dryer/Cooler
034	Bulk Load-out Operation
035	Transfer Bulk Load-out Operation

Emissions Units Details

Central Dust Collection System No. 1 (Rotoclone No. 1), designated Emissions Unit 021, used to control emissions from the Rotary Dryer, Bucket Elevator No. 10 (BE-10), and Belt Conveyor 11 (BC-11). The system is controlled by use of a skimmer followed by a wet rotoclone manufactured by AFF (Type W). The rotoclone exhausts through a stack 93' above grade.

Central Dust Collection System No. 2 (Rotoclone No. 2), designated Emissions Unit 022, used to control emissions from three (3) Rotex Screens, the Silo Scale, belt conveyors BC-16 and BC-19, the Packing Rotex Screen, the Packing Room Bins, the Bulk Curing Bins 1 through 6, Bucket Elevator 16 (BE-16) and the Sweco Shaker Screen. The system is controlled by use of wet rotoclone manufactured by AFF (Type W). The rotoclone exhausts through a stack 93' above grade.

Fluidized Bed Dryer, designated emissions unit 025 used as the primary sugar drying system with a permitted capacity of 36.25 TPH. The particulate matter emissions from the fluidized bed dryer are exhausted through a high efficiency baghouse manufactured by BETH GmbH, 23556 LÜB-beck (Type BETHPULS 6.60 x 7.5.10). The baghouse exhausts through a stack 80' above grade.

Cooler No. 1, designated Emissions Unit 023 used to cool drier sugar leaving the Rotary Dryer. The Cooler has a design capacity of 35.4 TPH. The Cooler exhausts to a wet cyclone vented at a height of 47' above grade.

Cooler No. 2, designated Emissions Unit 024 used to cool dried sugar leaving the Rotary Dryer. The Cooler has a design capacity of 35.4 TPH. The Cooler exhausts to a wet cyclone vented at a height of 35' above grade.

A 40 ft. x 80 ft. building to house a 1,700 cubic feet vacuum pan and associated process equipment. The associated process equipment includes a vacuum pan condenser, two centrifugals, syrup and molasses feed tanks, final liquor syrup storage tanks, one 5,000 gallon condensate collection tank, one 1,000 gallon centrifugal wash water tank, two 1,200 cubic feet seeder cutover tanks, motor control center room, MCC and centrifugal controller room, refined sugar conveying system, one 2,000 cubic feet receiver, and various pumps.

Bulk Load-out Operation, designated Emissions Unit 034 used to load sugar into either trucks or railcars. The operation includes a silo and a three-sided building. Emissions of fugitive particulate matter are controlled by use of the enclosure.

Transfer Bulk Load-out Station, Designated Emissions Unit 035 used to supply sugar to the packaging and transshipment facility. The operation includes four enclosed conveyors in series feeding refined sugar from the Bulk Load-out operation (E.U. ID 034) to an enclosed load-out building. Emissions of

fugitive particulate matter are controlled by use of the enclosure and high-pressure air curtains. Two additional storage and curing bins and new rotex screens have been added to the existing refinery building.

{Permitting note: The units are classified as synthetic minor sources under the PSD Program and considered as "Regulated Emissions Units" because they are subject to unit-specific federally enforceable emission limitations for particulate matter and visible emissions.}

Construction Restrictions

The following specific conditions apply to the emissions units listed above:
{Permitting notes: The following construction restrictions are "Not Federally Enforceable" and have been placed in the permit to identify the capacity of the unit to aid in determining future rule applicability. For the Refinery Operations, activities, which are completely enclosed and vented within the building, are not classified as air pollution sources.}

D.1. Design Specifications: The permittee shall not allow, cause, suffer or permit changes to the following Air Quality Control System (AQCS) specifications without prior authorization from the Permitting Authority:
[Rules 62-4.160(2), 62-210.200(228), and 62-210.300, F.A.C.]

(a) **Fabric Filter Control Devices**

E.U. ID No.	Design Flows[1]		AQCS Fabric Filter Specifications[1]		
	(ACFM)	(DSCFM)	Filtering Material	Filtering Area	A/C Ratio
025	70,620	N/A	PE 550	9,041	7.81

A/C Ratio – Air to Cloth Ratio (dscfm/sq. ft)
N/A – Not Applicable
PE 550 – Filter Quality per Manufacturer's Specifications

(1) - Not Federally Enforceable.
(2) – Potential Emissions include PM and PM10.

(b) **Cyclonic Control Devices**

E.U. ID No.	Design Flows[1]	AQCS Design Specifications[1]	
	(ACFM)	Water Injection Rate	Pressure Drop
021	19,000	7.5 gpm	9.0 in H_2O
022	19,000	7.5 gpm	9.0 in H_2O
023	14,100	7.5 gpm	8.0 in H_2O
024	14,100	7.5 gpm	8.0 in H_2O

ACFM – Actual Cubic Feet per Minute
gpm – gallons per minute, minimum value
in. H_2O – inches of water, minimum value
RD – Rotary Dryer FBD – Fluidized Bed Dryer

(1) - Not Federally Enforceable.
(2) – Potential Emissions Particulate Matter/PM10.

Essential Potential to Emit (PTE) Parameters

{Permitting notes: The operating restrictions which are identified as "Not Federally Enforceable" have been placed in the permit to identify the capacity of the unit for purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity, to establish emission limits, and to aid in determining future rule applicability.}

D.2. Permitted Capacities: Refined sugar production shall not exceed 1,500 tons per day and 390,000 tons per year. The permittee shall not allow, cause, suffer or permit the operation of a unit in excess of the following capacities without prior authorization from the Permitting Authority.

E.U.	Process Rates			
ID No.	RD - TPH	FBD - TPH	Total TPY*	Regulation/Permit
021	35.42	0.00	390,000	0990005-005-AC.
022	35.42	0.00	390,000	0990005-005-AC.
023	35.42	36.25	130,000	0990005-005-AC.
024	35.42	36.25	130,000	0990005-005-AC.
025	N/A	36.25	260,000	0990005-005-AC.
034	12.5	12.5	117,000	0990005-005-AC.
035	26.7	26.7	273,000	0990005-005-AC.

RD – Rotary Dryer FBD – Fluidized Bed Dryer
TPH – tons per hour TPY – tons per year
* Federally enforceable

[Rules 62-4.160(2), 62-210.200(228), and 62-210.300, F.A.C. and Construction Permit 0990005-002-AC, dated January 19, 2001 and Construction Permit 0990005-005-AC, dated January 19, 2001, Effective Date: March 18, 2004]

D.3. Isopropyl alcohol usage shall not exceed 78,040 pounds per year.
[Construction Permit 0990005-005-AC, dated January 19, 2001, Effective Date: March 18, 2004]

D.4. Refined sugar production from the fluidized bed sugar drying system shall not exceed 1,200 tons per day.
[Construction Permit 0990005-005-AC, dated January 19, 2001, Effective Date: March 18, 2004]

D.5. Refined sugar production from the rotary sugar drying system shall not exceed 1,200 tons per day and 130,000 tons per year.
[Construction Permit 0990005-005-AC, dated January 19, 2001, Effective Date: March 18, 2004]

D.6. Methods of Operation: The permittee shall not allow, cause, suffer, or permit any change in the method of operation without prior authorization from the Permitting Authority. The authorized methods of operation include the following:

(a) Rotary Dryer/Coolers: The permittee is authorized to use the Rotary Dryer and Cooler Nos. 1 and 2 for specialty sugars and in the event the fluidized bed dry/cooler is off line for repairs and vent the emissions units to the outside air through the AQCS. [Construction Permit 0990005-002-AC dated July 17, 1996]

(b) Central Dust Collection System No. 1: The permittee is authorized to operate the Rotary Dryer, Bucket Elevator No. 10 (BE-10), and Belt Conveyor 11 (BC-11) and vent the exhaust from each emissions unit to the outside air through the AQCS. [Not Federally Enforceable; Construction Permit 0990005-002-AC dated July 17, 1996]

(c) Central Dust Collection System No. 2: The permittee is authorized to operate the three (3) Rotex Screens, the Silo Scale, belt conveyors BC-16 and BC-19, the Packing Rotex Screen, the Packing Room Bins, the Bulk Curing Bins 1 through 6, Bucket Elevator 16 (BE-16) and the Sweco Shaker Screen and vent the exhaust from each emissions unit to the outside air through the AQCS. [Not Federally Enforceable; Construction Permit 0990005-002-AC dated July 17, 1996]

(d) Fluidized Bed Dryer/Cooler: The permittee is authorized to operate the Fluidized Bed Dryer/Cooler as the primary sugar drying process and vent the exhaust to the outside air through the AQCS. The permittee may operate the Fluidized Bed Dryer/Cooler at a maximum feed rate of 36.25 TPH. [Not Federally Enforceable; Construction Permit 0990005-002-AC dated July 17, 1996]

(e) Bulk Load-out Operation: The permittee is authorized to operate the existing Bulk Load-out operation continuously. Operations include transfer of sugar to trucks, railcars, or conveyors. All transfer operations shall be conducted within the three-sided enclosure. [Not Federally Enforceable; Construction Permit 0990005-002-AC dated July 17, 1996]

(f) Transfer Bulk Load-out Operation: The permittee is authorized to operate the Transfer Bulk Load-out operation continuously. Operations include the transfer of sugar to trucks. All transfer operations shall be conducted within the building enclosure and the air-curtains operating. [Not Federally Enforceable; Construction Permit 0990005-002-AC dated July 17, 1996]

Rules 62-4.160(2), 62-210.200(228), and 62-210.300, F.A.C.]

D.7. Hours of Operation: The permittee is authorized to operate the Fluidized Bed Dryer/Cooler, the Rotary Dryer, and Cooler Nos. 1 and 2, Bucket Elevator No. 10 (BE-10), belt conveyors BC-11, BC-16 and BC-19, bucket elevators BE-10 and BE-16, the three (3) Rotex Screens, the Silo Scale, the Packing Rotex Screen, the Packing Room Bins, the Bulk Curing Bins 1 through 6, and the Sweco Shaker Screen a maximum of 7,200 hours per year. The Bulk Load-out Operations (E.U. ID Nos. 034 and 035) are allowed to operate continuously.
[Construction Permit 0990005-002-AC dated July 17, 1996]

Emission Limitations and Standards

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

D.8. Visible Emissions: The permittee shall not allow visible emissions greater than 5 percent opacity (6-minute average) from the Fluidized Bed Dryer/Cooler (E.U. ID No. 25), the Central Dust Collection System Nos. 1 and 2 (E.U. ID Nos. 021 and 022), Cooler Nos. 1 and 2 (E.U. ID Nos. 023 and 24), or the Bulk Load-out Operations (E.U. ID Nos. 34 and 35).
[Construction Permit 0990005-002-AC dated July 17, 1996]

D.9. Particulate Matter (PM & PM_{10}): Particulate matter emissions from the sugar refinery shall not exceed 36.80 tons/year and PM-10 emissions shall not exceed 13.39 tons/year. The permittee shall not allow particulate matter emissions from each unit greater than the following without prior authorization from the Permitting Authority:

E.U. ID No.	Allowable Emission (TPY)		
	PM	PM10	Regulation/Permit
021	6.179	2.48	0990005-002-AC.
022	1.748	0.69	0990005-002-AC.
023	17.13	9.48	0990005-002-AC.
024	17.13	9.48	0990005-002-AC
025	6.91	0.28	0990005-002-AC
034	2.86	1.35	0990005-002-AC
035	1.22	0.58	0990005-002-AC
Total	36.80	13.39	0990005-005-AC

[Rules 62-4.160(2), 62-210.200(228), and 62-210.300, F.A.C and Construction Permit 0990005-002-AC, dated January 19, 2001 and Construction Permit 0990005-005-AC, dated January 19, 2001, Effective Date: March 18, 2004]

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

D.10. Visible Emissions: All visible emissions tests performed pursuant to the requirements of this permit shall comply with the following provisions:

(a) Test Method: The test method for visible emissions shall be EPA Method 9, incorporated in Rules 62-297.401(9), F.A.C. and the required minimum period of observation for a compliance test shall be thirty (30) minutes. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.
[Rules 62-297.401and 62-297.310(4)(a)2., F.A.C., and Construction Permit 0990005-001-AC dated January 24, 1996]

(b) Test Procedures: Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.
[Permit 0990005-002-AC July 17, 1996]

D.11. Particulate Matter (PM & PM_{10}): All particulate matter tests performed pursuant to the requirements of this permit shall comply with the following:

(a) Test Method: The test methods for particulate matter shall be EPA Methods 1, 2, 3, 4, 5, 201 or 201A described in 40 CFR 60, Appendix A, Rules 62-297.401(1) through (5), (41) and (41)(a), F.A.C.
[Rule 62-297.401, F.A.C., and Construction Permit 0990005-002-AC July 17, 1996]

(b) Test Procedures: The test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.
[Rule 62-297.401, F.A.C.]

Compliance Demonstrations and Periodic Monitoring

D.12. Annual Compliance Demonstrations: The permittee shall have formal compliance tests conducted for visible emissions from each emissions point (E.U. ID Nos. 021, 022, 023, 024, 034, and 035) annually during each federal fiscal year (October 1 – September 30), unless otherwise specified by rule, order, or permit, for the following pollutants.
[Rule 62-297.310(7), F.A.C]

D.13. Waiver of Compliance Test Requirements: For particulate matter (PM), the Permitting Authority has waived the particulate matter compliance test requirements and specified the alternative standard of 5% opacity (**Specific Condition D.8.**). If the Compliance Authority has reason to believe that either the design specifications of **Specific Condition D.1.** or the emissions rates are not being met, it shall require that compliance be demonstrated by the test methods specified in **Specific Condition D.11.**
[Rule 62-297.620(4), F.A.C. and Permit 0990005-002-AC dated July 17, 1996]

D.14. Operating Parameters: The permittee shall implement the following periodic monitoring requirements to ensure compliance with **Specific Conditions D.2., D.4. and D.5.** of this permit:

(a) *Central Dust Collection System No. 1 (E.U. ID No. 021)*: The permittee shall monitor and record the date, amount of sugar processed through the Rotary Dryer and hours of operation on a daily basis.

(b) *Fluidized Bed Dryer (E.U. ID No. 025)*: The permittee shall monitor and record the date, amount of sugar processed through the Fluidized Bed Dryer and hours of operation on a daily basis.

(c) *Cooler Nos. 1 and 2 (E.U. ID Nos. 023 & 024)*: The permittee shall monitor and record the date, amount of sugar processed through each cooler, and the hours of operation on a daily basis.

(d) *Bulk Load-out Operations (E.U. ID Nos. 034 and 035)*: The permittee shall monitor and record the date and amount of sugar transferred through each operation.

(e) The permittee shall keep records of the total daily-refined sugar production.

(f) The permittee shall keep records of the weekly use of isopropyl alcohol.

[Rule 62-213.440(1)(b), F.A.C and Construction Permit 0990005-005-AC, dated January 19, 2001, Effective Date: March 18, 2004]

D.15. Common Conditions: This emissions unit is also subject to **Specific Conditions H.1. through H.20.** contained in **Subsection H. Common Conditions.**

Subsection E. This section addresses the following emissions units for New Hope Power Partnership (AIRS ID No.: 0990332)

E.U. ID No.	Brief Description
004	Material Handling and Storage Operations (Cogeneration Facility)

Emissions Units Details

The materials handling and storage operations include authorization for truck and railcar unloading operations, storage piles, transfer operations, conveyors, screens, crushers, hoppers and silos. The materials authorized to be handled and stored include coal, biomass (bagasse and wood), ash (fly and bottom) and a mercury removal agent (Carbon). Unconfined particulate matter emissions from the operations are controlled through the use of Best Available Control Technology (BACT) and reasonable precautions as specified in the specific conditions.

The following specific conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

{Permitting note: The operating restrictions which are identified as "Not Federally Enforceable" have been placed in the permit to identify the capacity of the unit for purposes of confirming that emissions testing is conducted within 90 to 100 percent of the unit's rated capacity, to establish emission limits, and to aid in determining future rule applicability.}

E.1. Permitted Capacity. The permittee shall not allow, cause, suffer, or permit the operation of the unit in excess of the following capacities without prior authorization from the Permitting Authority. [Rules 62-4.160(2), 62-210.200(228), and 62-210.300, F.A.C.]

(a) Coal Handling: 74,000 tons per year (12-month rolling total) of bituminous coal. [Not Federally Enforceable]

(b) Biomass Handling: 2,200,000 tons per year (12-month rolling total) of biomass fuels (bagasse and wood). [Not Federally Enforceable]

(c) Fly Ash Handling: 74,000 tons per year (12-month rolling total) of removal agent (dry basis). [Not Federally Enforceable]

{Permitting note: Prior authorization includes the issuance of construction, reconstruction, or modification permits or a determination by the Permitting Authority that the action is not subject to 62-210.300(1), F.A.C.}

E.2. Methods of Operation: The permittee shall not allow, cause, suffer, or permit any change in the methods of operation without prior authorization from the Permitting Authority. The authorized methods of operation include the following:

(a) Coal Handling and Storage Operations[1]: The permittee is authorized to handle and store bituminous coal. The following activities are associated with these operations:

- Railcar & Truck Unloading
- Conveyor (Railcar to Coal Pile)

- Coal Storage Piles (Active & In-active)
- Reclaim Hopper
- Conveyor (Reclaim Hopper to Coal Crusher)
- Coal Crusher
- Conveyor (Coal Crusher to Conveyor)
- Conveyor (Conveyor to Boiler Silos)

(b) Biomass Handling and Storage Operations: The permittee is authorized to handle and store biomass fuels. The following activities are associated with these operations:

- Truck Unloading (Dumps #1 and #2, Unloading Bay)
- Chain Conveyors (#1 & #2)
- Unloading Conveyor
- Disk Screen
- Hogger
- Storage Conveyor
- Radial Stacker
- Biomass Storage Pile (Active & In-active)
- Underpile Chain Reclaimers (#1 and #2)
- Boiler Feed Conveyor
- Boiler Feed Conveyor Hopper
- Sugar Mill Bagasse Feed Conveyor
- Sugar Mill Bagasse Conveyor Hopper
- Chain Distribution Conveyors (#1 & #2)
- Boiler Meter Bins
- Recycle Conveyor
- Fixed Recycle Stacker

(c) Fly Ash Handling and Storage Operations: The permittee is authorized to handle and store fly ash. The following activities are associated with these operations:

- Boiler Bank Hoppers
- Air Preheater Hoppers
- Electrostatic Precipitator Hoppers
- Enclosed Drag Chain Conveyors
- Fly Ash Storage Silo (1,500 tons)
- Fly Ash Pug-Mill Conditioners
- Fly Ash Truck Loadout

(d) Mercury Removal Agent Handling and Storage Operations: The permittee is authorized to handle and store a mercury removal agent (carbon). The following activities are associated with these operations:

- Pneumatic Truck Unloading System
- Three Storage Silos
- Injection System

(e) Bottom Ash Handling and Storage Operations: The permittee is authorized to handle and store bottom ash. The following activities are associated with these operations:

- Submerged & Enclosed Drag Chain Conveyors
- Transfer Conveyor
- Collection Conveyor
- Three-Walled Storage Bunker
- Bottom Ash Truck Loadout

[Rules 62-4.160(2), 62-210.200(228), and 62-210.300, F.A.C.]

E.3. Hours of Operation: The permittee is authorized to operate the materials handling and storage operations continuously.
{Permitting note: The following notes address the Operating Restrictions: [1] Specific portions of the coal handling and storage operations, when constructed, will be subject to 40 CFR 60 Subpart Y and the applicant is required to comply with the General Provisions of 40 CFR Part 60, Subpart A. The equipment list is provided to identify activities subject to the visible emissions limitation of condition unregulated activities subject to the general opacity standard.}

Emission Limitations, Standards and Work Practices

{Permitting note: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

E.4. Visible Emissions: The permittee shall not allow visible emissions from the materials handling and storage operations that exceed the following without prior authorization from the Permitting Authority:

(a) Coal & Biomass Handling and Storage Operations: An opacity greater than or equal to 5 percent, except when adding, moving or removing coal from the coal pile, which would be allowed at no more than 20 percent opacity.
[PSD-FL-196 and Construction Permit AC50-219413, as amended]

(b) Fly Ash Handling and Storage Operations: An opacity greater than or equal to 5 percent (6-minute average).
[PSD-FL-196 and Construction Permit AC50-219413, as amended]

(c) Mercury Control Agent Handling and Storage Operations: An opacity greater than or equal to 5 percent (6-minute average).
[PSD-FL-196 and Construction Permit AC50-219413, as amended]

E.5. Particulate Matter (PM & PM_{10}): The permittee shall not allow particulate matter emissions to exceed the following without prior authorization from the Permitting Authority.

(a) Fly Ash Storage Silo: The permittee shall not allow, by design, emissions greater than 0.01 grains per actual cubic foot (gr/acf) outlet dust loading from the silo baghouse.
[PSD-FL-196 and Construction Permit AC50-219413, as amended]

(b) Mercury Control Agent Silos: The permittee shall not allow, by design, emissions greater than 0.01 grains per actual cubic foot (gr/acf) outlet dust loading from the silo baghouses.
[PSD-FL-196 and Construction Permit AC50-219413, as amended]

[Rules 62-4.160(2), 62-210.200(228), and 62-210.300, F.A.C.]

E.6. Fugitive Dust Controls: The permittee shall implement the following controls to minimize particulate matter emissions:

(a) All conveyors and conveyor transfer points shall be enclosed to preclude PM emissions (except those directly associated with the stacker/reclaimers, for which enclosure is operationally infeasible).

(b) Inactive coal storage piles shall be shaped, compacted, and oriented to minimize wind erosion. Sod, wetting agents, synthetic or other appropriate materials shall be used to cover those parts of the inactive coal pile that are prone to wind or water erosion.

(c) Water sprays or chemical wetting agents and stabilizers shall be applied to storage piles, handling equipment, unenclosed transfer points, etc. during dry periods and as necessary to all facilities to maintain an opacity in compliance with condition **E.4.** of this permit.

(d) The fly ash handling system (including transfer points and storage bin) shall be enclosed. The ash shall be wetted in the ash conditioner to minimize fugitive dust prior to it being discharged into the disposal bin.

(e) The mercury control system reactant storage silos shall be maintained at a negative pressure while operating with the exhaust vented to a filter control system.
[PSD-FL-196 and Construction Permit AC50-219413, as amended]

E.7. Fuel Management Plan: The permittee shall comply with the conditions of the April 1, 1994 Fuel Management Plan contained in Appendix FMP-001.
[PSD-FL-196 and Construction Permit AC50-219413, as amended]

E.8. Ash Management Plan: The permittee shall comply with the conditions of the April 1, 1994 Ash Management Plan contained in Appendix AMP-001.
[PSD-FL-196 and Construction Permit AC50-219413, as amended]

E.9. Operation and Maintenance Plans: Within ninety (90) days of the effective date of this permit, the permittee shall submit to the Permitting Authority operation and maintenance plans that will allow the permittee to monitor emission control equipment efficiency and enable the permittee to return malfunctioning equipment to proper operation as expeditiously as possible. The O/M Plans shall be incorporated into this permit as the following appendices:

(a) Appendix OMP-001, Fly Ash Silo Baghouse; and

(b) Appendix OMP-002, Mercury Control Agent Storage Silo Baghouses.

[PSD-FL-196 and Construction Permit AC50-219413, as amended] {Permitting notes: The controls identified in condition **E.6.** are specified within the construction permits and federally enforceable. Those identified in condition **E.7.** are in addition to controls specified in the construction permits and were identified within the initial Title V application.}

Test Methods and Procedures

{Permitting note: Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

E.10. Visible Emissions: All visible emissions tests performed pursuant to the requirements of this permit shall comply with the following provisions:

(a) Test Method: The test method for visible emissions shall be EPA Method 9, incorporated in Rule 62-297.401(9), F.A.C. and the required minimum period of observation for an annual compliance test shall be thirty (30) minutes. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur.
[Rules 62-296.410(3)(a) and 62-297.310(4)(a)2., F.A.C.]

(b) Test Procedures: Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.
[PSD-FL-196 and Construction Permit AC50-219413, as amended]

E.11. Particulate Matter (PM & PM_{10}): All particulate matter tests performed pursuant to the requirements of this permit shall comply with the following:

(a) Test Method: The test methods for particulate matter shall be EPA Methods 1, 2, 3, 4, 5, 201 and 201A described in 40 CFR 60, Appendix A, Rules 62-297.401(1) through (5), (41) and (41)(a), F.A.C.
[Rule 62-297.401, F.A.C.]

(b) Test Procedures: The test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.
[Rule 62-297.401, F.A.C.]

Compliance Demonstrations and Periodic Monitoring

E.12. Compliance Demonstrations: The permittee shall conduct formal compliance tests for visible emissions annually each federal fiscal year (October 1 – September 30) and prior to renewal for particulate matter, unless otherwise specified by rule, order, or permit.
[Rule 62-297.310(7)(a)3 and 4, F.A.C, PSD-FL-196, and AC50-219413, as amended]

E.13. Operating Parameters: The permittee shall implement the following periodic monitoring requirements to ensure compliance with the conditions **E.1.** and **E.2.** of this permit:

(a) Coal Handling: The permittee shall maintain records on each coal shipment including date and amount.

(b) Biomass Handling: The permittee shall maintain records on each biomass shipment including date and amount.

(c) Fly Ash Handling: The permittee shall maintain records on each fly ash shipment including date and amount.

[Rule 62-213.440(1)(b), F.A.C]

New Source Performance Standards (NSPS) – 40 CFR 60

{Permitting note: The proposed coal handling and storage operations are subject to the requirements of 40 CFR 60 Subpart A-General Provisions and Subpart Y-Standards of Performance for Coal Preparation Plants. The NSPS include notifications, emission limitations, and testing requirements.}

E.14. 40 CFR 60 Subpart A, General Provisions: The permittee shall comply with the applicable requirements of 40 CFR 60 Subpart A contained in Appendix NSPS-A. Specifically:

(a) 40 CFR 60.7, Notification and Recordkeeping,
(b) 40 CFR 60.8, Performance Tests,
(c) 40 CFR 60.11, Compliance with Standards and Maintenance Requirements,
(d) 40 CFR 60.12 Circumvention,
(e) 40 CFR 60.14, Modification, and
(f) 40 CFR 60.19 General Notification and Reporting Requirements

[40 CFR 60.1 and Rule 62-204.800(7)(a), F.A.C.]

E.15. 40 CFR 60 Subpart Y, Standards of Performance for Coal Preparation Plants: The permittee shall comply with the applicable requirements of 40 CFR 60 Subpart Y contained in Appendix NSPS-Y. Specifically:

(a) 40 CFR 60.252(c), Standards for Particulate Matter, and
(b) 40 CFR 60.254(a)(2), Test Methods and Procedures.

[40 CFR 60.250(a) and (b), and Rule 62-204.800(7)(b), F.A.C.]

Common Conditions

E.16. Common Conditions: This emissions unit is also subject to **Specific Conditions H.1.** through **H.23.** contained in **Subsection H. Common Conditions.**

Subsection F. This section addresses the following emissions units for New Hope Power Partnership (AIRS ID No.: 0990332)

E.U. ID No.	Brief Description
001	Cogeneration Boiler No. A
002	Cogeneration Boiler No. B
003	Cogeneration Boiler No. C
005	Cogeneration Facility NSPS Storage Tank

New Hope Power Partnership operates a 74.9 net MW cogeneration plant that provides process steam for the sugar mill/refinery and generates electricity for sale to the power grid (SIC 4911).

Emissions Units 001, 002, and 003: Cogeneration Boilers A, B, and C

Description: Each unit is a biomass-fired spreader stoker steam boiler manufactured by Zurn and designed to produce approximately 455,400 pounds per hour of steam at 1500 psig and 975° F.

Fuels and Capacity: The primary fuel is biomass (715 MM Btu per hour), which includes bagasse from the adjacent sugar mill and clean wood material delivered to the plant by area subcontractors. Auxiliary fuels include natural gas (400 MMBtu per hour) and very low sulfur distillate oil (490 MMBtu per hour).

Controls: Pollution control equipment includes low-NOx burners for gas firing, a selective non-catalytic reduction system to reduce nitrogen oxides emissions, mechanical dust collectors and an electrostatic precipitator to reduce particulate matter emissions, and an activated carbon injection system to reduce potential mercury emissions. Good operating practices and the efficient combustion of clean, low-sulfur fuels minimizes emissions of carbon monoxide, sulfuric acid mist, sulfur dioxide, and volatile organic compounds.

Stack Parameters: Exhaust gases exit a 10 foot diameter stack that is at least 199 feet tall and with a volumetric flow rate of approximately 246,000 acfm at 295° F.

Emissions Unit 004: Material handling and storage including unloading operations, stockpiles, transfer operations, conveyors, screens, crushers, hoppers, silos, and storage tanks.

REGULATORY CLASSIFICATION

PSD: The facility is located in an area currently designated as "attainment" or "unclassifiable" for each pollutant subject to a National Ambient Air Quality Standard. The cogeneration plant is considered a "fossil fuel fired steam electric plant of more than 250 million BTU per hour of heat input", which is one of the 28 PSD source categories with the lower PSD applicability threshold of 100 tons per year. Potential emissions of at least one regulated pollutant exceed 100 tons per year. Therefore, the facility is classified as a major source of air pollution with respect to Rule 62-212.400, F.A.C., the Prevention of Significant Deterioration (PSD) of Air Quality. The boilers have been reviewed under the PSD Program for sulfur dioxide (SO_2), sulfuric acid mist (H_2SO_4), nitrogen oxides (NOx), beryllium, and total fluorides. The boilers are synthetically limited (federally enforceable) for particulate matter (TSP & PM10), volatile organic compounds (VOC), carbon monoxide (CO), lead, and mercury. The synthetic emission limits for VOC and NOx, are more stringent than the Reasonably Available Control Technology (RACT) requirements of Rule 62-296.570, F.A.C.

PPSC: The facility is not subject to Chapter 62-17, F.A.C. for Power Plant Site Certification because it produces less than 75 MW of steam-generated electrical power.

NSPS: The boilers are classified as new facilities under the New Source Performance Standards (40 CFR 60 Subpart Da), and the fuel storage tanks are classified under Subpart Kb. Rule 62-296.405(2), F.A.C., Fossil Fuel Fire Steam Generators with more than 250 million Btu per Hour of Heat Input, and Rule 62-296.410, F.A.C., Carbonaceous Fuel Burners. Emission limitations for the boilers have been established through various federally enforceable permit conditions. The boilers are classified as "Qualifying Cogeneration Facilities" under 40 CFR Part 72, and exempt from the requirement to obtain an Acid Rain Permit.

CONSTRUCTION DETAILS

F.1. Generating Capacity: Construction of the proposed cogeneration plant shall reasonably conform to the plans described in the application. The plant shall be designed, constructed, and operated such that the generating capacity does not exceed 74.9 net megawatt (MW) based on a 1-hour average. The owner or operator shall not modify the cogeneration plant in any way that would cause the plant to exceed the limit on maximum net generating capacity. The hourly average net generation rate shall be recorded and retained for at least 5 years.
[Construction Permit 0990332-014-AC/PSD-Fl-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.2. Boiler Design: The cogeneration boilers shall consist of spreader stoker units designed to fire biomass as the primary fuel with pipeline-quality natural gas and distillate oil as auxiliary fuels. Natural gas and distillate oil are fired at startup, to supplement biomass fuel, and for periods when the biomass fuel supply is interrupted. No other fuels are authorized. {Permitting Note: Each boiler was originally designed to fire low sulfur coal as an emergency backup fuel, but no transfer, crushing, or storage systems were ever installed. The permittee shall apply for a permit modification before firing any other fuel.}
[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.3. Stack: Each boiler shall have an individual stack that is at least 199 feet tall. The permanent stack sampling facilities for each stack must comply with Rule 62-297.345, F.A.C.
[Construction Permit 0990332-014-AC/PSD-Fl-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.4. Process Monitors: Each boiler shall be equipped with instruments to measure the fuel feed rate, heat input, steam production, steam pressure, and steam temperature. Appendix E identifies minimum requirements for monitoring equipment.
[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.5. Control Equipment: Each boiler shall be equipped with:

- Low-NOx natural gas burners rated for no more than 0.15 pounds of NOx per MMBtu of heat input. Four burners are installed with one in each corner the boiler. The maximum heat input rate from all four burners is 400 MMBtu per hour.

- Mechanical dust collectors consisting of four, large diameter, multi-tube modules with airfoil vanes or equivalent equipment. The mechanical dust collectors shall be installed and maintained as pre-control devices prior to each electrostatic precipitator and designed for a removal efficiency of at least 85% of the particulate matter greater than 10 microns in size (assuming a specific gravity of 2.00).
- An electrostatic precipitator (ESP) designed for at least 98 percent removal of particulate matter.
- A selective non-catalytic reduction (SNCR) system designed for at least 40 percent removal of NOx.
- A carbon injection system (or equivalent) for potential control of mercury emissions.

[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.6. Continuous Monitors: For each cogeneration boiler, the permittee shall install, calibrate, maintain, and operate continuous emissions monitors (CEMS) and continuous opacity monitors (COMS) to measure and record emissions of carbon monoxide (CO), nitrogen oxides (NOx), opacity, oxygen (O2), and sulfur dioxide (SO2) in a manner sufficient to demonstrate compliance with the standards of this permit. The opacity monitor shall be placed in the ductwork between the electrostatic precipitator and the stack or in the stack. Appendix E identifies minimum requirements for monitoring systems.
[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.7. Good Combustion Practices: An oxygen meter shall be installed for each unit to continuously monitor a representative sample of the flue gas. The oxygen monitor shall be used with automatic feedback or manual controls to continuously optimize air/fuel ratio parameters. Depending on the fuel quality and existing combustion conditions, the operator shall provide sufficient excess air to ensure good combustion within the boiler. The application to revise the Title V operation permit shall identify "good combustion practices" for the cogeneration boilers to minimize pollutant emissions during startup, operation, and shutdown. The document "Use of Flue Gas Oxygen Meter as BACT for Combustion Controls" shall be used as a guide. Good combustion controls shall also include the following:

- Maintain improved combustion controls to provide efficient tuning of air/fuel control instrumentation.
- Maintain rotary pocket-style wood feeders with efficient air seal to minimize intrusion of ambient air.
- Maintain effective water level controls in bottom ash system to prevent intrusion of ambient air.
- Mix biomass fuel to provide a consistent fuel blend.
- Maintain the flue gas oxygen content to provide efficient combustion for the existing conditions.
- When necessary to enhance poor combustion, reduce the biomass feed rate below the maximum rate.
- When necessary to enhance poor combustion, co-fire natural gas or distillate oil.

[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.8. O&M Plans: The application to revise the Title V operation permit shall include an operation and maintenance plan consisting of at least the following items.

a) For the cogeneration boilers, electrostatic precipitators (ESP), selective non-catalytic reduction (SNCR) systems, activated carbon injection (ACI) mercury control systems, and silo fabric filters, identify: the capacities, design efficiencies, pollutant emission rates, general operational description of equipment, key design and operating parameters, expected operating range of each key parameter, monitoring of key parameters, frequency of monitoring (instantaneous, continual, or continuous), and actions taken to return key parameters to within the expected operating ranges. The plan shall also specify good operating practices to promote efficient boiler combustion, startup and shutdown procedures for the boilers and control systems to minimize emissions, and precautions to prevent fugitive particulate matter emissions. {Permitting Note: Operation outside of the specified operating range for any monitored parameter would not be a violation by itself. However, continued operation outside of a specified operating range without corrective action may be considered circumvention of the air pollution control equipment or methods.}

b) For the selective non-catalytic reduction (SNCR) systems identify an alternate NOx emissions control plan based on previous monitoring data that shall be implemented in case the NOx monitoring system is down. The plan shall identify the minimum urea injection rate that has demonstrated continuous compliance with the NOx emissions standard at various load conditions.

[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.9. Materials Handling Controls: For the fly ash handling and mercury control system reactant storage systems:

a) The particulate matter filter control system for the storage silos shall be designed to achieve an outlet dust loading of no greater than 0.01 grains per actual cubic feet of exhaust.

b) The fly ash handling system (including transfer points and storage bin) shall be enclosed. The ash shall be wetted in the ash conditioner to minimize fugitive dust prior to discharging to the disposal bin.

[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

Operational Restrictions

F.10. Permitted Capacity: The cogeneration boilers shall be constructed and operated in accordance with the capabilities and specifications described in the application. The maximum heat input rate to each cogeneration boiler shall not exceed 715 MMBtu/hr when burning 100 percent biomass, 400 MMBtu/hr when burning 100 percent natural gas, and 490 MMBtu/hr when burning 100 percent very low sulfur distillate oil. The maximum heat input to the entire plant (total for all three boilers combined) shall not exceed $11.5 \times 10^{+6}$ MMBtu during any consecutive 12-month period. The steam production of each boiler shall not exceed an average of 455,418 pounds per hour at 1,500 psig and 975°F.
[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.11. Primary Fuel: The primary fuel for the plant shall be biomass, which shall consist of bagasse and authorized wood material. Bagasse is the fibrous vegetative residue remaining after the sugarcane

milling process. Authorized wood material is clean construction and demolition wood debris, yard trash, land clearing debris, and other clean cellulose and vegetative matter. Each cogeneration boiler shall combust no more than 30% by weight yard waste (yard trash) on a calendar quarter basis that is defined as a municipal solid waste (MSW) in 40 CFR 60.51a. The biomass fuel used at the cogeneration plant shall not contain hazardous substances, hazardous wastes, biomedical wastes, or garbage. The fuel used at the cogeneration plant shall not contain special wastes, except wood, lumber, trees, tree remains, bagasse, cane tops and leaves, and other clean vegetative and cellulose matter. The permittee shall perform a daily visual inspection of any wood material or similar vegetative matter that has been delivered to the plant for use as fuel. Any shipment observed to contain prohibited materials shall not be used as fuel, unless such materials can be readily segregated and removed from the wood material and vegetative matter.

The permittee shall design and implement a management and testing program for the wood material and other materials delivered to the plant for fuel. The program shall be designed to keep painted and chemically treated wood, household garbage, toxic or hazardous non-biomass and non-combustible waste material, from being burned at this plant. The program shall provide for the routine inspection and/or testing of the fuel at the originating wood yard sites as well as at the cogeneration site, to ensure that the quantities of painted or chemically treated wood in the fuel are minimized. Based on the analysis of a composite sample, wood material containing more than 70.7 ppm arsenic or 83.3 ppm chromium or 62.8 ppm copper shall not be burned. Fuel scheduled for burning shall be inspected daily. At a minimum, the fuel management program shall include the following sampling and analyses:

a. At least twice each month, the permittee shall have separate analyses conducted on an as-fired wood sample and an as-fired bagasse sample for the following: heating value (modified ASTM D3286, Btu/lb, dry), carbon content (modified ASTM D5373, percent by weight, dry), sulfur content (modified ASTM D4239 Method C, percent by weight, dry), and moisture content (modified ASTM D3173, percent by weight). In addition the wood sample shall be analyzed for copper, chromium, and arsenic in accordance with Methods 3050/6010 (EPA Method SW-846) and reported in ppm by weight, dry. Samples shall be taken at least two weeks apart.

b. At least once each month, the permittee shall have an analysis conducted on a composite sample of fly ash and bottom ash for arsenic, copper, and chromium in accordance with the procedures described in EPA Method SW-846, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (40 CFR 261, Appendix III). The analytical results from ash testing shall be used in conjunction with those from the as-fired wood samples to evaluate the effectiveness of the fuel management program in removing chemically treated wood from the biomass fuel. The permittee shall dispose of all ash generated on site in accordance with the applicable state and federal regulations.

c. Analytical results of the as-fired biomass fuels and ash sampling shall be summarized and provided in the quarterly report to the Compliance Authority.

The ash and fuel management program shall become part of the Title V operation permit.
[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.12. Auxiliary Fuel: The cogeneration boilers shall fire only very low sulfur distillate oil and pipeline-quality natural gas as auxiliary fuels. Distillate oil shall be new No. 2 oil with a maximum

sulfur content of 0.05 percent sulfur by weight as determined by the appropriate test method listed in 40 CFR 60.17. "New" oil is oil that has been refined from crude oil and that has not been used in any manner that may contaminate it. Each boiler may startup solely on pipeline-quality natural gas or very low sulfur distillate oil.
[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.13. Fossil Fuel Limitation: The firing of fossil fuels (distillate oil and natural gas) shall be less than 25 percent of the total heat input to each cogeneration boiler during any calendar quarter.
[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.14. Fuel Records: The permittee shall maintain a daily log of the amounts and types of fuels used. The amount, heating value, and sulfur content of each fuel oil delivery shall be kept in a log for at least five years. For each calendar month, the actual monthly SO2 emissions and the 12-month rolling total SO2 emissions shall be determined and kept in a log.
[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.15. Emergency Standby: The existing sugar mill boilers shall comply with the following requirements.

a. Sugar mill boiler Nos. 4, 5, 6, 10, 11, 12, 14, and 15 may be retained for emergency standby operation until April 1, 2002. These boilers shall only operate in the event of electrical or mechanical failure of all three of the cogeneration boilers. Simultaneous operation of any of these sugar mill boilers with any of the cogeneration boilers is prohibited. Sugar mill boiler Nos. 4, 5, 6, 10, 11, 12, 14, and 15 shall be permanently shutdown and rendered incapable of operation no later than October 1, 2002.

b. Each sugar mill boiler shall comply with its most recent air construction and operation permit, including all emissions performance, testing, and monitoring requirements as well as any applicable Alternate Sampling Procedures approved by the Department. The sugar mill boilers shall only fire fuels approved in the most recent permits.
[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.16. Auxiliary Boiler: Sugar mill boiler No. 16 shall be operated in accordance with revised Permit No. PSD-FL-169A and the subsequently revised Title V operation permit.
[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

Emissions Limiting Standards

F.17. Emissions Standards: Based on the maximum permitted heat input to each cogeneration boiler, stack emissions shall not exceed the standards specified in the following table.

Pollutant	Averaging Period	Emissions Standards Per Boiler [j]	
		lb/MMBtu	lb/hr
Carbon Monoxide (CO) [a]	30-day rolling CEMS avg.	0.50	357.5
	12-month rolling CEMS avg.	0.35	
Nitrogen Oxides (NOx) [b]	30-day rolling CEMS avg.	0.15	107.3
Sulfur Dioxide (SO2) [c]	24-hour rolling CEMS avg.	0.20	143.0
	30-day rolling CEMS avg.	0.10	
	12-month rolling CEMS avg.	0.06	
Stack Opacity [d]	6-minute block COMS avg. (Alternative: EPA Method 9)	≤ 20% opacity, except for one 6-minute block per hour that is ≤ 27% opacity	
Particulate Matter (PM/PM10) [e]	3-run test avg.	0.03	21.5
Volatile Organic Compounds (VOC) [f]	3-run test avg.	0.06	42.9
Lead [g]	3-run test avg.	1.5×10^{-04}	NA
Mercury [h]	3-run test avg.	5.4×10^{-06}	NA
Fluorides [i]	Fluoride emissions shall be minimized by firing biomass as the primary fuel with natural gas and very low sulfur distillate oil as auxiliary fuels.		

a. Compliance shall be determined by data collected from the required CO CEMS in terms of "lb/MMBtu of heat input". The 30-day rolling average shall be determined by calculating the arithmetic average of all hourly emission rates for 30 successive boiler operating days and be consistent with the NOx monitoring requirements below. Compliance with the 12-month standard shall be based on the rolling average for each consecutive 12-month period.

b. Compliance shall be determined by data collected from the required NOx CEMS in terms of "lb/MMBtu of heat input". The 30-day rolling average shall be determined by calculating the arithmetic average of all hourly emission rates for 30 successive boiler operating days and the requirements of 40 CFR 60.13, 60.44a, 60.46a, 60.47a, 60.48a, and 60.49a. A boiler-operating day is any day in which any authorized fuel is fired.

c. Compliance with the SO2 standards shall be determined by data collected from the required SO2 CEMS in terms of "lb/MMBtu of heat input". The 24-hour average shall be determined by calculating the arithmetic average of all valid hourly emission rates for 24 successive boiler-operating hours. The 30-day rolling average shall be determined by calculating the arithmetic average of all hourly emission rates for 30 successive boiler-operating days and the requirements of 40 CFR 60.13, 60.43a, 60.46a, 60.47a, 60.48a, and 60.49a. Compliance with the 12-month standard shall be based on the rolling average for each consecutive 12-month period. Valid SO2 hourly averages shall not be excluded from any compliance average. {Permitting Note: Potential emissions of sulfuric acid mist are minimized by the effective control of SO2 emissions with the firing of low sulfur fuels. For reporting purposes, sulfuric acid mist emissions shall be estimated as 6% of the total measured SO2 emissions.}

d. Continuous compliance with the opacity standard shall be determined by data collected from the required COMS in terms of "percent opacity" based on 6-minute block averages. Alternatively, compliance may also be determined by conducting EPA Method 9 observations.

e. Compliance with the particulate matter standards shall be determined by the average of three test runs conducted in accordance with EPA Method 5. For purposes of reporting PM10 emissions, it shall be assumed that all particulate matter emitted is PM10.

f. Compliance with the VOC standards shall be determined by the average of three test runs conducted in accordance with EPA Method 25A based on propane. In addition, the permittee may choose to conduct EPA Method 18 concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions. Otherwise, all emissions measured by EPA Method 25A shall be considered "volatile organic compounds".

g. Compliance with the lead standards shall be determined by the average of three test runs conducted in accordance with EPA Method 12 or 29.

h. Compliance with the mercury standards shall be determined by the average of three test runs conducted in accordance with EPA Method 101A or 29. Emissions in excess of this standard shall be a violation of the permit. In addition, if two or more cogeneration boilers exceed the annual mercury emission limit, the permittee shall reactivate the carbon injection system for all three units within 30 days of the stack test report due date. The minimum carbon injection rate shall be at least 7 pounds per hour. Within 60 days of the stack test report due date, the permittee shall submit to the permitting and compliance authorities a mercury testing protocol designed to establish an effective carbon injection rate to control mercury emissions. Within 60 days of receiving approval for the mercury testing protocol by the permitting authority, the permittee shall begin the approved testing program. At a minimum, the permittee shall submit a full engineering report summarizing the uncontrolled emissions, controlled emissions, fuels, operating capacities, and recommending a minimum activated carbon injection rate to control mercury emissions.

i. This fuel specification is the BACT standard for fluoride emissions. {Permitting Note: For reporting purposes only, the fluoride emissions factor for firing biomass is 1.9×10^{-04} lb/MMBtu.

j. Each boiler shall comply with the standards when firing any combination of authorized fuels. Required compliance tests shall be performed in accordance with the requirements of **Specific Condition F.20.** The cogeneration boilers are also subject to the new source performance standards (NSPS Subpart Da) for new electric utility steam generating units. These requirements include the general provisions of Subpart A in 40 CFR 60, as well as the following source-specific applicable requirements: 60.40a (Applicability and Designation of Affected Facility); 60.41a (Definitions); 60.42a (Standards for Particulate Matter); 60.43a (Standard for Sulfur Dioxide); 60.44a (Standard for Nitrogen Oxides); 60.46a (Compliance Provisions); 60.47a (Emissions Monitoring); 60.48a (Compliance Determination Procedures and Methods); and 60.49a (Reporting Requirements). The cogeneration boilers are also subject to Rule 62-296.405(2), F.A.C. (Fossil Fuel Steam Generators with more than 250 MMBtu per Hour of Heat Input), Rule 62-296.410, F.A.C. (Carbonaceous Fuel Burning Equipment), and Rule 62-296.570, F.A.C.

(Reasonably Available Control Technology Requirements for Major VOC and NOx Facilities).

{Permitting Note: Appendix D identifies the final BACT determinations for the cogeneration boilers.}

[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.18. Material Handling: The following conditions apply to the biomass, ash, and activated carbon handling facilities.

a. All conveyors and conveyor transfer points shall be enclosed to preclude PM emissions (except those directly associated with the stacker/reclaimer, for which enclosure is operationally infeasible).

b. Water sprays, chemical wetting agents, and/or stabilizers shall be applied to storage piles, handling equipment, unenclosed transfer points, etc. during dry periods and as necessary to prevent visible emissions. When adding, moving or removing material from the storage pile, visible emissions of no more than 20% opacity are allowed.

c. The mercury control system reactant storage silos shall be maintained at a negative pressure while operating with the exhaust vented to a filter control system. Visible emissions from any storage silo shall not exceed 5 percent opacity based on a 6-minute block average. A visible emissions test (EPA Method 9) shall be performed at least annually for each silo that is loaded with carbon during the federal fiscal year.

[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

Startup, Shutdown, and Malfunction

F.19. Startup, Shutdown, and Malfunction Requirements: The permittee shall comply with the following requirements regarding periods of startup, shutdown, and malfunction for each cogeneration boiler.

a. *Definitions*

1) Excess emissions are emissions of pollutants in excess of those allowed by any applicable air pollution rule of the Department, or by a permit issued pursuant to any such rule or Chapter 62-4, F.A.C. The term applies only to conditions that occur during startup, shutdown, or malfunction. [Rule 62-210.200(106), F.A.C.]

2) Startup is the commencement of operation of a boiler which has shut down or ceased operation for a period of time sufficient to cause temperature, pressure, chemical or pollution control device imbalances, which may result in excess emissions. Periods of startup for each boiler shall end once steam generation reaches 150,000 pounds per hour. A cold startup is a startup after the boiler has been shutdown for 24 hours or more. A warm startup is a startup after the boiler has been shutdown for less than 24 hours.

3) Shutdown is the cessation of the operation of a boiler for any purpose after steam generation drops below 150,000 pounds per hour.

4) Malfunction is any unavoidable mechanical and/or electrical failure of air pollution control equipment or process equipment or of a process resulting in operation in an abnormal or unusual manner.
[Rule 62-210.200(160), F.A.C.]

b. *Prohibition*: Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. Emissions data recorded during such preventable periods shall be included in the compliance averages. [Rule 62-210.700(4), F.A.C.]

c. *Monitoring Data Exclusion*: Each continuous monitoring system shall operate and record data during all periods of operation (including startup, shutdown, and malfunction) except for continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments. Provided the operators implement best operational practices to minimize the amount and duration of emissions, the following conditions apply. Pursuant to Rules 62-210.700(1) and (5), F.A.C., these conditions consider the variations in operation of the cogeneration boilers.

1) Natural gas or distillate oil shall be fired during startup prior to energizing the electrostatic precipitator (ESP). Once the operating temperature recommended by the ESP manufacturer is maintained (approximately 340° F to 350 ° F), it shall be placed on line and the boiler shall comply with the opacity standard specified in **Specific Condition F.17.** The ESP shall be on line and functioning properly before firing any biomass. The opacity limit does not apply when the ESP is off line due to warm startup, cold startup, or shutdown. No more than twenty 6-minute block averages of opacity monitoring data shall be excluded in a 24-hour period due to documented malfunctions.

2) Hourly CO and NOx emission rate values collected during startup, shutdown, or documented malfunction may be excluded from the 30-day and/or 12-month compliance averages. No more than six hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a cold startup. No more than three hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a warm startup. No more than two hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a malfunction. No more than two hourly emission rate values (CO or NOx) shall be excluded in a 24-hour period due to a shutdown. For each cogeneration boiler, no more than 183 hourly emission rate values shall be excluded during any calendar quarter.

3) All valid hourly SO2 emission rate values shall be included in all of the compliance averages. [40 CFR 60.46a and 60.49a]

4) To "document" a malfunction, the operator shall notify the Compliance Authority within one working day of the malfunction by phone, facsimile, or electronic mail. The notification shall include the date and time of malfunction, a description of the malfunction and probable cause, steps to taken to minimize emissions, and actions taken to correct the problem. [Rules 62-210.700(6) and 62-4.130, F.A.C.]

d. *Reporting*: In conjunction with the annual operating report, the permittee shall identify the number of startups, the number of shutdowns, and the number of malfunctions that occurred during the year for each boiler. For each boiler's CO and NOx monitors, the report shall identify the annual hours of emission data excluded from the compliance determination due to each type of incident (startups; shutdowns; and documented malfunctions).

[Rule 62-210.700, F.A.C.; Rule 62-4.070(3), F.A.C.; 40 CFR 60.8; and 40 CFR 60.46a and Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

Compliance Methods and Reporting

F.20. Stack Test Requirements

a. *Initial Tests*: Within 90 days of the effective date of this permit, the permittee shall conduct compliance tests for emissions of lead, mercury, particulate matter, and volatile organic compounds. If conducted within the 12-month period prior to the effective date of this permit, previous emissions tests may be used to demonstrate compliance for these pollutants. The Department may require initial tests to be repeated if major physical or operational changes are made that affect main components such as the boiler, fuels, and/or pollution control equipment.

b. *Annual Tests*: At least once during each federal fiscal year, the permittee shall conduct compliance tests for emissions of mercury, particulate matter, and volatile organic compounds.

c. *Renewal Tests*: Within the 12-month period prior to submitting an application to renew the Title V air operation permit, the permittee shall conduct compliance tests for emissions of lead, mercury, particulate matter, and volatile organic compounds. Tests shall be conducted at five-year intervals.

d. *Test Procedures*: The emission compliance tests shall be conducted in accordance with the provisions of Chapter 62-297, F.A.C., 40 CFR 60.46a (NSPS Subpart Da), and as summarized in Appendix C of this permit. The permittee shall notify the Compliance Authority in writing at least 30 days prior to any initial NSPS performance tests and at least 15 days prior to any other required tests. The biomass fuel feed for each test run shall consist of at least 45% wood materials by weight. Testing of emissions shall be conducted with each cogeneration boiler operating at permitted capacity, which is defined as a heat input rate between 643 and 715 MMBtu/hour and firing 100% biomass. If it is impracticable to test at permitted capacity, a cogeneration boiler may be tested at less than the maximum permitted capacity; in this case, subsequent operation is limited to 110 percent of the test rate until a new test is conducted. Within three days of completing a test below permitted capacity, the permittee shall provide written notification of the restricted operational capacity to the Compliance Authority. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rule 62-297.310(7)(a)9, F.A.C. and 40 CFR 60.7, 60.8]

e. *Test Methods*: Compliance with the emission limits specified in this permit shall be demonstrated using EPA Methods, as contained in 40 CFR Part 60 (Standards of Performance for New Stationary Sources), or 40 CFR Part 61 (National Emission Standards for Hazardous Air Pollutants).

EPA Method*	Description
1	Selection of sample site and velocity traverses
2	Stack gas flow rate when converting concentrations to or from mass emission limits
3A	Gas analysis when needed for calculation of molecular weight or percent O2
4	Moisture content when converting stack velocity to dry volumetric flow rate for use in converting concentrations in dry gases to or from mass emission limits
5	Particulate matter emissions
6 or 6C	Sulfur dioxide emissions
7 or 7E	Nitrogen oxide emissions
9	Visible emissions determination of opacity {Permitting Note: Although each unit is required to monitor opacity with a COMS, visible observations may also be used to demonstrate compliance.}
10	Carbon monoxide emissions
12	Inorganic lead emissions
19	Calculation of sulfur dioxide and nitrogen oxide emission rates
25A	Volatile organic compounds emissions {Permitting Note: EPA Method 18 may be conducted concurrently with EPA Method 25A to deduct emissions of methane and ethane from the measured VOC emissions. Otherwise, all emissions measured by EPA Method 25A shall be considered "volatile organic compounds".
29	Multiple metals emissions
101A	Particulate and gaseous mercury emissions

No other methods may be used to demonstrate compliance unless prior written approval is received from the Department in accordance with a permit modification or an alternate sampling procedure issued pursuant to 62-297.620, F.A.C. Other applicable testing requirements are included in Appendix C of the permit. The permittee shall use CEMS and COMS data to demonstrate compliance with the emissions standards for CO, NOx, opacity, and SO2.

[Rules 62-204.800 and 62-297.100, F.A.C.; 40 CFR 60, Appendix A and Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.21. Continuous Monitor Requirements: The permittee shall demonstrate compliance with the emissions standards for CO, NOx, opacity, and SO2 based on data collected from the continuous emissions monitoring systems (CEMS) and continuous opacity monitoring systems (COMS) required for each cogeneration boiler. Appendix E specifies the minimum requirements for monitoring equipment. [Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.22. Quarterly Reports: For each cogeneration boiler, the permittee shall submit a quarterly report for each required continuous emissions and opacity monitoring system in accordance with the requirements specified in Appendix E of this permit. The permittee shall also submit a quarterly summary of the fuel

analyses, fuel usage, and equipment malfunctions. The fuel usage summary shall include the monthly heat input and the 12-month rolling total heat input for the cogeneration boilers. For each malfunction, the report shall identify the cause (if known), and corrective actions taken. The quarterly reports and summaries shall be submitted to the Compliance Authority no later than 30 days following each calendar quarter.
[Construction Permit 0990332-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.23 Wood-Waste And Ash Inspection And Testing Plan: The permittee shall monitor and inspect the biomass fuels in accordance with Appendix FMTP-001, Wood-Waste And Ash Inspection And Testing Plan to ensure compliance with **Specific Condition F.6.** of this permit.
[Rule 62-213.440(1)(b), F.A.C. and Construction Permit 0990005-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

New Source Performance Standards (NSPS) - 40 CFR 60

{Permitting notes: The cogeneration facility boilers are subject to the requirements of 40 CFR 60 Subpart Ea Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989 and on or Before September 20, 1994, and 40 CFR 60 Subpart Da- Standards of Performance for Electric Utility Steam Generating Units for Which Construction Is Commenced After September 18, 1978. The NSPS include notifications, exemptions, emission limitations, monitoring, and testing requirements.}

F.24. 40 CFR 60 Subpart A, General Provisions: The permittee shall comply with the applicable requirements of 40 CFR 60 Subpart A contained in Appendix NSPS-A of this permit. Specifically:

(a) 40 CFR 60.5, Determination of Construction or Modification,
(b) 40 CFR 60.6, Review of Plans,
(c) 40 CFR 60.7, Notification and Recordkeeping,
(d) 40 CFR 60.8, Performance Tests,
(e) 40 CFR 60.11, Compliance with Standards and Maintenance Requirements,
(f) 40 CFR 60.12 Circumvention,
(g) 40 CFR 60.13, Monitoring Requirements,
(h) 40 CFR 60.14, Modification,
(i) 40 CFR 60.15, Reconstruction,
(j) 40 CFR 60.17, Incorporation by Reference, and
(k) 40 CFR 60.19, General Notification and Reporting Requirements

[40 CFR 60.1, and Rule 62-204.800(7)(a), F.A.C. and Construction Permit 0990005-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.25. 40 CFR 60 Subpart Da- Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978: The permittee shall comply with the applicable requirements of 40 CFR 60 Subpart Da contained in Appendix NSPS-Da. Specifically:

(a) 40 CFR 60.41a, Definitions,
(b) 40 CFR 60.42a(a), (a)(1), (a)(2), (a)(3) and (b), Standard for Particulate Matter,

(c) 40 CFR 60.43a(a), (b)(2), (d)(2), (g), (h)(1) and (h)(2), Standard for Sulfur Dioxide,

(d) 40 CFR 60.44a(a), (a)(1), (a)(2), and (c), Standard for Nitrogen Oxides,

(e) 40 CFR 60.46a(a), (b), (c), (e), (f), (g) and (h), Compliance Provisions,

(f) 40 CFR 60.47a(a), (b), (b)(2), (c), (d), (e), (f), (g), (h), (h)(1), (h)(2), (h)(3), (h)(4), (i), (i)(1), (i)(2), (i)(5), (j), (j)(1), (j)(2), (j)(3), and (j)(4), Emission Monitoring,

(g) 40 CFR 60.48a(a), (b), (b)(1), (b)(2), (b)(3), (c)(3), (c)(4), (c)(5), (d), (d)(1), (d)(2), (e), (e)(1), and (e)(2), Compliance Determination Procedures and Methods, and

(h) 40 CFR 60.49a(a), (b), (b)(1), (b)(2), (b)(4), (b)(5), (b)(6), (b)(7), (b)(8), (b)(9), (c), (c)(1), (c)(2), (c)(3), (c)(4), (c)(5), (f), (g), (g)(1), (g)(2), (g)(3), (g)(4), (h), and (i), Reporting Requirements.

[40 CFR 60.40a(a)(1) and (a)(2), and Rule 62-204.800(7)(b), F.A.C. and Construction Permit 0990005-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

F.26. 40 CFR 60 Subpart Ea - Standards of Performance for Municipal Waste Combustors for Which Construction is Commenced After December 20, 1989 and on or Before September 20, 1994: The permittee shall comply with the applicable requirements of 40 CFR 60 Subpart Ea contained in Appendix NSPS-Ea. Specifically the following sections related to applicability:

(a) 40 CFR 60.50a(a), (d), (e), (g), and (h), Applicability and Delegation of Authority, and

(b) 40 CFR 60.51a, Definitions

[Construction Permit 0990005-014-AC/PSD-FL-196M, dated January 31, 2002, Effective Date: March 18, 2004]

Common Conditions

F.27. Common Conditions: This emissions unit is also subject to **Specific Conditions H.1. through H.20.** contained in Subsection **H. Common Conditions.**

Subsection G. This section addresses the following emissions unit.

E.U. ID No.	Brief Description
048	Paint Booth

This Emissions Unit consists of a paint spray booth that will be used to paint farm equipment. The paint spray booth is manufactured by AFC, Inc. The model number is TSD6036.

{Permitting note: The painting operations conducted on agricultural equipment in the spray booth are subject to reasonably achievable control technology (RACT) requirements of Rule 62-296.513, Florida Administrative Code (F.A.C.)}

The following specific conditions apply to the emissions units listed above:

Essential Potential to Emit (PTE) Parameters

G.1. Permitted Capacity. The maximum throughput rate of paint and thinner is 2,475 gallons per year. [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C.; and Construction Permit 0990005-010-AC, dated August 22, 2001, Effective Date: March 18, 2004]

G.2. Methods of Operation. Paint will be applied by one of two methods, compressed air spray gun or an airless paint sprayer. The compressed air spray gun will use house air within a pressure range of 60 to 80 pounds per square inch (psi). The airless paint sprayer will be a Titan airless paint sprayer, Model Epic 1100HPX. It will operate at a pressure of approximately 3,200 psi. There are two exhaust stacks for the paint spray booth. Both are 25.7 feet tall with a 4-foot diameter and have a flowrate of 45,500 acfm.
[Rule 62-213.410, F.A.C.; and Construction Permit 0990005-010-AC, dated August 22, 2001, Effective Date: March 18, 2004]

G.3. Hours of Operation. This emissions unit is allowed to operate continuously, 8,760 hours/year. [Rule 62-210.200(PTE), F.A.C.; and Construction Permit 0990005-010-AC, dated August 22, 2001, Effective Date: March 18, 2004]

Emission Limitations and Standards

G.4. The permittee may adjust the amounts and types of coatings used as necessary to comply with the conditions of this permit.
[Construction Permit 0990005-013-AC, dated November 13,2003, Effective Date: March 18, 2004]

G.5. For painting operations conducted on agricultural equipment:

a.) The permittee shall not cause, allow, or permit the discharge into the atmosphere of any volatile organic compounds (VOC) in excess of 3.5 pounds per gallon of coating (0.42 kilograms per liter), excluding water, delivered to a coating applicator in a coating application system that is air dried or forced warm dried at temperatures up to 194 degrees Fahrenheit (90 degrees Celsius).

b.) All VOC emissions from solvent washings shall be considered in the emission limitations in Specific Condition 5., unless the solvent is directed into containers that prevent evaporation into the atmosphere.
[Rule 62-296.513(2)(b), F.A.C.]

c.) The emissions limit in Specific Condition 5. shall be achieved by the application of low solvent coating technology.
[Rule 62-296.513(3)(a), F.A.C.]

d.) The test method for VOC emissions using low solvent coating technology shall be EPA Method 24 incorporated and adopted by reference in Chapter 62-297, F.A.C.
[Rule 62-296.513(4)(a), F.A.C.]

e.) Test procedures shall meet all applicable requirements of Chapter 62-297, F.A.C.
[Rule 62-296.513(4), F.A.C.]

f.) The permittee shall maintain daily records of operations for the most recent two-year period. The records shall be made available to the include, but not limited to, the following: Department upon request. The records shall

1. The rule number applicable to the operation for which the records are being maintained.
2. The application method and substrate type (metal, plastic, paper, etc.)
3. The amount and type of adhesive, coatings (including catalysts and reducer for multicomponent coatings), solvent, and/or graphic arts material used at each point of application, including exempt compounds.
4. The VOC content as applied in each adhesive coating, solvent and/or graphic arts material.
5. The date for each application of adhesive coating, solvent, and/or graphic arts material.
6. The amount of surface preparation, clean-up, wash-up of solvent (including exempt compounds) used and the VOC content of each.
7. Oven temperature (where applicable)
[Rule 62-296.500(2)(b)1., F.A.C.]

g) The VOC content shall be calculated using a percent solids basis (less water and exempt solvents) for adhesives, coating, and inks, using EPA Reference Method 24.
[Rule 62-296.500(2)(b)2., F.A.C.]

[Construction Permit 0990005-013-AC, dated November 13, 2003, Effective Date: March 18, 2004]

G.6.. Emissions of volatile organic compounds (VOCs) from the spray booth are limited to 3.9 tons per year.
[Construction Permit 0990005-010-AC, dated August 22, 2001, Effective Date: March 18, 2004]

G.7. Emissions of particulate matter (PM) are estimated to be less than 0.23 tons per year.
[Construction Permit 0990005-010-AC, dated August 22, 2001, Effective Date: March 18, 2004]

G.8. The exhaust stacks for the paint spray booth will be equipped with glass fiber paint arrestor pads.
Construction Permit 0990005-010-AC, dated August 22, 2001, Effective Date: March 18, 2004]

G.9.. Visible emissions from the paint spray booth shall not exceed 20% opacity.
[Rule 62-296.320, F.A.C.]
[Construction Permit 0990005-010-AC, dated August 22, 2001, Effective Date: March 18, 2004]

G.10. The permittee shall not discharge air pollutants, which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), F.A.C. and Construction Permit 0990005-010-AC, dated August 22, 2001, Effective Date: March 18, 2004]

G.11. The permittee shall take all reasonable precautions to prevent emissions of unconfined particulate matter. Reasonable precautions may include, but shall not be limited to, (a) removal of particulate matter from roads and other paved areas under the control of the permittee, and from buildings or work areas to prevent particulate from becoming airborne, (b) landscaping or planting of vegetation, (c) use of hoods, fans, filter, and similar equipment to contain, capture and/or vent particulate matter, and (d) confining abrasive blasting and sanding where possible.
[Rule 62-296.320(4)(c), F.A.C. and Construction Permit 0990005-010-AC, dated August 22, 2001, Effective Date: March 18, 2004]

G.12. All equipment, pipes, hoses, lids, fittings, etc., shall be operated/maintained in such a manner as to minimize leaks, fugitive emissions, and spills of solvent materials.
[Rule 62-296.320, F.A.C. and Construction Permit 0990005-010-AC, dated August 22, 2001, Effective Date: March 18, 2004]

Recordkeeping and Reporting Requirements

G.13. The permittee shall record and maintain records of the following:

a) the number of hours that the spray booth is in use (actual);

b) the dates of operation;

c) the amounts and types of coating used;

The permittee shall calculate the VOC emitted on a monthly basis by assuming that all VOC in the coatings and cleanup solvents are evaporated. The mass fraction of VOC from each coating material (and cleanup solvents) shall be determined from the Material Safety Data Sheets (MSDS) supplied from the vendors. The permittee shall maintain a file of MSDS for each raw material which indicates the composition of the volatile organic compounds. Raw materials include, but are not limited to, powder coatings, solvent coatings, thinners, and cleaners. The file must be maintained on site and made available for inspection upon request. The permittee shall have until the 15th day of the following month to complete these records.
[Rules 62-210.370, and 62-296.500(2)(c), F.A.C. and Construction Permit 0990005-013-AC, dated November 13, 2003, Effective Date: March 18, 2004]

G.14. The amounts and types of coatings used and the calculated VOC emissions shall be included in the annual report.
[Rules 62-210.370 and 62-296.500(2)(c), F.A.C. and Construction Permit 0990005-013-AC, dated November 13, 2003, Effective Date: March 18, 2004]

G.15. Copies of all reports, tests, notifications or other submittals required by this permit shall be submitted to both the Department of Environmental Protection, South District and the Palm Beach County Public Health Unit.
[Rule 62-210.370, F.A.C.]

Reasonable Assurances

G.16. Although there are not minimum ventilation airflow rates (this is a fugitive VOC emitting source) required by this permit to satisfy the Department of Environmental Protection, other regulations (i.e. OSHA) may require such flow rates. It is the permittee's responsibility to comply with all applicable regulations. Future regulations my impact this facility at some future date. The permittee shall comply with any applicable future regulations when they become effective.
[Rule 62-210.300, F.A.C.]

G.17. Common Conditions: This emissions unit is also subject to **Specific Conditions H.1. through H.20.** contained in **Subsection H. Common Conditions.**

Subsection H. Common Conditions.

This section addresses the common conditions for the following emissions units as noted within each emissions units section.

E.U. ID No.	Status	Brief Description
003	Regulated	Mill Boiler No. 4
004	Regulated	Mill Boiler No. 5
005	Regulated	Mill Boiler No. 6
009	Regulated	Mill Boiler No. 10
010	Regulated	Mill Boiler No. 11
011	Regulated	Mill Boiler No. 12
012	Regulated	Mill Boiler No. 14
013	Regulated	Mill Boiler No. 15
014	Regulated	Mill Boiler No. 16
015	Regulated	Sugar Mill NSPS Storage Tank
016	Regulated	Sugar Mill NSPS Storage Tank
017	Regulated	Sugar Mill NSPS Storage Tank
018	Regulated	Central Vacuum System for the Trans-Shipment Facility
019	Regulated	Packaging Lines
020	Regulated	Sugar Grinder and Hopper
021	Regulated	Central Dust Collection System No. 1 (Wet Rotoclone #1)
022	Regulated	Central Dust Collection System No. 2 (Wet Rotoclone #2)
023	Regulated	Cooler No. 1 (Cyclone No. 1)
024	Regulated	Cooler No. 2 (Cyclone No. 2)
025	Regulated	Fluidized Bed Dryer/Cooler
026	Regulated	Sugar Silo (S1101)
027	Regulated	Sugar Silo (S1102)
028	Regulated	Sugar Silo (S1103)
029	Regulated	Materials Handling and Storage Operations (Cogeneration Facility)
030	Regulated	Cogeneration Boiler No. 1

E.U. ID No.	Status	Brief Description
031	Regulated	Cogeneration Boiler No. 2
032	Regulated	Cogeneration Boiler No. 3
033	Unregulated	Cogeneration Facility NSPS Storage Tank
034	Regulated	Bulk Load-out Operation
034	Regulated	Transfer Bulk Load-out Operation

H.1. Required Number of Test Runs: For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured; provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five-day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five-day period allowed for the test, the Secretary or his or her designee may accept the results of two complete runs as proof of compliance, provided that the arithmetic mean of the two complete runs is at least 20% below the allowable emission limiting standard.
[Rule 62-297.310(1), F.A.C.]

H.2. Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operating at permitted capacity as defined below. If it is impractical to test at permitted capacity, an emissions unit may be tested at less than the maximum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test rate until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.
[Rule 62-297.301(2), F.A.C.]

H.3. Permitted Capacity: Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit.
[Rule 62-297.310(2)(b), F.A.C.]

H.4. Calculation of Emission Rate: The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the three separate test runs unless otherwise specified in a particular test method or applicable rule.
[Rule 62-297.310(3), F.A.C.]

H.5. Required Sampling Time: Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.
[Rule 62-297.310(4)(a)1, F.A.C.]

H.6. Opacity Compliance Tests: When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

(a) For batch, cyclical processes, or other operations, which are normally completed within less than the minimum observation period and do not recur within that time, the period of observation shall be equal to the duration of the batch cycle or operation completion time.

(b) The observation period for special opacity tests that are conducted to provide data to establish a surrogate standard pursuant to Rule 62-297.310(5)(k), F.A.C., Waiver of Compliance Test Requirements, shall be established as necessary to properly establish the relationship between a proposed surrogate standard and an existing mass emission limiting standard.

[Rule 62-297.310(4)(a)2, F.A.C.]

H.7. Minimum Sample Volume: Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.
[Rule 62-297.310(4)(b), F.A.C.]

H.8. Required Flow Rate Range: For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.
[Rule 62-297.310(4)(c), F.A.C.]

H.9. Allowed Modification to EPA Method 5: When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube.
[Rule 62-297.310(4)(e), F.A.C.]

H.10. Required Equipment: The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
[Rule 62-297.310(5)(a), F.A.C.]

H.11. Calibration of Sampling Equipment: Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1.
[Rule 62-297.310(4)(d), F.A.C.]

Table 297.310-1 Calibration Schedule			
Item	**Minimum Calibration Frequency**	**Reference Instrument**	**Tolerance**
Liquid in glass thermometer	Annually	ASTM Hg in glass ref. Thermometer or equivalent, or thermometric points	+/-2%
Bimetallic thermometer	Quarterly	Calib. liq. in glass thermometer	5 degrees F
Thermocouple	Annually	ASTM Hg in glass ref. thermometer, NBS calibrated reference and potentiometer	5 degrees F
Barometer	Monthly	Hg barometer or NOAA station	+/-1% scale
Pitot Tube	When required or when damaged	By construction or measurements in wind tunnel D greater than 16" and standard pitot tube	See EPA Method 2, Fig. 2-2 &2-3
Probe Nozzles	Before each test or when nicked, dented, or corroded Max. deviation between readings	Micrometer	+/-0.001" mean of at least three readings .004"
Dry Gas Meter and Orifice Meter	1. Full Scale: When received, When 5% change observed, Annually 2. One Point: Semiannually 3. Check after each test series	Spirometer or calibrated wet test or dry gas test meter Comparison check	2% 5%

H.12. Accuracy of Equipment: Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.
[Rule 62-297.310(5)(b), F.A.C.]

H.13. Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it shall require the owner or operator of the emissions unit to conduct a

special compliance test. The special compliance test shall be conducted within 15 days of operation of the E.U. outside the design criteria of the AQCS (air quality control system). The special compliance test shall be conducted to document compliance with the emission limitations and to establish a normal range of operation.
[Rule 62-297.310(7)(b), F.A.C.]

H.14. Waiver of Compliance Test Requirements: If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.
[Rule 62-297.310(7)(c), F.A.C.]

H.15. Compliance Test Notification: The permittee shall notify the Compliance Authority fifteen (15) days prior to Emission Unit (E.U.) testing.
[Rule 62-297.310(7)(a)(9), F.A.C.]

H.16. Compliance Test Submittal: Copies of the test report(s) shall be submitted to the Permitting Authority and the Compliance Authority within forty-five (45) days of completion of testing.
[Rule 62-297.310(8)(b), F.A.C.]

H.17. Test Reports: The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Department to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:
[Rule 62-297.310(8)(c), F.A.C.]

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time, and duration of each sampling run.

9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer, and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing, and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

H.18. Recordkeeping: The permittee shall ensure that all records of monitoring information shall specify the date, place, and time of sampling or measurement and the operating conditions at the time of sampling or measurement, the date(s) analyses were performed, the company or entity that performed the analyses, the analytical techniques or methods used, and the results of such analyses.
[Rule 62-213.440(1)(b)2.a., F.A.C.]

H.19. Record Retention: The permittee shall retain records of all monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information shall include all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.
[Rule 62-213.440(1)(b)2.b., F.A.C.]

H.20. Alternate Sampling Procedure: The owner or operator of any emissions unit subject to the provisions of this chapter may request in writing a determination by the Secretary or his/her designee that any requirement of this chapter (except for any continuous monitoring requirements) relating to emissions test procedures, methodology, equipment, or test facilities shall not apply to such emissions unit and shall request approval of an alternate procedures or requirements.

The request shall set forth the following information, at a minimum:

(a) Specific emissions unit and permit number, if any, for which exception is requested.

(b) The specific provision(s) of this chapter from which an exception is sought.

(c) The basis for the exception, including but not limited to any hardship which would result from compliance with the provisions of this chapter.

(d) The alternate procedure(s) or requirement(s) for which approval is sought and a demonstration that such alternate procedure(s) or requirement(s) shall be adequate to demonstrate compliance with applicable emission limiting standards contained in the rules of the Department or any permit issued pursuant to those rules.

The Secretary or his/her designee shall specify by order each alternate procedure or requirement approved for an individual emissions unit source in accordance with this section or shall issue an order denying the request for such approval. The Department's order shall be final agency action, reviewable in accordance with Section 120.57, Florida Statutes.
[Rule 62-297.620, F.A.C.]

H.21 Modification: Upon modification, each emissions unit shall become an affected facility for each pollutant to which a standard applies and for which there is an increase in the emission rate to the atmosphere in accordance with 40 CFR 60.14 contained in Appendix NSPS-A.
[40 CFR 60.14 and Rule 62-204.800(7)(d), F.A.C.]

H.22 Emission Rate Increases: When a determination of an emission rate increase is required and is based on results from manual emission tests or continuous monitoring systems, the procedures specified in 40 CFR 60 Appendix C shall be used to determine whether an increase in emission rate has occurred in accordance with 40 CFR 60.14 contained in Appendix NSPS-A. [40 CFR 60.14 and Rule 62-204.800(7)(d), F.A.C.]

H.23 Reconstruction: Upon reconstruction, each emissions unit shall become an affected facility, irrespective of any change in emission rate in accordance with 40 CFR 60.15 contained in Appendix NSPS-A. [40 CFR 60.15 and Rule 62-204.800(7)(d), F.A.C.

APPENDIX 10.2

LAND USE DESCRIPTIONS

5. Agriculture

General

The State Comprehensive Plan clearly emphasizes the continuation of agriculture as an important and stable part of the State economy. The Agriculture Goal states: "Florida shall maintain and strive to expand its food, agriculture, ornamental horticulture, aquaculture, forestry, and related industries in order to be a healthy and competitive force in the national and international marketplace."

The Treasure Coast Comprehensive Regional Policy Plan also stresses the importance of agriculture to Palm Beach County. The land use designations and provisions included in this

Element are designed to support the Agricultural Industry while satisfying other goals of the County.

Uses

Urban/Suburban Tier. Areas within the Urban/Suburban Tier may be suitable for agricultural use throughout the implementation period of the Plan. It is not the intent of the Plan to encourage premature urbanization of these areas. In the Urban/Suburban Tier agricultural uses are expected to convert to other uses consistent with the Plan when those agricultural uses are no longer economically viable. Agricultural uses permitted in the residential land use designation must be compatible with the protection of the residential lifestyle and quality of life.

In this Tier agricultural uses shall be allowed, subject to conditions of approval. These conditions may include but are not limited to: compatibility analysis; controlling objectionable odors; fencing; sound limitations; inspections; reporting or monitoring; preservation areas; mitigation; and, such other conditions of operation or other limitations found in the ULDC. Conditions would be imposed concurrent with development approval either as a conditional use, a site plan, or any other process identified in the ULDC. Failure to meet these standards and conditions shall subject the agricultural use to the enforcement procedures in Article 14 of the ULDC.

Land Development Regulations in the Urban/Suburban Tier. The County may apply the ULDC standards for rural residential areas in the Urban/Suburban Tier in low density areas in the Residential future land use designations which are used for agricultural purposes, or on parcels with a Special Agricultural (SA) land use category.

Rural and Exurban Tiers. Limited agricultural uses are expected to co-exist with residential uses. Additionally, the County encourages the continuation and enhancement of the equestrian industry by acknowledging the keeping, raising and training of horses as an agricultural use and shall allow a wide range of related activities and accessory uses in appropriate locations throughout Palm Beach County.

Special Agriculture Uses. The following land uses and intensities are allowed in areas designated Special Agriculture where permitted by the terms of the Unified Land Development Code:

1. Fruit and vegetable markets and terminals for farm products;
2. Agricultural production uses including, but not limited to, produce packing plants, poultry and egg production, nurseries, growing, livestock, kennels, training centers and potting soil manufacturing;
3. Agriculturally related services such as feed and grain stores and farm implement sales and service and fueling areas restricted solely to agricultural activities;
4. Mining, subject to the limitations;
5. Uses and structures accessory to a permitted use; and
6. Limited residential uses as described below,

    a) farm labor quarters and camps;
    b) caretaker's quarters, such as for pump houses;
    c) dwelling quarters and farm residences for bona fide farm operations; or
    d) dwelling units allowed as alternative use.

In order to protect existing residential uses, intense agricultural or other similar uses in the Special Agricultural (SA) future land use designation shall be limited or restricted. Some agricultural uses and intensities will not be permitted as a right within residential areas. While many agricultural uses may be permitted within residential areas, special care shall be taken to protect the existing neighborhoods. Alternative residential designations are depicted on the Future Land Use Atlas for some sites to allow these areas to convert to other uses.

Agricultural Production (AP) Uses: The following land uses and intensities are allowed within areas designated as Agricultural Production, where permitted by the terms of the Unified Land Development Code.

1. Cultivation of crops and livestock including: crop land, pasture land, groves, nurseries, ornamental horticulture areas, thoroughbred and pleasure horse ranches and equestrian facilities, cattle ranches, and specialty farms;
2. Facilities associated with, and dependent upon, a principal agricultural activity including but not limited to transportation, storage or processing of agricultural products or by-products;
3. Limited residential uses as described below,

    a) Farm labor quarters and camps;
    b) Caretaker's quarters, such as for pump houses;
    c) Dwelling quarters and farm residences for bona fide farm operations.
4. Parks and Recreation uses, Institutional uses and Utilities and Transportation uses designed to serve the needs of the agricultural production area including the needs of the limited residential uses described above;
5. Parks and Recreation uses, Institutional uses and Utilities and Transportation designed to serve Countywide, regional and/or state needs may be permitted subject to the siting criteria of the appropriate regulatory authority(ies) and any special review and siting criteria adopted by the Board of County Commissioners of Palm Beach County;
6. Communication Facilities;
7. Mining, subject to the limitations;
8. Uses and structures accessory to permitted use;
9. Residential and non-residential development pursuant to any approvals granted prior to the 1989 Plan adoption, or residential units required to accommodate the relocation of existing units that were approved prior to the 1989 Plan adoption.

8. Transportation and Utilities Facilities (U/T)

Transportation Uses. Transportation uses include streets and other transportation corridors, expressways, interchanges, public and private airports and landing strips, ports, and railroad facilities. Airports and related facilities include, but are not limited to, airport and aircraft operations and maintenance facilities, cargo distribution terminals, car rental operations, warehouses, hotels, and offices.

Utility Uses. Utility Facilities include a full range of utility uses such as water and sewage treatment plants, solid waste transfer stations and facilities, and electrical transmission facilities, towers, sub-stations and power plants.

Communication Facilities include such facilities as television and radio station, towers and relay structures and telephone facilities.

APPENDIX 10.3

ZONING DESCRIPTIONS

Department of Planning, Zoning & Building
100 Australian Avenue
West Palm Beach, FL 33406
(561) 233-5000
Planning Division 233-5300
Zoning Division 233-5200
Building Division 233-5100
Code Enforcement 233-5500
Contractors Certification 233-5525
Administration Office 233-5005
Executive Office 233-5003
www.pbcgov.com/pzb

June 18, 2004

Gary Brandenburg
11780 US 1, Suite 300
North Palm Beach, FL 33408

RE: Zoning Petition - DOA1992-014B Okeelanta Co-Gen Facility

Dear Mr. Brandenburg:

The referenced zoning petition was approved at the June 16, 2004, Board of County Commissioners public hearing, subject to the conditions that are attached. Please notify Maryann Kwok, Principal Site Planner at (561) 233-5036 within five (5) days if you believe there are any discrepancies. Copies of the resolution will be available approximately two weeks after adoption by the Board of County Commissioners.

The approval granted by the Board of County Commissioners is subject to all applicable code requirements, including the zoning district in which the property lies and Section 5.8 (Compliance with Time Limitations) of the ULDC. In addition, prior to obtaining any land development, clearing or building permits, the property owner must receive certification of all applicable plans from the Development Review Officer (DRO).

Please do not hesitate to contact me if you have any questions or require further information.

Very truly yours,

WCW
by lc

William C. Whiteford, Zoning Director

WCW/lc
attachment

cc: Petition File
D. Beasley – Permit Coordinator
R. Crone - Lake Worth Drainage District
S. Hardy-Miller - Land Development
Willie Swoop - PZ&B/Administration
U:\ZONING\PUBLIC HEARING\ACCESS-NEW\APPROVE-CONDITIONS.DOC

EXHIBIT C

CONDITIONS OF APPROVAL

NOTE: All previous conditions of approval are shown in **BOLD** and will be carried forward with this petition unless expressly modified.

A. ALL PETITIONS

1. Condition A.1 of Resolution R-99-4, Petition 1992-014(A) which currently states:

   All previous conditions of approval applicable to the subject property, as contained in Resolutions R-93-340 (Petition 92-014), have been consolidated herein. The petitioner shall comply with all previous conditions of approval and deadlines previously established by Section 5.8 of the ULDC and the Board of County Commissioners, unless expressly modified. (ONGOING: MONITORING- Zoning)

   Is hereby amended to read:

   All previous conditions of approval applicable to the subject property, as contained in Resolutions R-1999-4 (Petition 1992-014(A) have been consolidated as contained herein. The petitioner shall comply with all previous conditions of approval and deadlines previously established by Article 2.E of the ULDC and the Board of County Commissioners, unless expressly modified. (ONGOING: MONITORING-Zoning)

2. Development of the site is limited to the uses and site design as approved by the Board of County Commissioners. The approved site plan is dated April 15, 2004. All modifications must be approved by the Board of County Commissioners unless the proposed changes are required to meet conditions of approval or are in accordance with the ULDC. (ONGOING: ZONING-Zoning)

B. BUILDING AND SITE DESIGN

1. **Maximum total floor area shall be limited to 10% of the total lot area of the subject property.** (BUILDING-Zoning) (Previous Condition C.1 of Resolution R-99-4, Petition 1992-014(A))

2. Condition B.3 of Resolution R-99-4, Petition 1992-014(A) which currently states:

   Prior to site plan certification, the site plan shall be amended to indicate a maximum five (5) acre building envelope on the site and the square footage to be contained therein. All construction and development of the principal structure and accessory facilities shall occur within this envelope. All accessory uses indicated on the site plan outside of the building envelope shall be subject to the requirements and regulations of Section 402.7(E)2(b) (Site Plan Review Committee Powers and Standards of Review). Uses and building locations within the envelope shall not be subject to this requirement. (ZONING)

   Is hereby amended to read:

   Prior to final site plan approval by the Development Review Officer (DRO), the site plan shall be amended to indicate a 8.12 acre building envelope on the site and the square footage to be contained therein. All construction and

development of the principal structure and accessory facilities shall occur within this envelope. All accessory uses indicated on the site plan outside of the building envelope shall be subject to the requirements and regulations of Section 402.7(E)2(b) (Site Plan Review Committee Powers and Standards of Review). Uses and building locations within the envelope shall not be subject to this requirement. (DRO:ZONING-Zoning)

3. Condition K.5 of Resolution R-99-4, Petition 1992-014(A) which currently states:

   The maximum height, from grade to highest point, for all fuel storage areas shall not exceed fifty (50) feet. (BLDG. PERMIT – BLDG. -Zoning)

   Is hereby amended to read:

   The maximum height from finished grade to highest point, for all fuel storage structures/areas, shall not exceed fifty (50) feet. (BLDG. PERMIT – BLDG. - Zoning)

4. **With the exception of clearing for access roads, survey lines, construction trailers, equipment staging areas, fencing, and specific building sites, construction shall commence within 90 days after completion of clearing and grading. Any cleared zones or areas not necessary to the operation of the site shall be planted in grass within 90 days after establishment of finished grade.** (CO:LANDSCAPE-Zoning) (Previous Condition B.3 of Resolution R-99-4, Petition 1992-014(A))

C. ENVIRONMENTAL RESOURCES MANAGEMENT

1. **Plans for all underground and above ground storage tanks must be approved by the Department of Environmental Resources Management prior to installation. The petitioner shall perform all necessary preventative measures to reduce the chances of contamination of the groundwater. Double walled tanks and piping with corrosion protection or their equivalent shall be a part of those measures.** (BLDG. PERMIT – ERM- ERM) (Previous Condition D.1 of Resolution R-99-4, Petition 1992-014(A))

2. **Secondary containment for stored Regulated Substances, including but not limited to fuels, oils, solvents, or other hazardous chemicals, is required. Department of Environmental Resources Management staff are willing to provide guidance on appropriate protective measures.** (BLDG. PERMIT – ERM- ERM) (Previous Condition D.2 of Resolution R-99-4, Petition 1992-014(A))

3. **All new excavated lakes shall possess a littoral shelf area. A littoral shelf shall be an area with a slope not greater six (6) feet horizontal to one (1) foot vertical, ranging in depth from ordinary high water (OHW) or the controlled water level (CWL) to four feet below OHW or CWL. A minimum of 30% of the surface area of all lakes shall be planted with native aquatic vegetation on a minimum of three foot centers.**

   a. **A littoral shelf planting plan and maintenance plan shall be submitted to the Department of Environ-mental Resources Management concurrent with Site Plan Review application and approved by ERM prior to Site Plan certification. This information shall also be provided on a mylar for the Zoning Division as part of the site plan application. (ERM)**

b. **Prior to the issuance of a Certificate of Occupancy and within three working days of the completion of littoral plantings ERM shall be notified. This planting shall not be credited as compensation required by wetland permits.** (BLDG. PERMIT – ERM- ERM) (Previous Condition D.3 of Resolution R-99-4, Petition 1992-014(A))

4. **Areas disturbed as a result of the construction of the cogeneration facility and transmission lines shall be continually maintained to be free of Brazilian Pepper, Australian Pine and Melaleuca.** (BUILDING-Zoning) (Previous Condition F.1 of Resolution R-99-4, Petition 1992-014(A))

D. HEALTH

1. Condition B.1 of Resolution R-99-4, Petition 1992-014(A) which currently states:

Petitioner shall:

a. **Prior to initial start up, install all air pollution control devices and processes required by the Florida Department of Environmental Regulation (DERM), the United States Environmental Protection Agency (EPA), and as described in the environmental report attached hereto and made a part hereof (Exhibit A) to include, but not be limited to:**

(1) **an electrostatic precipitator, designed for at least 98% removal of particulate matter or equivalent;**
(2) **a thermal D-Nox system designed for at least 40% removal of oxides of nitrogen, or equivalent; and,**
(3) **an activated carbon injection system for control of mercury emissions, or equivalent.**

b. **Continuously monitor and record exhaust gas opacity, oxides of nitrogen, and carbon monoxide.**

c. **Test stack emissions according to DER and EPA standards at least once every six months for particular matter, oxides of nitrogen, carbon monoxide, sulfur dioxide, lead, mercury and volatile organic compounds for the first two years of operation. If the test results for the first two years of operations indicate the facility is operating in compliance with the terms of approval and of applicable permits and regulations, the test will thereafter occur as required by the respective DER and EPA permits, with the exception that stack emissions will be tested annually for mercury. In the event the results of the first two years of testing show non-compliance, then the frequency of testing shall continue to occur once every six months until the facility achieves a sustained two-year period of compliance.**

d. **Not exceed the total actual annual emissions from the existing boilers and those currently permitted for construction at this facility. Except for particulate matter and sulfur dioxide, the following figures represent the best available estimates for the actual current emissions. These emissions, in tons per year, by pollutant, are:**

(1)	**Particulate Matter:**	**311.3**
(2)	**Oxides of Nitrogen**	**478.9**

(3) Carbon Monoxide: 5,895.4
(4) Volatile Organic Compounds: 218.1
(5) Mercury: 0.0141
(6) With regard to sulfur dioxide emissions, the following conditions shall apply:

(a) If used, coal shall be of the low sulfur variety, and shall not exceed 0.7% sulfur by weight..
(b) Fuel oil shall be limited to low sulfur No. 2 distillate oil and shall not exceed 1% sulfur by weight.
(c) Coal consumption shall not exceed 25% of the total heat input in any calendar quarter.

(Paragraphs (d) through (h) apply to total sulfur dioxide emissions for the combined facilities of petitions 92-13 and 92-14.)

(d) Shall not exceed the current emissions of the proposed project (an average of 1000 tons of sulfur dioxide. If the life of the project exceeds thirty years, the total allowable lifetime emissions will be adjusted proportionately.
(e) For the case that the Palm Beach County government makes available 200,000 tons of biomass fuel per year to the cogeneration facilities in Petitions 92-13 and 92-14, under the same terms and conditions as those in the existing Okeelanta/Palm Beach Solid Waste Authority Wood-waste Agreement, the petitioner shall:

1) not exceed 1500 tons of sulfur dioxide for that year.
2) not exceed an average of 1300 tons of sulfur dioxide for each five year incremental period.

(f) For the case that the Palm Beach County government cannot make available the 200,000 tons of biomass fuel per year to the cogeneration facilities in Petitions 92-13 and 92-14, the petitioner shall:

1) not exceed 1700 tons of sulfur dioxide for that year.
2) not exceed an average of 1500 tons of sulfur dioxide for each ten year incremental period.

(g) The allowable average sulfur dioxide emissions for the five and ten year incremental periods described above shall be calculated on a weighted average for any period in which both cases occur (years in which biomass is made available/years in which biomass is not made available.)

(h) Sulfur dioxide emissions shall include all emissions from the proposed projects in Petitions 92-13 and 92-14 and the currently existing boilers at the Okeelanta and Osceola facilities if in operation during initial project operation.

e. **Employ all methods to control unconfined dust and particulate emissions, required by local, state and/or federal agencies.**

f. **Request in all applications to DER and EPA that the above conditions become part of the corresponding permits.** (ONGOING:HEALTH-Health)

Is hereby deleted RESAON [Replaced by new Health conditions D.2-D.5].

2. This facility shall operate and maintain, all air pollution control devices and processes required by the Florida Department of Environmental Protection (FDEP) and the United States Environmental Protection Agency (EPA). (ONGOING: MONITORING-Health)

3. Continuous Emission Monitors shall be operated in accordance with Air Permit No. PSD-FL-196 (O), Project No. 0990332-016-AC issued on October 29, 2003 by FDEP. (ONGOING: MONITORING-Health) (Previous Condition G.1 of Resolution R-99-4, Petition 1992-014(A))

4. Stack tests shall be conducted in accordance with Air Permit No. PSD-FL-196 (O), Project No. 0990332-016-AC issued on October 29, 2003 by FDEP. (ONGOING: MONITORING-Health)

5. The total annual emissions for this facility shall be in accordance with Air Permit No. PSD-FL-196 (O), Project No. 0990332-016-AC issued on October 29, 2003 by FDEP. The property owner shall not deviate from the emission limiting requirements specified in permit PSDF-FL-196(O) without prior authorization from the Board of County Commissioners. (ONGOING: MONITORING-Health)

6. **During land clearing and site preparation, wetting operations or other soil treatment techniques appropriate for controlling unconfined particulates, including grass seeding and mulching of disturbed areas, shall be undertaken and implemented by the Petitioner to comply with state and federal air standards.** (ONGOING: HEALTH-Health) (Previous Condition B.2 of Resolution R-99-4, Petition 1992-014(A))

7. **The petitioner shall comply at all times with the requirements of all permits issued by all agencies having jurisdiction over the facility.** (ONGOING:MONITORING-Health/Erm) (Previous Condition B.4 of Resolution R-99-4, Petition 1992-014(A))

8. **Potable water supply for the proposed project is to be provided by a reverse osmosis non-transient non-community water supply system in accordance with Chapter 17-550 & 17-555, F.A.C.** (ONGOING: MONITORING-Health) (Previous Condition G.1 of Resolution R-99-4, Petition 1992-014(A))

9. **The industrial waste stream generated by this site shall be disposed of in accordance with all applicable Florida DER regulations.** (HEALTH) (Previous Condition G.2 of Resolution R-99-4, Petition 1992-014(A))

10. **Cogeneration boiler fuels shall be limited to Biomass, as defined in Condition K.9. and fossil fuels. The use of fossil fuels shall be limited in accordance with conditions A.1.d.(6)(a), A.1.d.(6)(b) and A.1.d.(c). The use of Biomass Wastes shall include provisions for the substantial exclusion of painted and chemically treated wood, household garbage, toxic or hazardous materials or wastes and special wastes. This specification must be reviewed and approved by the Palm Beach**

County Public Health Unit prior to site plan approval. (ONGOING: MONITORING-Health) (Previous Condition G.3 of Resolution R-99-4, Petition 1992-014(A))

Is hereby amended to read:

Cogeneration boiler fuels shall be limited to Biomass Waste as defined in condition D23, and approved fossil fuels.

a. The use of Biomass Wastes shall include provisions for the substantial exclusion of painted and chemically treated wood, household garbage, toxic or hazardous materials or wastes and special wastes. (ONGOING: MONITORING- Health)

b. The use of fossil fuels shall be limited to pipeline natural gas or new low sulfur distillate with sulfur content not more than 0.05% sulfur by weight. The facility will consider replacing this fuel with ultra low sulfur fuel of sulfur content not greater than 0.0015 % by weight as secondary fuel when it becomes available. The burning of coal as an alternate fuel shall be prohibited. [Note: It is expected that ultra low sulfur distillate fuel will be widely available by 2006 due to federal regulations for highway fuel as outlined in Federal Register / Vol. 66, No. 12 / Thursday, January 18, 2001 / Rules and Regulations, on the Fuel Quality Standards.1]. (ONGOING: MONITORING-Health)

11. **All fly ash and bottom ash from the facility which is produced during any period in which fossil fuels are used, and thereafter for a reasonable time shall be segregated and managed as set forth in the ash management plan.** (ONGOING:MONITORING-Health) (Previous Condition G.4 of Resolution R-99-4, Petition 1992-014(A))

12. **Prior to site plan approval, a detailed ash management plan shall be submitted by the petitioner and approved by the Palm Beach County Public Health Unit. This plan must detail contingencies plans, testing and monitoring of the ash, ash handling and disposal methods, planned spreading locations and identification of environmental impacts and proposed measures for mitigating these impacts.** (HEALTH) (Previous Condition G.5 of Resolution R-99-4, Petition 1992-014(A))

Is hereby amended to read:

The facility shall revise the current ash management plan to incorporate the revised testing procedures for the ash as submitted to the Palm Beach County Health Department. The facility shall request that the revised ash management plan be included in the Title V operating permit. (DRO: HEALTH-Health)

13. **Prior to site plan approval of the operation of the facility, a detailed fuel management plan shall be submitted and approved by the Palm Beach County Public Health Unit. This plan shall detail location, size, handling procedures, transportation, dust control and fire protection.** (ONGOING:HEALTH-Health) (Previous Condition G.6 of Resolution R-99-4, Petition 1992-014(A))

Is hereby amended to read:

The facility shall revise the current fuel management plan to incorporate "The Inclement Weather Operating Procedures" and "Wood, Bagasse and Ash, Inspection and Testing Plan" as submitted to the Palm Beach County Health Department on March 30, 2004. The facility shall request that the revised fuel management plan be included in the Title V operating permit. Revisions to this plan shall be made in concurrence with Palm Beach County Health Department. (DRO: HEALTH-Health)

14. Condition G.7 of Resolution R-99-4, Petition 92-14(A) which currently states:

Prior to site plan approval, the petitioner shall identify all liquid waste streams and provide a complete physical and chemical characterization of the waste streams which shall include, at a minimum, the following information:

a. A description of the source or process associated with the waste stream.
b. Volume and flow rates.
c. Physical parameters including temperature, pH, and total dissolved solids.
d. Expected concentrations of pollutants or contaminants, including but not limited to, Nitrogen, Phosphorous and other nutrients, mercury, lead and other trace metals, volatile or semi-volatile organic compounds, etc.
e. A description and detail of any treatment system utilized.
f. A description of the disposal or reuse method and identification of all points of discharge. (DRO:HEALTH- Health)

Is hereby deleted. REASON: [Regulated by FDEP].

15. Condition G.8 of Resolution R-99-4, Petition 92-14(A) which currently states:

Prior to site plan approval, a detailed domestic wastewater management plan shall be submitted and approved by the Palm Beach County Public Health Unit. (DRO:HEALTH- Health)

Is hereby deleted. REASON: [Regulated by FDEP].

16. Condition G.9 of Resolution R-99-4, Petition 92-14(A) which currently states:

Prior to site plan approval, a detailed storm water management plan shall be submitted by the petitioner to the South Florida Water Management District (SFWMD) and Palm Beach County Public Health Unit for review and approval. Staff shall coordinate its review with the SFWMD. (DRO:HEALTH- Health)

Is hereby deleted. REASON:[Regulated by SFWMD].

17. **Prior to site plan approval, a detailed industrial wastewater management plan must be submitted to the Department of Environmental Regulation (DER) and the Palm Beach County Public Health Unit for review and approval. Staff shall coordinate its review with the DER.** (DRO:HEALTH- Health) (Previous Condition G.10 of Resolution R-99-4, Petition 92-14(A))

Is hereby deleted. REASON: Regulated by FDEP].

18. Condition G.11 of Resolution R-99-4, Petition 92-14(A) which currently states:

Prior to site plan approval, all applicable environmental permits or applications for permits must be obtained or submitted. (DRO:HEALTH-Health)

Is hereby deleted. REASON:[The facility has in compliance with the requirements].

19. **Onsite storage shall be contained within the area designated on Exhibit 48 and shall be processed and stored in a manner which controls fugitive and dust particulate emissions.** (Previous Condition L.6 of Resolution R-99-4, Petition 1992-014(A)) (ONGOING:CODE ENF-Health)

20. **The storage of fuel on site shall be limited to the areas designated on the certified site plan and shall be limited to the storage of bagasse and biomass waste only.** (Previous Condition L.8 of Resolution R-99-4, Petition 1992-014(A)) (ONGOING:CODE ENF-Health)

21. **"Biomass Waste", as referred to herein, shall mean bagasse, vegetative and woody matter, including material resulting from landscaping, maintenance, land clearing operations, clean wood, cellulose material, tree and shrub trimmings, grass clippings, palm fronds, trees, tree stumps, wood from land development operations, clean wood debris from demolition operations; it shall not include trash, garbage or sludge (FAC 17-701), biohazardous waste (17-712 FAC), or biological waste (17-712 FAC).** (Previous Condition L.9 of Resolution R-99-4, Petition 1992-014(A)) (ONGOING:CODE ENF-Health)

22. **The existing boilers at the adjacent sugar mill facility shall be subject to the conditions contained within the permits issued by the State of Florida Department of Environmental Protection (DERM).** (ONGOING:DERM/HEALTH - Zoning) (Previous Condition L.10 of Resolution R-99-4, Petition 1992-14(A)).

E. ENGINEERING

1. **The Developer shall provide discharge control and treatment for the stormwater runoff in accordance with all applicable agency requirements in effect at the time of the permit application. However, at a minimum, this development shall retain onsite the stormwater runoff generated by a three (3) year-one (1) hour storm with a total rainfall of 3 inches as required by the Permit Section, Land Development Division. The drainage system shall be maintained in an acceptable condition as approved by the County Engineer. In the event that the drainage system is not adequately maintained as determined by the County Engineer, this matter will be referred to the Code Enforcement Board.** (ONGOING:CODE-Eng) (Previous Condition E.1 of Resolution R-99-4, Petition 1992-014(A))

2. **If required by the County Engineer or the South Florida Water Management District the Developer shall design the drainage system such that drainage from those areas which may contain hazardous or undesirable waste shall be separate from stormwater runoff from the remainder of the site** (ONGOING:MONITORING- Eng) (Previous Condition E.2 of Resolution R-99-4, Petition 1992-014(A))

F. LANDSCAPING

1. Condition H.1 of Resolution R-99-4, Petition 92-14(A)) which currently states:

   Prior to site plan certification, the petitioner shall submit a Landscape Betterment Plan for review and approval by the Zoning Division. The Landscape Betterment Plan shall demonstrate conformance to all Landscape Code requirements and conditions of approval. (DRO:LANDSCAPE-Zoning)

   Is hereby deleted. [REASON: Completed].

2. **As an alternative, the petitioner may landscape the site and provide off-site improvements in accordance with the ULDC, upon adoption.** (DRO:LANDSCAPE-Zoning) (Previous Condition H.2 of Resolution R-99-4, Petition 92-14(A))

   Is hereby deleted. [REASON: Completed].

3. **The petitioner shall utilize all drought-tolerant plants in landscaping on the subject property.** (BLDG.PERMIT:LANDSCAPE-Zoning) (Previous Condition M.2 of Resolution R-99-4, Petition 1992-014(A))

   Is hereby deleted. [REASON: Completed].

G. LIGHTING

1. Condition I.1 of Resolution R-99-4, Petition 92-14(A) which currently states:

   All outdoor lighting used to illuminate the premises and identification signs shall be of low intensity, shielded and directed downward.

   Is hereby deleted. REASON:[building code].

H. PARKING

1. Condition J.1 of Resolution R-99-4, Petition 92-14(A) which currently states:

   Vehicle parking shall be limited to the parking areas designated on the approved site plan. No parking of vehicles shall be permitted in landscaped areas, right-of-way or interior drives.

   Is hereby deleted. REASON: [superceded by Condition A.2, and on-site parking is a code-requirement].

I. TRANSMISSION LINES

1. **All transmission lines required by this facility are to be constructed in accordance with the National Electric Safety Code.** (Previous Condition J.1 of Resolution R-99-4, Petition 92-14(A))

2. **All transmission lines leaving the site and required by this facility shall not exceed 138 KV.** (Previous Condition J.1 of Resolution R-99-4, Petition 92-14(A))

J. USE LIMITATIONS

1. Condition J.1 of Resolution R-99-4, Petition 92-14(A) which currently states:

   Use of the site shall be limited as follows:

Land Area 50.00 acres
Total Floor Area 217,800 square feet
Maximum Floor Area 10%
Electrical Production 65 mega watt maximum
Fuel Yard 35 acre max. net land area

Is hereby amended to read:

a. Use of the site shall be limited as follows:

Land Area 81.28 acres
Total Floor Area 354,055 square feet
Maximum Floor Area 10%
Electrical Production 140 net mega watt maximum
Fuel Yard 45 acre max. net land area
(DRO/BLDG.PERMIT:DRO/BLDG-Zoning)

b. Prior to site plan approval by the Development Review Officer (DRO), the site plan shall be revised to reflect the most updated condition consistent with the use limitation condition as identified on J.1.a. (DRO:DRO-Zoning)

2. Condition K.2 of Resolution R-93-340, Petition 92-14 which currently states:

Prior to site plan certification, the site plan shall be amended to indicate the location of a truck/vehicle wash facility. This wash facility shall utilize a 100% water recycling system. (ZONING-Building)

Is hereby deleted. REASON: [no vehicle wash facility will be constructed].

3. **There shall be no repair or maintenance of vehicles on site.** (Previous Condition K.3 of Resolution R-99-4, Petition 1992-014(A)) (ONGOING:CODE ENF-Zoning)

4. **No outside storage of disassembled vehicles, or parts thereof, shall be permitted on site.** (Previous Condition K.4 of Resolution R-99-4, Petition 1992-014(A))

5. **All vehicles utilizing public rights-of-way to carry biomass waste (i.e. vegetative matter) to the site shall be equipped, at a minimum, with covering or screens over top of the open bed of the vehicle to prevent the loss of material during transportation to the facility.** (Previous Condition K.6 of Resolution R-99-4, Petition 1992-014(A)) (ONGOING:CODE ENF-Zoning)

K. WATER SUPPLY

1. Condition M.1 of Resolution R-99-4, Petition 1992-014(A) which currently states:

Construction shall not commence on the project site until it has been demonstrated to the satisfaction of the South Florida Water Management District that an acceptable and sustainable supply of water during drought periods is available to serve the project over and above that necessary to serve already approved development. (BLDG.PERMIT: MONITORING-SFWMD)

Is hereby amended to read:

Prior to the issuance of a building permit for Petition 1992-014(B), the property owner shall obtain approval from the South Florida Water Management District (SFWMD) that an acceptable and sustainable supply of water during drought periods is available to serve the project exceeding the requirement necessary to serve the approved development. (BLDG.PERMIT: MONITORING-SFWMD)

2. Condition M.3 of Resolution R-99-4, Petition 1992-014(A) which currently states:

The petitioner shall use water-saving plumbing fixtures and other water conserving devices in restrooms and employee locker rooms, as specified in the Water Conservation Act, Section 553.14, F.S. (BUILDING)

Is hereby amended to read:

The property owner shall use water-saving plumbing fixtures and other water conserving devices in restrooms and employee locker rooms, as specified in the Water Conservation Act, Section 553.14, F.S. (BLDG. PERMIT: BLDG-Zoning)

L. COMPLIANCE

1. **In granting this approval, the Board of County Commissioners relied upon the oral and written representations of the petitioner both on the record and as part of the application process. Deviations from or violation of these representations shall cause the approval to be presented to the Board of County Commissioners for review under the compliance condition of this approval.** (ONGOING: MONITORING - Zoning) (Previous Condition N.1 of Resolution R-99-4, Petition 1992-014(A)).

2. Conditions N.2 of Resolution R-99-4, Petition 1992-014(A) which currently states:

Failure to comply with any of the conditions of approval for the subject property at any time may result in:

a. The issuance of a stop work order; the issuance of a cease and desist order; the denial or revocation of a building permit; the denial or revocation of a Certificate of Occupancy; the denial of any other permit, license or approval to any developer, owner, lessee, or user of the subject property; the revocation of any other permit, license or approval from any developer, owner, lessee, or user of the subject property; revocation of any concurrency; and/or

b. The revocation of the Official Map Amendment, Conditional Use, Requested Use, Development Order Amendment, and/or any other zoning approval; and/or

c. A requirement of the development to conform with the standards of the ULDC at the time of the finding of non-compliance, or the addition or modification of conditions reasonably related to the failure to comply with existing conditions; and/or

d. Referral to code enforcement; and/or

e. Imposition of entitlement density or intensity.

Staff may be directed by the Executive Director of PZ&B or a majority vote of the Code Enforcement Board to schedule a Status Report before the body which approved the Official Zoning Map Amendment, Conditional Use, Requested Use, Development Order Amendment, and/or other zoning approval, in accordance with the provisions of Section 5.8 of the ULDC, in response to any flagrant violation and/or continued violation of any condition of approval.

Appeals of any departmental administrative actions hereunder may be taken to the Palm Beach County Board of Adjustment or as otherwise provided in the Unified Land Development Code (ULDC), as amended. Appeals of any revocation of an Official Zoning Map Amendment, Conditional Use, Requested Use, Development Order Amendment or other actions based on a Board of County Commission decision shall be by petition for writ of certiorari to the Fifteenth Judicial Circuit. (MONITORING)

Is hereby amended to read:

2. Failure to comply with any of the conditions of approval for the subject property at any time may result in:

   a. The issuance of a stop work order; the issuance of a cease and desist order; the denial or revocation of a building permit; the denial or revocation of a Certificate of Occupancy; the denial of any other permit, license or approval to any developer, owner, lessee, or user of the subject property; the revocation of any other permit, license or approval from any developer, owner, lessee, or user of the subject property; revocation of any concurrency; and/or
   b. The revocation of the Official Map Amendment, Conditional Use, Requested Use, Development Order Amendment, and/or any other zoning approval; and/or
   c. A requirement of the development to conform with the standards of the ULDC at the time of the finding of non-compliance, or the addition or modification of conditions reasonably related to the failure to comply with existing conditions; and/or
   d. Referral to code enforcement; and/or
   e. Imposition of entitlement density or intensity.

   Staff may be directed by the Executive Director of PZ&B or a Code Enforcement Special Master to schedule a Status Report before the body which approved the Official Zoning Map Amendment, Conditional Use, Requested Use, Development Order Amendment, and/or other zoning approval, in accordance with the provisions of Article 2.E of the ULDC, in response to any flagrant violation and/or continued violation of any condition of approval.

   Appeals of any departmental administrative actions hereunder may be taken to the Palm Beach County Board of Adjustment or as otherwise provided in the Unified Land Development Code (ULDC), as amended. Appeals of any revocation of an Official Zoning Map Amendment, Conditional Use, Requested Use, Development Order Amendment or other actions based on a Board of County Commission decision shall be by petition for writ of certiorari to the Fifteenth Judicial Circuit. (ONGOIGN: MONITORING - Zoning)

RESOLUTION NO. R-99- 4

RESOLUTION APPROVING ZONING PETITION EAC92-014(A
DEVELOPMENT ORDER AMENDMENT
PETITION OF OKEELANTANA CORPORATION
BY GARY BRANDENBURG, AGENT
(OKEELANTANA CO-GEN FACILITY)

WHEREAS, the Board of County Commissioners, as the governing body of Palm Beach County, Florida, pursuant to the authority vested in Chapter 163 and Chapter 125, Florida Statutes, and the Palm Beach County Unified Land Development Code, is authorized and empowered to consider petitions relating to zoning; and

WHEREAS, the notice and hearing requirements, as provided for in Article 5 of the Palm Beach County Unified Land Development Code, have been satisfied; and

WHEREAS, Zoning Petition EAC92-014(A) was presented to the Board of County Commissioners at a public hearing conducted on January 7, 1999; and

WHEREAS, the Board of County Commissioners has considered the evidence and testimony presented by the petitioner and other interested parties, and the recommendations of the various county review agencies; and

WHEREAS, this approval is subject to Article 5, Section 5.8 (Compliance with Time Limitations), of the Palm Beach County Unified Land Development Code and other provisions requiring that development commence in a timely manner; and

WHEREAS, the Board of County Commissioners made the following findings of fact:

1. This Development Order Amendment is consistent with the Palm Beach County Comprehensive Plan.

2. This Development Order Amendment complies with the relevant and appropriate portions of Article 6, Supplementary Use Standards; of the Palm Beach County Unified Land Development Code.

3. This Development Order Amendment is consistent with the requirements of the Palm Beach County Unified Land Development Code.

4. This Development Order Amendment, with conditions as adopted, is compatible as defined in the Palm Beach County Unified Land Development Code and generally consistent with the uses and character of the land surrounding and in the vicinity of the land proposed for development.

5. This Development Order Amendment, with conditions as adopted, complies with the standards imposed on it by applicable provisions of the Palm Beach County Unified Land Development Code for use, layout, function, and general development characteristics.

6. This Development Order Amendment meets applicable local land development regulations.

7. This Development Order Amendment, with conditions as adopted, minimizes adverse effects, including visual impact and intensity of the proposed use on adjacent lands.

8. This Development Order Amendment has a concurrency determination and complies with Article 11 (Adequate Public Facility Standards) of the Palm Beach County Unified Land Development Code.

9. This Development Order Amendment, with conditions as adopted, minimizes environmental impacts, including but not limited to water, air, stormwater management, wildlife, vegetation, wetlands and the natural functioning of the environment.

10. This Development Order Amendment, with conditions as adopted, will result in logical, timely and orderly development patterns.

WHEREAS, Article 5 of the Palm Beach County Unified Land Development Code requires that the action of the Board of County Commissioners be adopted by resolution.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF PALM BEACH COUNTY, FLORIDA, that Zoning Petition EAC92-014(A), the petition of Okeelantana Corporation, by Gary Brandenburg, agent, for a Development Order Amendment/Expedited Application Consideration (EAC) to modify Condition K.10 (boilers) of R-93-340 on a parcel of land legally described in EXHIBIT A, attached hereto and made a part hereof, and generally located as shown on a vicinity sketch attached as EXHIBIT B, attached hereto and made a part hereof, was approved on January 7, 1999, subject to the conditions of approval described in EXHIBIT C, attached hereto and made a part hereof.

Commissioner McCarty moved for the approval of the Resolution.

The motion was seconded by Commissioner Newell and, upon being put to a vote, the vote was as follows:

Maude Ford Lee, Chair	–	Aye
Warren Newell, Vice Chair	–	Aye
Karen T. Marcus	–	Aye
Carol A. Roberts	–	Aye
Mary McCarty	–	Aye
Burt Aaronson	–	Aye
Tony Masilotti	–	Aye

The Chair thereupon declared that the resolution was duly passed and adopted on January 7, 1999.

APPROVED AS TO FORM
AND LEGAL SUFFICIENCY

BY: _____
COUNTY ATTORNEY

PALM BEACH COUNTY, FLORIDA
BY ITS BOARD OF COUNTY
COMMISSIONERS

DOROTHY H. WILKEN, CLERK

BY: _____
DEPUTY CLERK

EXHIBIT A

LEGAL DESCRIPTION

LEGAL DESCRIPTION

BEING A TRACT OF LAND LYING IN THE NORTHEAST ONE-QUARTER OF SECTION 16, TOWNSHIP 45 SOUTH, RANGE 36 EAST, PALM BEACH COUNTY, FLORIDA, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCE AT THE NORTHEAST CORNER OF SAID NORTHEAST ONE-QUARTER; THENCE S 00° 50' 58"E, ALONG THE EAST LINE OF SAID NORTHEAST ONE-QUARTER, A DISTANCE OF 793.03 FEET; THENCE S 89° 37' 17"W, A DISTANCE OF 50.00 FEET TO THE POINT OF BEGINNING; THENCE S 00° 50' 58"E, ALONG A LINE PARALLEL WITH AND 50.00 FEET WEST OF THE EAST LINE OF SAID NORTHEAST ONE-QUARTER, A DISTANCE OF 1170.01 FEET; THENCE S 89° 37' 17"W, A DISTANCE OF 2508.51 FEET TO A POINT ON A LINE PARALLEL WITH AND 80.00 FEET EAST OF THE WEST LINE OF SAID NORTHEAST ONE-QUARTER; THENCE N 00° 55' 27" W, ALONG SAID PARALLEL LINE, A DISTANCE OF 1078.02 FEET; THENCE N 89° 37' 17"E, A DISTANCE OF 402.64 FEET; THENCE N 42° 03' 08"E, A DISTANCE OF 124.65 FEET; THENCE N 89° 37' 17"E, A DISTANCE OF 2022.43 FEET TO THE POINT OF BEGINNING.

CONTAINING 66.456 ACRES, MORE OR LESS.

EXHIBIT B

VICINITY SKETCH

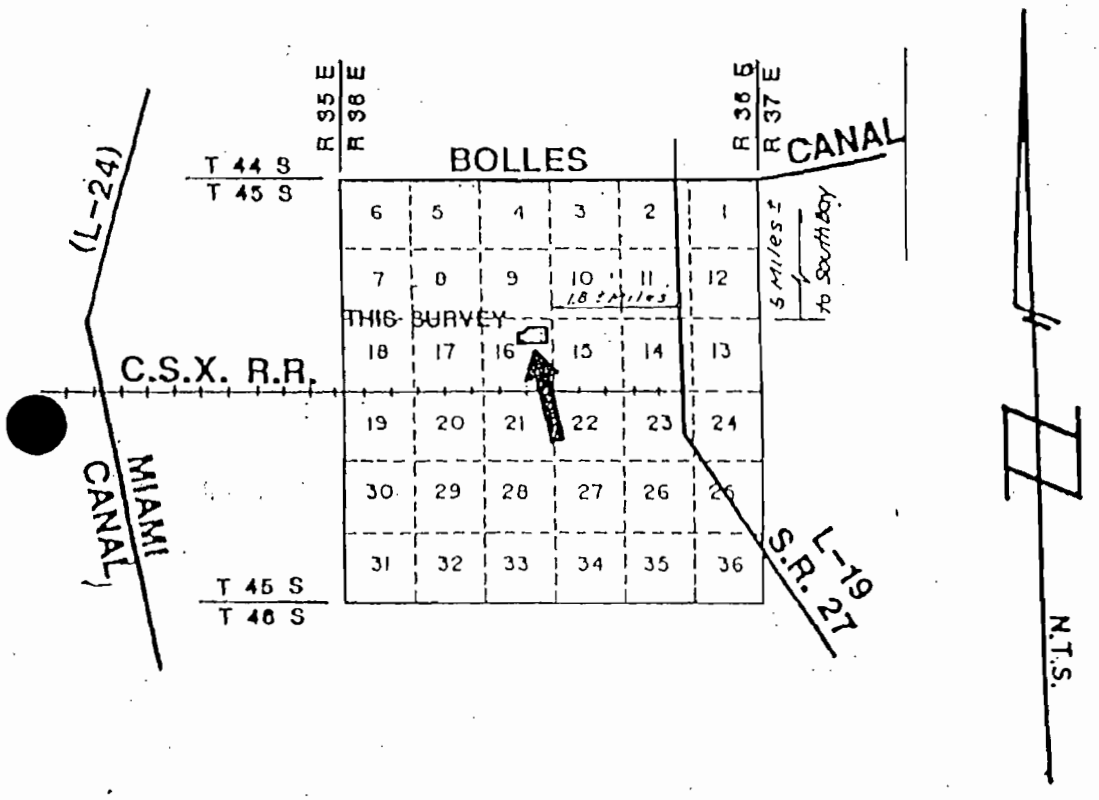

EXHIBIT C

CONDITIONS OF APPROVAL

NOTE: All previous conditions of approval are shown in **BOLD** and will be carried forward with this petition unless expressly modified.

A. ALL PETITIONS

1. All previous conditions of approval applicable to the subject property, as contained in Resolutions R-93-340 (Petition 92-014), have been consolidated herein. The petitioner shall comply with all previous conditions of approval and deadlines previously established by Section 5.8 of the ULDC and the Board of County Commissioners, unless expressly modified. (ONGOING: MONITORING - Zoning)

B. AIR QUALITY

1. **Petitioner shall:**

   a. **Prior to initial start up, install all air pollution control devices and processes required by the Florida Department of Environmental Regulation (DERM), the United States Environmental Protection Agency (EPA), and as described in the environmental report attached hereto and made a part hereof (Exhibit A) to include, but not be limited to:**

      (1) **an electrostatic precipitator, designed for at least 98% removal of particulate matter or equivalent;**
      (2) **a thermal D-Nox system designed for at least 40% removal of oxides of nitrogen, or equivalent; and,**
      (3) **an activated carbon injection system for control of mercury emissions, or equivalent.**

   b. **Continuously monitor and record exhaust gas opacity, oxides of nitrogen, and carbon monoxide.**

   c. **Test stack emissions according to DER and EPA standards at least once every six months for particular matter, oxides of nitrogen, carbon monoxide, sulfur dioxide, lead, mercury and volatile organic compounds for the first two years of operation. If the test results for the first two years of operations indicate the facility is operating in compliance with the terms of approval and of applicable permits and regulations, the test will thereafter occur as required by the respective DER and EPA permits, with the exception that stack emissions will be tested annually for mercury. In the event the results of the first two years of testing show non-compliance, then the frequency of testing shall continue to occur once every six months until the facility achieves a sustained two-year period of compliance.**

   d. **Not exceed the total actual annual emissions from the existing boilers and those currently permitted for construction at this facility. Except for particulate matter and sulfur dioxide, the following figures represent the best available estimates for the**

actual current emissions. These emissions, in tons per year, by pollutant, are:

(1) Particulate Matter: 311.3
(2) Oxides of Nitrogen 478.9
(3) Carbon Monoxide: 5,895.4
(4) Volatile Organic Compounds: 218.1
(5) Mercury: 0.0141
(6) With regard to sulfur dioxide emissions, the following conditions shall apply:

(a) If used, coal shall be of the low sulfur variety, and shall not exceed 0.7% sulfur by weight..
(b) Fuel oil shall be limited to low sulfur No. 2 distillate oil and shall not exceed 1% sulfur by weight.
(c) Coal consumption shall not exceed 25% of the total heat input in any calendar quarter.

(Paragraphs (d) through (h) apply to total sulfur dioxide emissions for the combined facilities of petitions 92-13 and 92-14.)

(d) Shall not exceed the current emissions of the proposed project (an average of 1000 tons of sulfur dioxide. If the life of the project exceeds thirty years, the total allowable lifetime emissions will be adjusted proportionately.
(e) For the case that the Palm Beach County government makes available 200,000 tons of biomass fuel per year to the cogeneration facilities in Petitions 92-13 and 92-14, under the same terms and conditions as those in the existing Okeelanta/Palm Beach Solid Waste Authority Wood-waste Agreement, the petitioner shall:

1) not exceed 1500 tons of sulfur dioxide for that year.
2) not exceed an average of 1300 tons of sulfur dioxide for each five year incremental period.

(f) For the case that the Palm Beach County government cannot make available the 200,000 tons of biomass fuel per year to the cogeneration facilities in Petitions 92-13 and 92-14, the petitioner shall:

1) not exceed 1700 tons of sulfur dioxide for that year.
2) not exceed an average of 1500 tons of sulfur dioxide for each ten year incremental period.

(g) **The allowable average sulfur dioxide emissions for the five and ten year incremental periods described above shall be calculated on a weighted average for any period in which both cases occur (years in which biomass is made available/years in which biomass is not made available.)**

(h) **Sulfur dioxide emissions shall include all emissions from the proposed projects in Petitions 92-13 and 92-14 and the currently existing boilers at the Okeelanta and Osceola facilities if in operation during initial project operation.**

e. **Employ all methods to control unconfined dust and particulate emissions, required by local, state and/or federal agencies.**

f. **Request in all applications to DER and EPA that the above conditions become part of the corresponding permits.** (Previously Condition A.1 of Resolution R-93-340, Petition 92-14) (HEALTH)

2. **During land clearing and site preparation, wetting operations or other soil treatment techniques appropriate for controlling unconfined particulates, including grass seeding and mulching of disturbed areas, shall be undertaken and implemented by the Petitioner to comply with state and federal air standards.** (Previously Condition A.2 of R-93-340, Petition 92-14) (ZONING-Health)

3. **With the exception of clearing for access roads, survey lines, construction trailers, equipment staging areas, fencing, and specific building sites, construction shall commence within 90 days after completion of clearing and grading. Any cleared zones or areas not necessary to the operation of the site shall be planted in grass within 90 days after establishment of finished grade.** (Previously Condition A.3 of Resolution R-93-340, Petition 92-14) (ZONING)

4. **The petitioner shall comply at all times with the requirements of all permits issued by all agencies having jurisdiction over the facility.** (Previously Condition A.4 of R-93-340, Petition 92-14) (HEALTH-ERM)

C. <u>BUILDING AND SITE DESIGN</u>

1. **Maximum total floor area shall be limited to 10% of the total lot area of the subject property.** (Previously Condition B.1 of R-93-340, Petition 92-14) (BUILDING-Zoning)

2. **Prior to site plan certification, the site plan shall be amended to indicate a maximum five (5) acre building envelope on the site and the square footage to be contained therein. All construction and development of the principal structure and accessory facilities shall occur within this envelope. All accessory uses indicated on the site plan outside of the building envelope shall be subject to the requirements and regulations of Section 402.7(E)2(b) (Site Plan Review Committee Powers and Standards of Review). Uses and building locations within the envelope shall not be subject to this requirement.** (Previously Condition B.2 of Resolution R-93-340, Petition 92-14) (ZONING)

D. ENVIRONMENTAL RESOURCES MANAGEMENT

1. Plans for all underground and above ground storage tanks must be approved by the Department of Environmental Resources Management prior to installation. The petitioner shall perform all necessary preventative measures to reduce the chances of contamination of the groundwater. Double walled tanks and piping with corrosion protection or their equivalent shall be a part of those measures. (Previously Condition C.1 of Resolution R-93-340, Petition 92-14) (BUILDING-ERM)

2. Secondary containment for stored Regulated Substances, including but not limited to fuels, oils, solvents, or other hazardous chemicals, is required. Department of Environmental Resources Management staff are willing to provide guidance on appropriate protective measures. (Previously Condition C.2 of R-93-340, Petition 92-14) (BUILDING-ERM)

3. All new excavated lakes shall possess a littoral shelf area. A littoral shelf shall be an area with a slope not greater six (6) feet horizontal to one (1) foot vertical, ranging in depth from ordinary high water (OHW) or the controlled water level (CWL) to four feet below OHW or CWL. A minimum of 30% of the surface area of all lakes shall be planted with native aquatic vegetation on a minimum of three foot centers.

   a. A littoral shelf planting plan and maintenance plan shall be submitted to the Department of Environ-mental Resources Management concurrent with Site Plan Review application and approved by ERM prior to Site Plan certification. This information shall also be provided on a mylar for the Zoning Division as part of the site plan application. (ERM)

   b. Prior to the issuance of a Certificate of Occupancy and within three working days of the completion of littoral plantings ERM shall be notified. This planting shall not be credited as compensation required by wetland permits. (Previously Cond. C.3 of R-93-340, Petition 92-14) (BUILDING-ERM)

E. ENGINEERING

1. The Developer shall provide discharge control and treatment for the stormwater runoff in accordance with all applicable agency requirements in effect at the time of the permit application. However, at a minimum, this development shall retain onsite the stormwater runoff generated by a three (3) year-one (1) hour storm with a total rainfall of 3 inches as required by the Permit Section, Land Development Division. The drainage system shall be maintained in an acceptable condition as approved by the County Engineer. In the event that the drainage system is not adequately maintained as determined by the County Engineer, this matter will be referred to the Code Enforcement Board. (Previously Cond. E.1 of R-93-340, Petition 92-14) (ENG - Code Enf)

2. **If required by the County Engineer or the South Florida Water Management District the Developer shall design the drainage system such that drainage from those areas which may contain hazardous or undesirable waste shall be separate from stormwater runoff from the remainder of the site** (Previously Cond. E.2 of R-93-340, Petition 92-14) (ENG)

F. EXOTIC SPECIES

1. **Areas disturbed as a result of the construction of the cogeneration facility and transmission lines shall be continually maintained to be free of Brazilian Pepper, Australian Pine and Melaleuca.** (Previously Condition D.1 of Resolution R-93-340, Petition 92-14) (BUILDING-Zoning)

G. HEALTH

1. **Potable water supply for the proposed project is to be provided by a reverse osmosis non-transient non-community water supply system in accordance with Chapter 17-550 & 17-555, F.A.C.** (Previously Condition F.1 of Resolution R-93-340, Petition 92-14) (HEALTH)

2. **The industrial waste stream generated by this site shall be disposed of in accordance with all applicable Florida DER regulations.** (Previously Condition F.2 of R-93-340, Petition 92-14) (HEALTH)

3. **Cogeneration boiler fuels shall be limited to Biomass, as defined in Condition K.9. and fossil fuels. The use of fossil fuels shall be limited in accordance with conditions A.1.d.(6)(a), A.1.d.(6)(b) and A.1.d.(c). The use of Biomass Wastes shall include provisions for the substantial exclusion of painted and chemically treated wood, household garbage, toxic or hazardous materials or wastes and special wastes. This specification must be reviewed and approved by the Palm Beach County Public Health Unit prior to site plan approval.** (Previously Condition F.3 of Resolution R-93-340, Petition 92-14) (HEALTH)

4. **All fly ash and bottom ash from the facility which is produced during any period in which fossil fuels are used, and thereafter for a reasonable time shall be segregated and managed as set forth in the ash management plan.** (Previously Condition F.4 of R-93-340, Petition 92-14) (HEALTH)

5. **Prior to site plan approval, a detailed ash management plan shall be submitted by the petitioner and approved by the Palm Beach County Public Health Unit. This plan must detail contingencies plans, testing and monitoring of the ash, ash handling and disposal methods, planned spreading locations and identification of environmental impacts and proposed measures for mitigating these impacts.** (Previously Condition F.5 of R-93-340, Petition 92-14) (HEALTH)

6. **Prior to site plan approval of the operation of the facility, a detailed fuel management plan shall be submitted and approved by the Palm Beach County Public Health Unit. This plan shall detail location, size, handling procedures, transportation, dust control and fire protection.** (Previously Condition F.6 of Resolution R-93-340, Petition 92-14) (HEALTH)

7. **Prior to site plan approval, the petitioner shall identify all liquid waste streams and provide a complete physical and chemical characterization of the waste streams which shall include, at a minimum, the following information:**

   a. **A description of the source or process associated with the waste stream.**
   b. **Volume and flow rates.**
   c. **Physical parameters including temperature, pH, and total dissolved solids.**
   d. **Expected concentrations of pollutants or contaminants, including but not limited to, Nitrogen, Phosphorous and other nutrients, mercury, lead and other trace metals, volatile or semi-volatile organic compounds, etc.**
   e. **A description and detail of any treatment system utilized.**
   f. **A description of the disposal or reuse method and identification of all points of discharge.** (Previously Condition F.7 of Resolution R-93-340, Petition 92-14) (HEALTH)

8. **Prior to site plan approval, a detailed domestic wastewater management plan shall be submitted and approved by the Palm Beach County Public Health Unit.** (Previously Condition F.8 of R-93-340, Pet. 92-14) (HEALTH)

9. **Prior to site plan approval, a detailed storm water management plan shall be submitted by the petitioner to the South Florida Water Management District (SFWMD) and Palm Beach County Public Health Unit for review and approval. Staff shall coordinate its review with the SFWMD.** (Previously Condition F.9 of R-93-340, Petition 92-14) (HEALTH)

10. **Prior to site plan approval, a detailed industrial wastewater management plan must be submitted to the Department of Environmental Regulation (DER) and the Palm Beach County Public Health Unit for review and approval. Staff shall coordinate its review with the DER.** (Previously Condition F.10 of Resolution R-93-340, Petition 92-14) (HEALTH)

11. **Prior to site plan approval, all applicable environmental permits or applications for permits must be obtained or submitted.** (Previously Condition F.11 of Resolution R-93-340, Petition 92-14) (HEALTH)

H. LANDSCAPING

1. **Prior to site plan certification, the petitioner shall submit a Landscape Betterment Plan for review and approval by the Zoning Division. The Landscape Betterment Plan shall demonstrate conformance to all Landscape Code requirements and conditions of approval.** (Previously Condition G.1 of Resolution R-93-340, Petition 92-14) (ZONING)

2. **As an alternative, the petitioner may landscape the site and provide off-site improvements in accordance with the ULDC, upon adoption.** (Previously Cond. G.2 of R-93-340, Petition 92-14) (ZONING)

I. LIGHTING

1. **All outdoor lighting used to illuminate the premises and identification signs shall be of low intensity, shielded and directed downward.** (Previously Condition H.1 of R-93-340, Pet. 92-14) (BUILDING - CODE ENF)

J. PARKING

1. **Vehicle parking shall be limited to the parking areas designated on the approved site plan. No parking of vehicles shall be permitted in landscaped areas, right-of-way or interior drives.** (Previously Condition I.1 of Resolution R-93-340, Petition 92-14) (CODE ENF)

K. TRANSMISSION LINES

1. **All transmission lines required by this facility are to be constructed in accordance with the National Electric Safety Code.** (Previously Condition J.1 of Resolution R-93-340, Petition 92-14) (BUILDING)

2. **All transmission lines leaving the site and required by this facility shall not exceed 138 KV.** (Previously Cond. J.2 of R-93-340, Petition 92-14) (BUILDING)

L. USE LIMITATIONS

1. **Use of the site shall be limited as follows:**

Land Area	**50.00 acres**
Total Floor Area	**217,800 square feet**
Maximum Floor Area	**10%**
Electrical Production	**65 mega watt maximum**
Fuel Yard	**35 acre max. net land area** (Previously Condition K.1 of Resolution R-93-340, Petition 92-14)

2. **Prior to site plan certification, the site plan shall be amended to indicate the location of a truck/vehicle wash facility. This wash facility shall utilize a 100% water recycling system.** (Previously Condition K.2 of Resolution R-93-340, Petition 92-14) (ZONING-Building)

3. **There shall be no repair or maintenance of vehicles on site.** (Previously Condition K.3 of Resolution R-93-340, Petition 92-14) (CODE ENF)

4. **No outside storage of disassembled vehicles, or parts thereof, shall be permitted on site.** (Prev. Cond. K.4 of R-93-340, Pet. 92-14) (CODE ENF)

5. **The maximum height, from grade to highest point, for all fuel storage areas shall not exceed fifty (50) feet.** (Previously Condition K.5 of Resolution R-93-340, Petition 92-14) (BUILDING)

6. **Onsite storage shall be contained within the area designated on Exhibit 48 and shall be processed and stored in a manner which controls fugitive and dust particulate emissions.** (Previously Condition K.6 Resolution R-93-340, Petition 92-14) (CODE ENF-Zoning)

7. **All vehicles utilizing public rights-of-way to carry biomass waste (i.e. vegetative matter) to the site shall be equipped, at a minimum, with covering or screens over top of the open bed of the vehicle to prevent the loss of material during transportation to the facility.** (Previously Condition K.7 of Resolution R-93-340, Petition 92-14) (CODE ENF)

8. **The storage of fuel on site shall be limited to the areas designated on the certified site plan and shall be limited to the storage of bagasse and biomass waste only.** (Previously Condition K.8 of R-93-340, Petition 92-14)

9. **"Biomass Waste", as referred to herein, shall mean bagasse, vegetative and woody matter, including material resulting from landscaping, maintenance, land clearing operations, clean wood, cellulose material, tree and shrub trimmings, grass clippings, palm fronds, trees, tree stumps, wood from land development operations, clean wood debris from demolition operations; it shall not include trash, garbage or sludge (FAC 17-701), biohazardous waste (17-712 FAC), or biological waste (17-712 FAC).** (Previously Condition K.9 of R-93-340, Petition 92-14) (SWA)

10. Condition K.10 of Resolution R-93-340, Petition 92-14 which currently states:

    The existing boiler facilities shall be abandoned within three (3) years of commercial start up of the cogeneration facility and no later than January 1, 1999. The existing boilers and new facilities shall not be operated at the same time. (MONITORING-Bldg)

    Is hereby amended to read:

    The existing boilers at the adjacent sugar mill facility shall be subject to the conditions contained within the permits issued by the State of Florida Department of Environmental Protection (DERM). (DERM - Zoning)

M. WATER SUPPLY

1. **Construction shall not commence on the project site until it has been demonstrated to the satisfaction of the South Florida Water Management District that an acceptable and sustainable supply of water during drought periods is available to serve the project over and above that necessary to serve already approved development.** (Previously Condition L.1 of Resolution R-93-340, Petition 92-14) (BUILDING-SFWMD)

2. **The petitioner shall utilize all drought-tolerant plants in landscaping on the subject property.** (Previously Condition L.2 of Resolution R-93-340, Petition 92-14) (BUILDING-Zoning)

3. **The petitioner shall use water-saving plumbing fixtures and other water conserving devices in restrooms and employee locker rooms, as specified in the Water Conservation Act, Section 553.14, F.S.** (Previously Condition L.3 of Resolution R-93-340, Petition 92-14) (BUILDING)

N. COMPLIANCE

Conditions M.1 and M.2 of Resolution R-93-340, Petition 92-14 which currently state:

1. **As provided in the Palm Beach County Zoning Code, Sections 400.2 and 402.6, failure to comply with any of these conditions of approval at any time may result in:**

   a. **The denial or revocation of a building permit; the issuance of a stop work order; the denial of a Certificate of Occupancy on any building or structure; or the denial or revocation of any permit or approval for any developer-owner, commercial-owner, lessee, or user of the subject property; and/or**

   b. **The revocation of the Special Exception and any zoning which was approved concurrently with the Special Exception as well as any previously granted certifications of concurrency or exemptions therefrom; and/or**

   c. **A requirement of the development to conform with updated standards of development, applicable at the time of the finding of non-compliance, or the addition or modification of conditions reasonably related to the failure to comply with existing conditions.** (Previously Condition M.1 of Resolution R-93-340, Petition 92-14) (MONITORING)

2. **Appeals of any departmental-administrative actions hereunder may be taken to the Palm Beach County Board of Adjustment or as otherwise provided in the Palm Beach County Zoning Code. Appeals of any revocation of Special Exception, Rezoning, or other actions based on a Board of County Commission decision, shall be by petition for writ of certiorari to the Fifteenth Judicial Circuit.** (Previously Condition M.2 of Resolution R-93-340, Petition 92-14) (MONITORING)

Are hereby amended to read:

1. In granting this approval, the Board of County Commissioners relied upon the oral and written representations of the petitioner both on the record and as part of the application process. Deviations from or violation of these representations shall cause the approval to be presented to the Board of County Commissioners for review under the compliance condition of this approval. (ONGOING: MONITORING - Zoning)

2. Failure to comply with any of the conditions of approval for the subject property at any time may result in:

   a. The issuance of a stop work order; the issuance of a cease and desist order; the denial or revocation of a building permit; the denial or revocation of a Certificate of Occupancy; the denial of any other permit, license or approval to any developer, owner, lessee, or user of the subject property; the revocation of any other permit, license or approval from any developer, owner, lessee, or user of the subject property; revocation of any concurrency; and/or

   b. The revocation of the Official Map Amendment, Conditional Use, Requested Use, Development Order Amendment, and/or any other zoning approval; and/or

c. A requirement of the development to conform with the standards of the ULDC at the time of the finding of non-compliance, or the addition or modification of conditions reasonably related to the failure to comply with existing conditions; and/or
d. Referral to code enforcement; and/or
e. Imposition of entitlement density or intensity.

Staff may be directed by the Executive Director of PZ&B or a majority vote of the Code Enforcement Board to schedule a Status Report before the body which approved the Official Zoning Map Amendment, Conditional Use, Requested Use, Development Order Amendment, and/or other zoning approval, in accordance with the provisions of Section 5.8 of the ULDC, in response to any flagrant violation and/or continued violation of any condition of approval.

Appeals of any departmental administrative actions hereunder may be taken to the Palm Beach County Board of Adjustment or as otherwise provided in the Unified Land Development Code (ULDC), as amended. Appeals of any revocation of an Official Zoning Map Amendment, Conditional Use, Requested Use, Development Order Amendment or other actions based on a Board of County Commission decision shall be by petition for writ of certiorari to the Fifteenth Judicial Circuit. (MONITORING)

APPENDIX 10.4.1

FDEP SURFACE WATER MANAGEMENT SYSTEM PERMIT

Department of Environmental Protection

Jeb Bush
Governor

South District
P.O. Box 2549
Fort Myers, Florida 33902-2549

David B. Struhs
Secretary

January 4, 2002

RECEIVED
JAN 8 2002
NEW HOPE POWER PARTNERSHIP
OKEELANTA CO-GENERATION

Mr. James M. Merriwether
c/o New Hope Power Partnership
P.O. Box 9
South Bay, FL 33493

RE: Palm Beach County - MSSW
DEP Permit No. MS 502447915
Okeelanta Power Limited Partnership
Transfer of Permit to
New Hope Power Partnership
DEP File No. 50-0192121-001
Okeelanta Cogeneration Facility

Dear Mr. Merriwether:

Enclosed is a copy of the executed transfer of permit for the referenced project. The transfer of Permit No. MS 502447915, from Okeelanta Power Limited Partnership to New Hope Power Partnership, is hereby approved and effective as of January 4, 2002. Please attach this letter and the enclosed transfer of permit to your permit and make them available on-site, as necessary. **When referring to this project in correspondence, please use the project name and Permit No. MS 502447915.**

This notice of transfer does not alter the General or Special (Specific) Conditions, or other requirements, of the permit, as issued or modified. **This letter must be attached to the original permit.** This letter constitutes final agency action unless a person substantially affected by this action requests an administrative hearing pursuant to Section 120.57, Florida Statutes. The petition must be filed within fourteen (14) days from receipt of this letter. The petition must comply with the requirements of Florida Administrative Code Rule 28-5.201 and be filed pursuant to Rule 62-103.155(1) in the Office of General Counsel of the Department of Environmental Protection at 3900 Commonwealth Boulevard, Tallahassee, Florida 32399. Petitions which are not filed in accordance with the above provisions will not be accepted by the Department.

If a formal proceeding pursuant to Section 120.57(1) is requested, at such formal hearing all parties shall have an opportunity to respond, to present evidence and argument on all issues involved, to conduct cross-examination of witnesses and submit rebuttal evidence, to submit proposed findings of facts and orders, to file exceptions to any order or hearing officer's

recommended order, and to be represented by counsel. If an informal proceeding is requested, the agency will, in accordance with its rules of procedure, give affected persons or parties or their counsel an opportunity, at a convenient time and place, to present to the agency or hearing officer written or oral evidence in opposition to the agency's action or refusal to act, or a written statement challenging the grounds upon which the agency has chosen to justify its action or inaction, pursuant to Section 120.57(2), Florida Statutes. The hearing process is designed to formulate agency action. Accordingly, the Department's final action as a result of a hearing may be different from the position taken by it in this stage. Therefore, any person who may wish to contest the Department's ultimate permitting decision must petition for hearing within the fourteen day period described above. Failure to file a request for hearing within this time period shall constitute a waiver of any right such person may have to request a hearing under Section 120.57, Florida Statutes.

If you have any questions concerning this matter, please contact me or Jack D. Myers at the letterhead address or by telephone at (941) 332-6975. Your cooperation is appreciated.

Sincerely,

Lucianne Blair
Environmental Administrator
Submerged Lands and
Environmental Resources Program

LB/JDM/jdm

Enclosure: Copy of executed transfer application

cc: U.S. Army Corps of Engineers, Miami
Palm Beach County Tax Collector

50-0192121-001-MSTR

Form 62-343.900 (8)
Application for Transfer of ERP Permit
Effective Date: 8-14-96

APPLICATION FOR TRANSFER OF ENVIRONMENTAL RESOURCE PERMIT AND NOTIFICATION OF SALE OF A FACILITY OR SURFACE WATER MANAGEMENT SYSTEM

Permit No. MS 502447915 Date Issued June 6, 1994 Date Expires NA

FROM (Name of Current Permit Holder): Okeelanta Power Limited Partnership

Mailing Address: P.O. Box 8

City: South Bay State: Florida Zip Code: 33493

Telephone: (561) 993-1000

Identification or Name of Facility/Surface Water Management System: MS 502447915 - Okeelanta Cogeneration Facility

Phase of Facility/Surface Water Management System (if applicable):

The undersigned hereby notifies the Department of the sale or legal transfer of this facility, or surface-water management system, and further agrees to assign all rights and obligations as permittee to the applicant in the event the Department agrees to the transfer of permit.

Signature of the current permittee: R A Lima

Title (if any): General Manager Date: 11/15/01

TO (Name of Proposed Permit Transferee): New Hope Power Partnership
Okeelanta Cogeneration Plant

Mailing Address: P.O. Box 9

City: South Bay State: Florida Zip Code: 33493

Telephone: (561) 993-1000

The undersigned hereby notifies the Department of having acquired the title to this facility, or surface-water management system. The undersigned also states he or she has examined the application and documents submitted by the current permittee, the basis of which the permit was issued by the Department, and states they accurately and completely describe the permitted activity or project. The undersigned further attests to being familiar with the permit, agrees to comply with its terms and with its conditions, and agrees to assume the rights and liabilities contained in the permit. The undersigned also agrees to promptly notify the Department of any future changes in ownership of, or responsibility for, the permitted activity or project.

Signature of the applicant (Transferee): Rodney Wilson

Title (if any): Plant Manager Date: 11/06/01

Project Engineer Name (if applicable)

Mailing Address: P.O. Box 9, South Bay, Florida 33493

Telephone: (561) 993-1000

RECEIVED
NOV 1 5 2001
D.E.P. - South District

Florida Department of
Environmental Protection

South District
2295 Victoria Avenue
Fort Myers, Florida 33901

Lawton Chiles
Governor

Virginia B. Wetherell
Secretary

PERMITTEE: Okeelanta Power Ltd. Part.
c/o Srinivas G. Rao, Phd PE
KBN Eng. & Applied Sciences
5405 West Cypress, Ste. 215
Tampa, FL 33607

I.D. NUMBER:
PERMIT/CERTIFICATION
No. MS 502447915
DATE OF ISSUE:
June 6, 1994
PALM BEACH COUNTY
LATITUDE/LONGITUDE:
26° 35′ 00" N
80° 45′ 00" W
SECTION/TOWNSHIP/RANGE:
16 / 45 S / 36 E
PROJECT: Okeelanta
Cogeneration Facility

This permit is issued under the provisions of Chapters 373 and 403, Florida Statutes (F.S.), Public Law (PL) 92-500, and Florida Administrative Code (F.A.C.) Rule(s) 17-4, 17-302, 17-101.040, 40E-4.101 and 40E-4.301. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings, plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

A 66.47 acre cogeneration facility with a discharge into the New River Canal, as described in the application and supporting documents received February 1, 1994, the revised information received March 8, 1994, and the staff report submitted by the South Florida Water Management District for this project.

No discharge from the bagasse/wood waste storage area will enter this system.

Subject to 12 Limiting Conditions, 15 General Conditions and 22 Special Conditions.

PERMITTEE: Okeelanta Power Ltd Part. I.D. NUMBER:
c/o Srinivas G. Rao, Phd PE No. MS 502447915
KBN Eng. & Appld. Sciences DATE OF ISSUE:
5405 West Cypress, Std. 215 June 6, 1994
Tampa, FL 33607

LIMITING CONDITIONS:

1. The permittee shall prosecute the work authorized in a manner so as to minimize any adverse impact of the works on fish, wildlife, natural environmental values, and water quality. The permittee shall institute necessary measures during the construction period, including full compaction of any fill material placed around newly installed structures, to reduce erosion, turbidity, nutrient loading and sedimentation in the receiving waters.

2. Water quality data for the water discharged from the permittee's property or into surface waters of the state shall be submitted to the Department as required. Parameters to be monitored may include those listed in Chapter 17-302. if water quality data is required, the permittee shall provide data as required, on volumes of water discharge including total volume discharge, during the days of sampling and total monthly discharges from the property or into surface waters of the state.

3. The permittee shall comply with all applicable local subdivision regulations and other local requirements. In addition, the permittee shall obtain all necessary federal, state, local and special district authorizations prior to the start of any construction or alteration of works authorized by this permit.

4. The operation phase of this permit shall not become effective until a Florida registered professional engineer certifies that all facilities have been constructed in accordance with the design approved by the Department. Within 30 days after completion of construction of the surface water management system, the permittee shall submit the certification and notify the Department that the facilities are ready for inspection and approval. Upon approval of the completed surface water management system, the permittee shall request transfer of the permit to the responsible entity approved by the Department.

5. All roads shall be set at or above elevations required by the applicable local government flood criteria.

6. All building floors shall be set at or above elevations acceptable to the applicable local government.

PERMITTEE: Okeelanta Power Ltd Part. I.D. NUMBER:
c/o Srinivas G. Rao, Phd PE No. MS 502447915
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5405 West Cypress, Std. 215 June 6, 1994
Tampa, FL 33607

LIMITING CONDITIONS:

7. Off-site discharges during construction and development shall be made only through the facilities authorized by this permit. No roadway or building construction shall commence on-site until completion of the permitted discharge structure and detention areas. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream water stages. Stages may be subject to operating schedules satisfactory to the Department and South Florida Water Management District.

8. No construction authorized herein shall commence until a responsible entity acceptable to the Department has been established and has agreed to operate and maintain the system. The entity must be provided with sufficient ownership so that it has control over all water management facilities authorized herein. Upon receipt of written evidence of the satisfaction of this condition, the Department will issue an authorization to commence construction.

9. As provided in subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in this permit.

10. The permittee shall hold and save the Department harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, operation, maintenance or use of any facility authorized by the permit.

11. This permit is issued based on the applicants' submitted information which reasonably demonstrates that adverse off-site water resource related impacts will be caused by the completed permit activity. It is also the responsibility of the permittee to insure that adverse off-site water resource impacts do not occur during construction.

12. Prior to dewatering, plans shall be submitted to the Department for approval. Information shall include as minimum: pump sizes, locations and hours of operation for each pump. If

PERMITTEE: Okeelanta Power Ltd Part.
c/o Srinivas G. Rao, Phd PE
KBN Eng. & Appld. Sciences
5405 West Cypress, Std. 215
Tampa, FL 33607

I.D. NUMBER:
No. MS 502447915
DATE OF ISSUE:
June 6, 1994

LIMITING CONDITIONS:

off-site discharge is proposed, or off-site adverse impacts are evident, an individual water use permit may be required. The permittee is cautioned that several months may be required for consideration of the water use permit application by South Florida Water Management District.

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Chapter 373, F.S., and Sections 403.161, 403.727, or 403.859 through 403.861, F.S. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Chapter 373, F.S., and in Subsections 403.087(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

GENERAL CONDITIONS:

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of the Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

a. Having access to and copying any records that must be kept under the condition of the permit;

b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and

c. Sampling or monitoring any substances or parameters at any location reasonable necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with, or will be unable to comply with any condition or limitation specified in his permit, the permittee shall immediately notify them and provide the Department with the following information:

a. A description of and cause of non-compliance; and

b. The period of non-compliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

PERMITTEE: Okeelanta Power Ltd Part. I.D. NUMBER:
c/o Srinivas G. Rao, Phd PE No. MS 502447915
KBN Eng. & Appld. Sciences DATE OF ISSUE:
5405 West Cypress, Std. 215 June 6, 1994
Tampa, FL 33607

GENERAL CONDITIONS:
The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use is prescribed by Chapter 373, F.S., and Sections 403.73 and 403.111, F.S.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with F.A.C. Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:
( ) Determination of Best Available Control Technology (BACT)
( ) Determination of Prevention of Significant Deterioration (PSD)
(X) Certification of Compliance with State Water Quality Standards (Chapters 373 and 403, F.S., and PL 92-500)
( ) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:
a. Upon Request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

PERMITTEE: Okeelanta Power Ltd Part. I.D. NUMBER:
c/o Srinivas G. Rao, Phd PE No. MS 502447915
KBN Eng. & Appld. Sciences DATE OF ISSUE:
5405 West Cypress, Std. 215 June 6, 1994
Tampa, FL 33607

GENERAL CONDITIONS:

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all records required by this permit, and records of all data used to complete the application for this permit. The time records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:
-- the date, exact place, and time of sampling or measurements;
-- the person responsible for performing the sampling or measurements;
-- the date(s) analyses were performed;
-- the person responsible for performing the analyses;
-- the analytical techniques or methods used; and
-- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

SPECIAL CONDITIONS:

1. Minimum building floor elevation: 17 feet NGVD for all basins.

2. Minimum road crown elevation: 16 feet NGVD for all basins.

3. Minimum parking lot elevation: 16 feet NGVD for all basins.

4. Discharge Facilities:

Basin: Basin 1:
1-3' wide sharp crested weir with crest at elev. 14' NGVD.
1-46' w x .33' h triangular orifice with invert at elev. 11' NGVD. 55 lf of 1.5' dia. CMP culvert.

PERMITTEE: Okeelanta Power Ltd Part. I.D. NUMBER:
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5405 West Cypress, Std. 215 June 6, 1994
Tampa, FL 33607

SPECIAL CONDITIONS:

Receiving Body: North New River Canal

Control Elev: 11 feet NGVD./11 feet NGVD dry season.

Basin: Basin 2:

1-3′ wide sharp crested weir with crest at elev. 14′ NGVD.
1-46′ w x .38′ h triangular orifice with invert at elev. 11′ NGVD. 22 lf of 1.5′ dia CMP culvert.

Receiving Body: North New River Canal

Control Elev: 11 feet NGVD./11 feet NGVD dry season.

5. The permittee shall be responsible for the correction of any erosion. Shoaling or water quality problems that result from the construction or operation of the surface water management system.

6. Measures shall be taken during construction to insure that sedimentation and/or turbidity problems are not created in the receiving water.

7. The Department reserves the right to require that additional water quality treatment methods be incorporated into the drainage system if such measures are shown to be necessary.

8. Prior to the initiation of any withdrawal of water (irrigation, dewatering, public water supply, etc.), it will be necessary to apply to the South Florida Water Management District for a water use permit. The permittee is cautioned that a minimum of 90 days is required for consideration of the water use permit application. The permittee is cautioned that the issuance of a surface water management permit shall not be construed to be a guarantee that water will be available.

9. Facilities other than those stated herein shall not be constructed without an approved modification of this permit.

10. A benchmark shall be provided in the vicinity of the control structure and a description provided to the Department when certifying construction completion of the drainage facilities.

11. Prior to July 10, 1993, the Department shall be notified by the permittee or authorized agent

SPECIAL CONDITIONS:

(via the supplied construction commencement notice or equivalent) of the actual or anticipated construction start date and the expected completion date/duration.

12. When the duration of construction exceeds one year, construction status reports shall be submitted to the Department on an annual basis (via the supplied annual status report or equivalent) beginning one year after the initial commencement of construction date.

13. Within 30 days after completion of construction of the surface water management system, the permittee or authorized agent shall notify the Department of that completion date and submit certification by a Florida registered professional engineer that all facilities have been constructed in accordance with the design approved by the Department (via the supplied construction completion/construction certification or equivalent). Such certification may consist of wording in paragraph 3.1.7 "construction completion certification" of the current basis of review for surface water management permit applications within the South Florida Water Management District. If the certification language used is different from the suggested language, a set of record drawings consisting of elevations, locations and dimensions of components of the surface water management system shall also be submitted.

14. The permittee shall prosecute the work authorized in a manner so as to minimize any adverse impact of the works on fish, wildlife, natural environmental values, and water quality. The permittee shall institute necessary measures during the construction period, including full compaction of any fill material placed around newly installed structures, to reduce erosion, turbidity, nutrient loading and sedimentation in the receiving waters.

15. Off-site discharges during construction and development shall be made only through the facilities authorized by this permit. No roadway or building construction shall commencement on-site until completion of permitted discharge structure and detention areas. Water discharged from the project shall be through structures having a mechanism suitable for regulating upstream water stages. Stages may be subject to operating schedules satisfactory to the Department.

PERMITTEE: Okeelanta Power Ltd Part. I.D. NUMBER:
c/o Srinivas G. Rao, Phd PE No. MS 502447915
KBN Eng. & Appld. Sciences DATE OF ISSUE:
5405 West Cypress, Std. 215 June 6, 1994
Tampa, FL 33607

SPECIAL CONDITIONS:

16. The permittee shall hold and save the District harmless from any and all damages, claims, or liabilities which may arise by reason of the construction, operation, maintenance or use of any facility authorized by the permit.

17. This permit is issued based on the applicant's submitted information which reasonably demonstrates that adverse off-site water resource related impacts will not be caused by the completed permit activity. It is also the responsibility of the permittee to insure that adverse off-site water resource related impacts do not occur during construction.

18. Prior to dewatering, plans shall be submitted to the Department for approval. Information shall include as a minimum: pump sizes, locations and hours of operation for each pump. If off-site discharge is proposed, or off-site adverse impacts are evident, an individual water use permit may be required. The permittee is cautioned that several months may be required for consideration of the water use permit application.

19. The permit does not convey to the permittee any property right or any rights or privileges other than those species in the permit and Chapter 40-4, F.A.C.

20. Upon completion of construction, and on an annual basis (march of each year) the permittee shall submit reports to this Department for structural adequacy of the permitted impoundment. Such reports shall include proposal of technique and schedule for repair of any deficiencies noted and shall be signed and sealed by a Florida registered professional engineer.

21. Operation of the surface water management system shall be the responsibility of Okeelanta Power Limited Partnership.

22. Water quality samples shall be taken at the discharge location(s) of the water management system during periods of discharge, or if no discharge occurs during the scheduled monitoring period, water quality samples shall be taken immediately upstream of the discharge structure (see Exhibit No. 2). A laboratory certified by Florida DEP and/or HRS shall be responsible for all water quality sampling and analyses. Reports, including the DEP/HRS certified lab number, DEP permit number, sample location, and flow/no-flow occurrence shall be

PERMITTEE: Okeelanta Power Ltd Part. I.D. NUMBER:
c/o Srinivas G. Rao, Phd PE No. MS 502447915
KBN Eng. & Appld. Sciences DATE OF ISSUE:
5405 West Cypress, Std. 215 June 6, 1994
Tampa, FL 33607

SPECIAL CONDITIONS:

submitted to the Department semiannually unless requested on a more frequent basis. Initial sampling results shall be reported to this Department no later than 30 days following the submittal of the construction completion/construction certification of the surface water management system by a Florida registered professional engineer. The Department will evaluate monitoring requirements following two years of data collection and make a determination as to whether the discharge conforms to State water quality standards as defined in chapter 17-302, F.A.C. If the water quality analyses show little or no change and it is determined that there is minimal contaminant potential, the monitoring program may be modified to reduce the sampling schedule and/or parameters. If water quality problems develop, the Department reserves the right to require more frequent sampling and more thorough analyses. The samples shall be analyzed on a bimonthly bases for the following parameters:

Parameters	Units
Temperature	deg.C
Conductivity, field	umho/cm
Dissolved Oxygen (DO)	mg/L
Chemical Oxygen Demand (COD)	mg/L
pH (Range > 6.0 & > 8.5)	Standard Unit
Alkalinity	mg/L
Total Suspended Solids (TSS)	mg/L
Oils and Greases	mg/L
Total Phosphorous	mg/L
Total Kjel Nitrogen	mg/L
Nitrate	mg/L
Nitrite	mg/L
Turbidity, NTU	NTU

PERMITTEE: Okeelanta Power Ltd Part. I.D. NUMBER:
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5405 West Cypress, Std. 215 June 6, 1994
Tampa, FL 33607

Note: In the event of an emergency, the permittee shall contact the Department by calling (904) 488-1320. During normal business hours, the permittee shall call (813) 332-6975.

Issued this 6th day of June, 1994

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Ronald D. Blackburn
Acting Director of
District Management

RDB/GR/ml/bal

19 Pages Attached

cc: Eduardo Lopez, SFWMD, West Palm Beach
Palm Beach County Health Unit
Palm Beach County Board of County Commissioners
Rosa Durando, Lake Worth
Palm Beach County ERM, West Palm Beach

LOCATION MAP

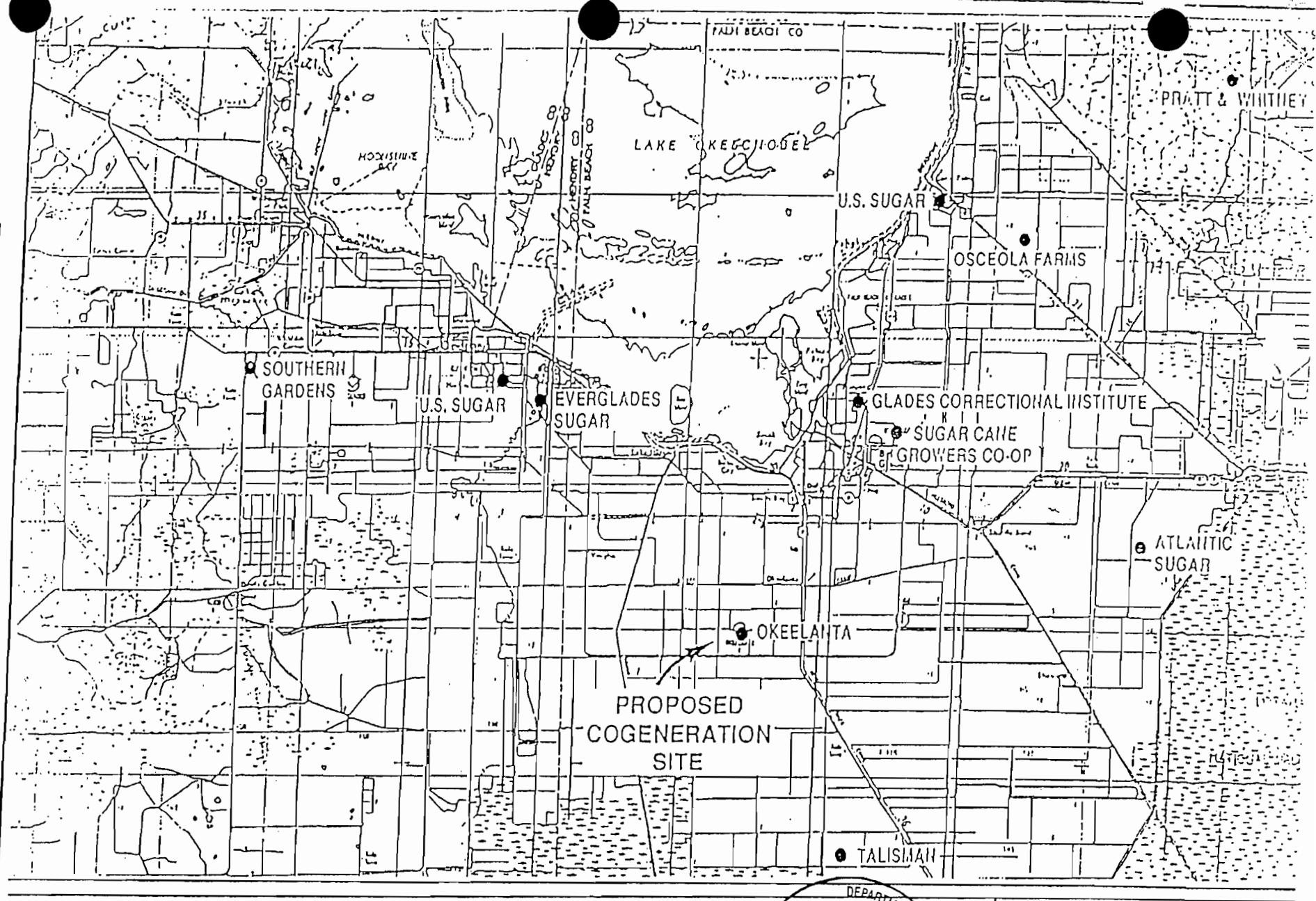

FIGURE I-1
OKEELANTA POWER LIMITED PARTNERSHIP
PALM BEACH COUNTY, FL
LOCATION MAP

KBN

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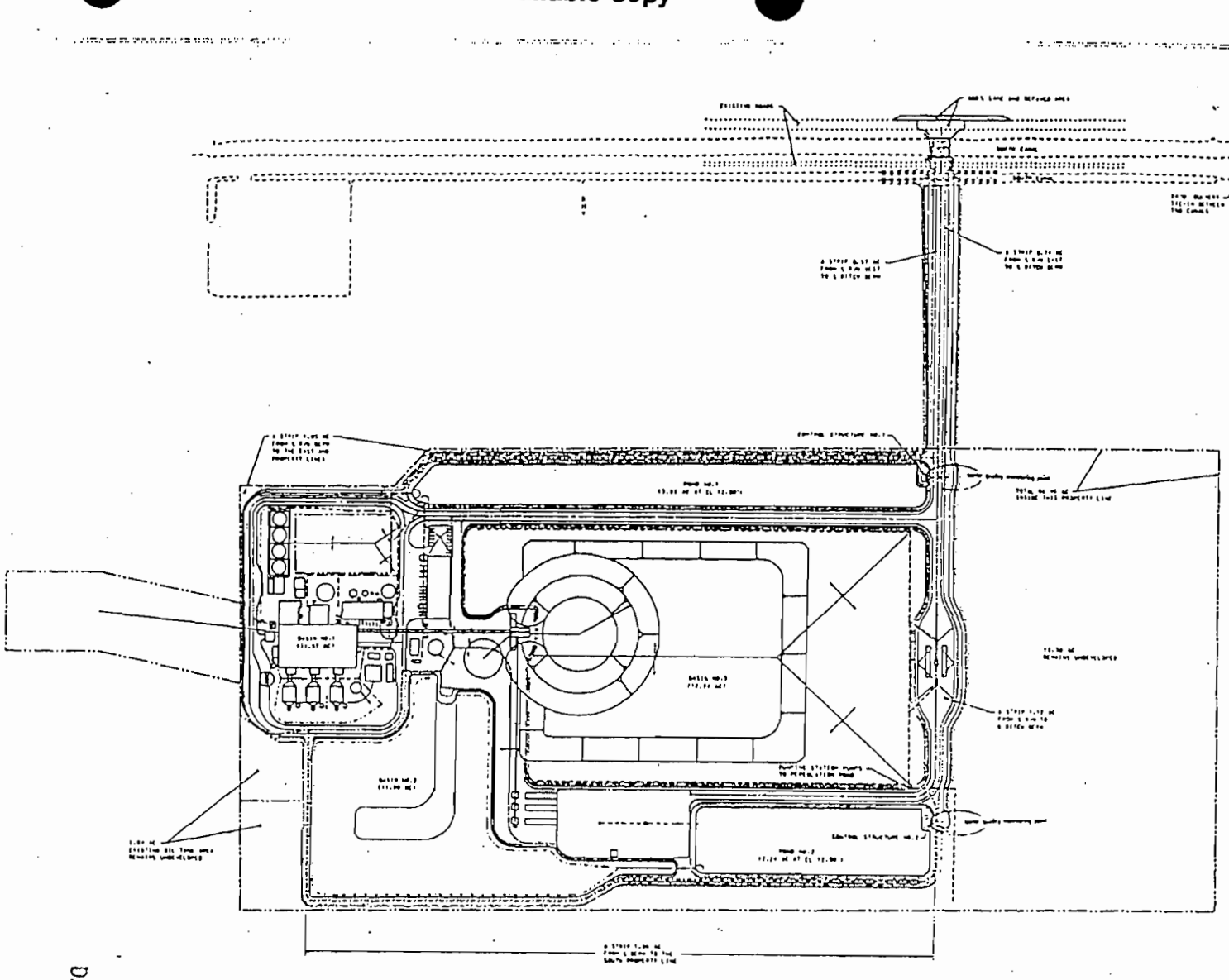

RECEIVED
APR 21 1994
D.E.P. SOUTH DISTRICT

DEPARTMENT OF ENVIRONMENTAL PROTECTION
244791
PERMIT
6-6-94
STATE OF FLORIDA

EXHIBIT 2

BECHTEL

CHARLES G. WORTHINGTON

OKEELANTA COGENERATION PROJECT
SOUTH BAY, FLORIDA

SURFACE WATER MANAGEMENT PLAN
FOR PROPOSED COGENERATION PLANT SITE

17413	SK-007

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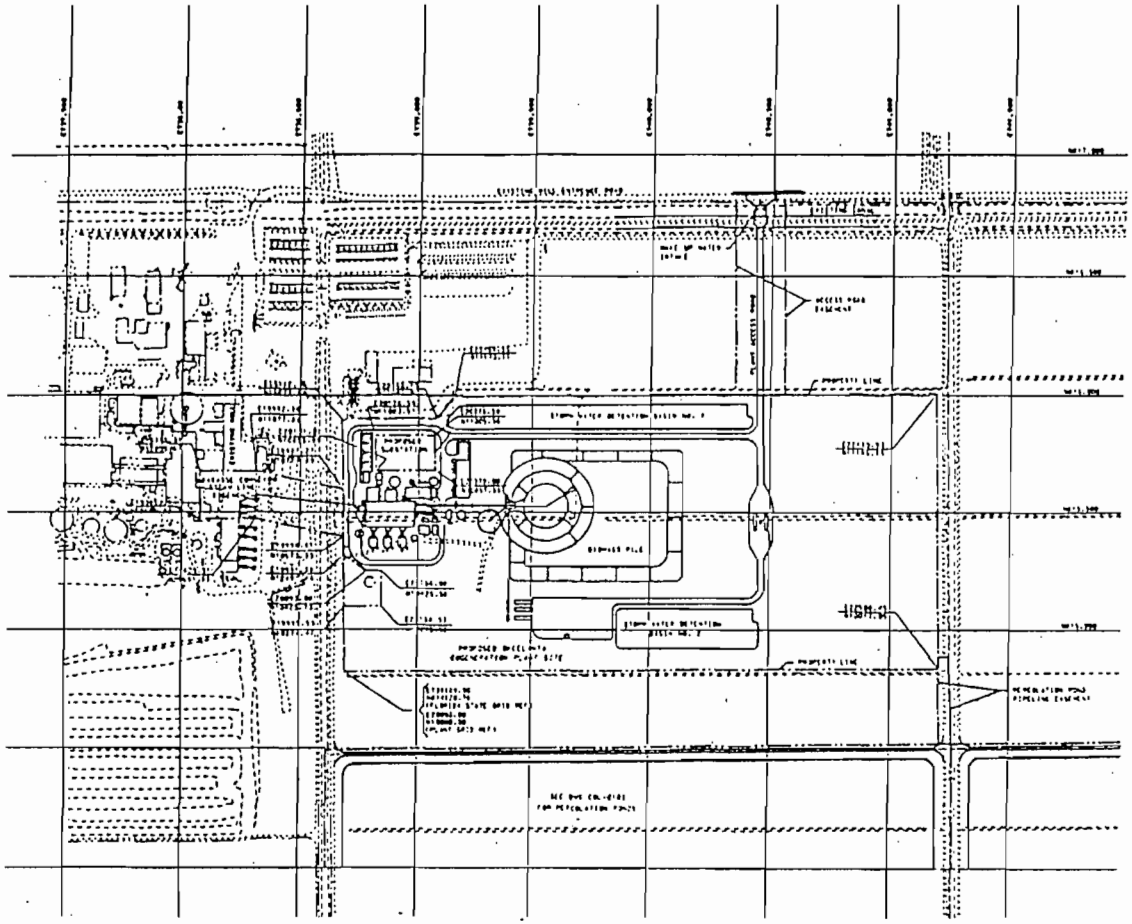
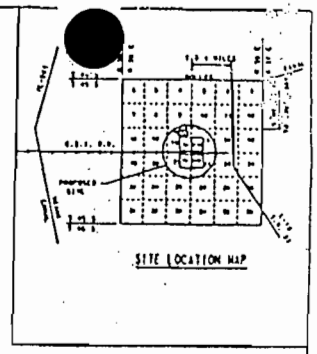


SITE PLAN



SITE LOCATION MAP

NOTES:

1. [illegible] SHOWN ARE FLORIDA STATE SYSTEM.
2. [illegible] SHOWN ARE BECHTEL PLANT COORDINATES.

RECEIVED
APR 21 1994
D.E.P. SWIM [illegible]

DEPARTMENT OF ENVIRONMENTAL PROTECTION
244791
PERMIT
6-6-94
STATE OF FLORIDA

BECHTEL

CHARLES G. WORTHINGTON
PROFESSIONAL ENGINEER
FLA. LIC. NO. 0043118

OKEELANTA COGENERATION PROJECT
SOUTH BAY, FLORIDA

SITE PLAN

EXHIBIT 3

APPENDIX 10.4.2

FDEP INDUSTRIAL WASTEWATER TREATMENT PERMIT

Department of Environmental Protection

Jeb Bush
Governor

South District
P.O. Box 2549
Fort Myers, Florida 33902-2549

Colleen M. Castille
Secretary

CERTIFIED MAIL NO.: 7003 2260 0004 9496 2877
RETURN RECEIPT REQUESTED

In the Matter of an
Application for Permit by:

New Hope Power Partnership
Mr. Rodney Williams, Plant Manager
8001 HWY 27 South
P.O. Box 9
South Bay, FL 33493

Palm Beach County-IW
Okeelanta Co-Generation Plant
PA File No. FLA150355-004-IW1N
FLA150355
Everglades Agriculture Area sub EMA

NOTICE OF PERMIT ISSUANCE

Enclosed is Permit Number FLA150355 to construct and operate modifications to an industrial wastewater treatment and disposal system serving and existing electric co-generation facility, issued under Section(s) 403.087, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit under Section 120.68, Florida Statutes, by the filing of a Notice of Appeal under Rules 9.110 and 9.190, Florida Rules of Appellate Procedure, with the Clerk of the Department of Environmental Protection, Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000 and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this notice is filed with the clerk of the Department.

Executed in Fort Myers, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Jon M. Iglehart
Acting Director of District Management

CERTIFICATE OF SERVICE

The undersigned hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on June 30, 2004 to the listed persons

FILING AND ACKNOWLEDGMENT

FILED, on this date, under Section 120.52, Florida Statutes, with the designated deputy clerk, receipt of which is hereby acknowledged.

Janice L. Ingram 6-30-04
Clerk Date

JMI/EJP/cfh

Copies furnished to:

Glen A. Miller, P.E., Miller Engineering
Silvia Alderman, Katz, Kutter, Alderman & Bryant, P.A.
Rick Orth, P.G., FDEP
Keith Kleinmann, FDEP

STATE OF FLORIDA
INDUSTRIAL WASTEWATER FACILITY PERMIT

PERMITTEE:

New Hope Power Partnership (NHPP)
8001 HWY 27 South
P.O. Box 9
South Bay, FL 33493

PERMIT NUMBER:	FLA150355
PA FILE NUMBER:	FLA150355-004-IW1N
ISSUANCE DATE:	**June 30, 2004**
EXPIRATION DATE:	**June 29, 2009**

RESPONSIBLE AUTHORITY:

Mr. Rodney Williams
Plant Manager

FACILITY:

Okeelanta Co-Generation Plant
South Bay, FL 33493
Palm Beach County

Latitude: 26° 34' 37" N Longitude: 80° 44' 49" W

This permit is issued under the provisions of Chapter 403, Florida Statutes, and applicable rules of the Florida Administrative Code. The above named permittee is hereby authorized to construct and operate the facilities shown on the application and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

WASTEWATER TREATMENT:

Operate and construct modification to an industrial wastewater treatment and disposal system serving an existing electric co-generation facility. New Hope Power Partnership intends to construct and install additional onsite power generating capacity, including the construction of a second cooling tower, which will generate additional industrial wastewater flows. The expanded plant site, including the bagasse storage area is approximately 82 acres. Wastewater streams include contact and non-contact stormwater runoff, cooling tower blowdown, reverse osmosis reject, demineralizer reject and low volume washwater. The system includes industrial wastewater collection/transmission systems, oil/water separator, neutralization basin, pumps and associated piping with discharge to one cell of a 600 acre four cell percolation pond network on an annual rotating basis. The system does not discharge to surface waters of the State.

The system is as shown on the current and previously submitted permit applications and in supporting documents by Glen A. Miller, P.E. of Miller Engineering and others.

EFFLUENT DISPOSAL:

Land Application:

Effluent will be discharged to one of the following land application systems on an annual rotating basis.

An existing 1.10 MGD annual average daily flow (AADF) land application system (R-001) consisting of percolation pond. Land application system R-001 is located approximately at latitude 26° 33' 54" N, longitude 80° 44' 51" W.

An existing 1.10 MGD annual average daily flow (AADF) land application system (R-002) consisting of percolation pond. Land application system R-002 is located approximately at latitude 26° 33' 54" N, longitude 80° 43' 55" W.

An existing 1.10 MGD annual average daily flow (AADF) land application system (R-003) consisting of percolation pond. Land application system R-003 is located approximately at latitude 26° 33' 03" N, longitude 80° 44' 51" W.

An existing 1.10 MGD annual average daily flow (AADF) land application system (R-004) consisting of percolation pond. Land application system R-004 is located approximately at latitude 26° 33' 03" N, longitude 80° 43' 55" W.

IN ACCORDANCE WITH: The limitations, monitoring requirements and other conditions as set forth in Part I through Part VIII on pages 2 through 14 of this permit.

I. Effluent Limitations and Monitoring Requirements

A. Surface Water Discharges

1. This facility does not discharge to surface waters of the State.

B. Underground Injection Control Systems

1. This section is not applicable to this facility.

C. Land Application Systems

1. During the period beginning on the issuance date and lasting through the expiration date of this permit, the permittee is authorized to discharge process wastewater, non process wastewater, contact and non-contact stormwater, cooling tower blow down, and reverse osmosis reject water to Land Application System R-001, R-002, R-003, R-004 a percolation pond network. Discharge to the percolation pond network shall be monitored by the permittee. Flow shall be monitored and recorded daily and total dissolved solids shall be sampled monthly.

2. The annual average flow into the percolation pond system shall not exceed 1.10 MGD.

3. The annual average total dissolved solids concentration in the effluent to the percolation pond system shall not exceed 6,000 mg/l.

4. Records of the monitoring data shall be kept on site and made available for inspection by Department personnel during normal business hours.

5. New Hope Power Partnership will perform an inspection prior to placing a new cell into service each year to ensure that the berm is properly constructed. Documentation of this inspection will be kept on site and made available for inspection by Department personnel during normal business hours. The rotational schedule for the said cell rotation is provided below.

Rotational schedule for the four percolation cells	Dates
Cell 4 active	2003 to 2004
Cell 2a active	2004 to 2005
Cell 1a active	2005 to 2006
Cell 3 active	2006 to 2007
Cell 4 active	2007 to 2008
Cell 2a active	2008 to 2009

D. Other Methods of Disposal or Recycling

1. There shall be no discharge of industrial wastewater from this facility to ground or surface waters, except as authorized by this permit.

E. Other Limitations and Monitoring and Reporting Requirements

1. Monitoring requirements under this permit are effective on the first day of the second month following permit issuance. Until such time, the permittee shall continue to monitor and report in accordance with previously effective permit requirements, if any. During the period of operation authorized by this permit, the permittee shall complete and submit to the South District Office Discharge Monitoring Reports (DMRs) in accordance with the frequencies specified by the REPORT type (i.e., monthly, toxicity, quarterly, semiannual, annual, etc.) indicated on the DMR forms attached to this permit. Monitoring results for each monitoring period shall be submitted in accordance with the associated DMR due dates below.

REPORT Type on DMR	Monitoring Period	DMR Due Date
Monthly or Toxicity	First day of month – last day of month	28th day of following month
Quarterly	January 1 - March 31 April 1 – June 30 July 1 – September 30 October 1 – December 31	April 28 July 28 October 28 January 28
Semiannual	January 1 – June 30 July 1 – December 31	July 28 January 28
Annual	January 1 – December 31	January 28

DMRs shall be submitted for each required monitoring period including months of no discharge.

The permittee shall make copies of the attached DMR form(s) and shall submit the completed DMR form(s) to the Department's South District Office at the address specified in Permit Condition I.E.2.

2. Unless specified otherwise in this permit, all reports and notifications required by this permit, including twenty-four hour notifications, shall be submitted to or reported to the South District Office at the address specified below:

South District Office
Post Office Box 2549
Fort Myers, FL 33902-2549

Phone Number - (239) 332-6975
FAX Number - (239) 332-6969 (All FAX copies shall be followed by original copies.)

3. All reports and other information shall be signed in accordance with requirements of Rule 62-620.305, F.A.C. *[62-620.305, 10-23-00]*.

4. The permittee shall provide safe access points for obtaining representative samples, which are required by this permit.

5. If there is no discharge from the facility on a day scheduled for sampling, the sample shall be collected on the day of the next discharge.

6. Any bypass of the treatment facility which is not included in the monitoring specified in sections I.A, I.B, I.C, or I.D, is to be monitored for flow and all other required parameters. For parameters other than flow, at least one grab sample per day shall be monitored. Daily flow shall be monitored or estimated, as appropriate, to obtain reportable data. All monitoring results shall be reported on the appropriate DMR.

II. Industrial Sludge Management Requirements

1. This section not applicable to this facility.

III. Ground Water Monitoring Requirements

A. Construction Requirements

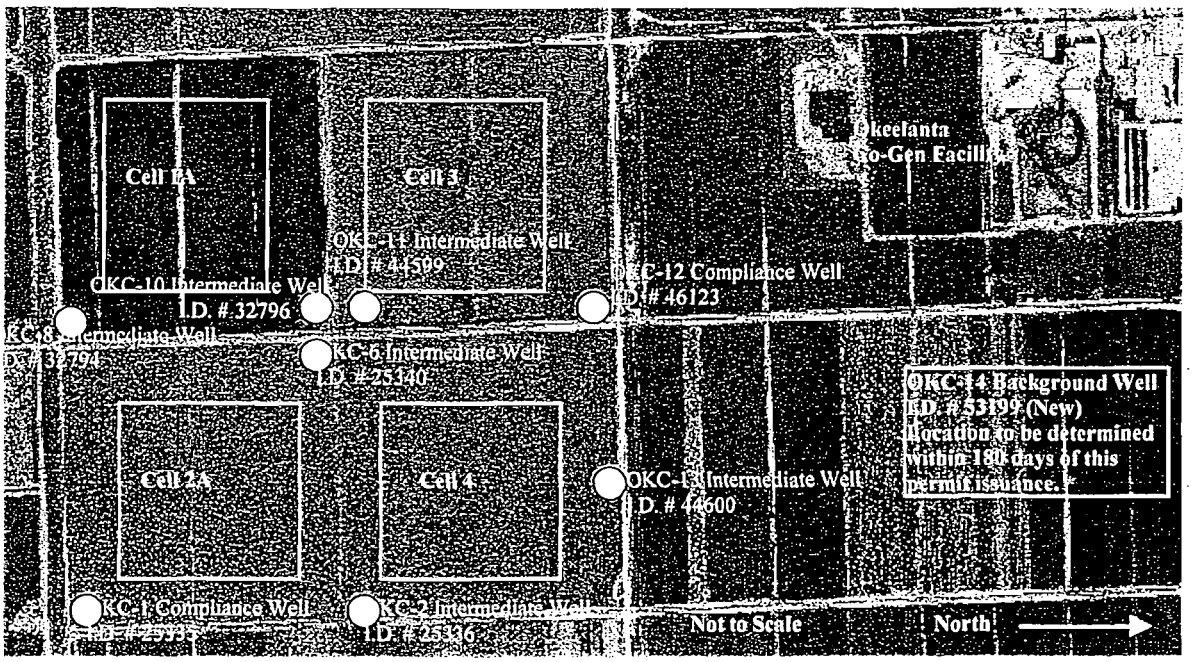
1. Prior to construction of the new ground water monitoring well, a soil boring shall be made at the new monitoring well location in order to properly determine the well depth and screen interval.

2. The permittee shall give at least 72-hours notice to the Department, prior to the installation of the monitoring well detailed in this permit.

3. Within 30 days after installation of a new monitoring well, the permittee shall submit to the Department's South District Office detailed information on the well's location and construction on DEP Form 62-522.900(3), Monitor Well Completion Report.

4. Upon completion of construction of the new background monitoring well OKC-14 (53199) sampling for initial characterization of the monitoring well shall be performed for Total Dissolved Solids, Total Phosphorous, Nitrate, Nitrite, TKN, Chloride, Sodium, pH (field), Specific Conductance (field), Gross Alpha, Water Level, and EPA methods 601, 602, and 608 or equivalent approved method for 40 CFR 136 with detection limits equal to or lower for the parameters listed.

5. The ground water monitoring wells shall be located as depicted in the site map below:



* The location of the proposed background monitoring well is not depicted on this site map.

B. Operational Requirements

1. During the period of operation authorized by this permit, the permittee shall continue to sample ground water at the existing monitoring wells identified in item III.B.2 below, in accordance with this permit and the approved ground water monitoring plan prepared in accordance with Rule 62-522.600, F.A.C. Within 90 days of installation of the new background-monitoring well, the permittee shall begin sampling ground water at the new monitoring well identified in item III.B.2 below in accordance with this permit and the approved ground water monitoring plan.

2. The following monitoring wells shall be sampled for the rotating four cell (1A, 2A, 3 & 4) percolation pond land application systems R-001, R-002, R-003 and R-004.

Monitoring Well ID	Alternate Well Name and/or Description of Monitoring Location	Depth (Feet)	Aquifer Monitored	Monitoring Frequency
MWB-53199	OKC-14 Background Well. Location to be determined within 90 days from the issuance of this permit. (New)		Surficial	All Quarters
MWC-25335	OKC-1 Compliance Well. Located in the southeast corner of Cell #2A. (Existing)	17.54	Surficial	1st & 3rd Quarters
MWC-46123	OKC-12 Compliance Well. Located in the northeast corner of Cell #3. (Existing)	17.0	Surficial	2nd & 4th Quarters
MWI-25336	OKC-2 Intermediate Well. Located in the southeast corner of Cell #4. (Existing)	16.0	Surficial	1st & 3rd Quarters
MWI-25340	OKC-6 Intermediate Well. Located in the northwest corner of Cell #2A. (Existing)	15.5	Surficial	2nd & 4th Quarters
MWI-32794	OKC-8 Intermediate Well. Located in the southeast corner of Cell #1A. (Existing)	17.5	Surficial	2nd & 4th Quarters
MWI-32796	OKC-10 Intermediate Well. Located in the northeast corner of Cell #1A. (Existing)	17.0	Surficial	2nd & 4th Quarters
MWI-44599	OKC-11 Intermediate Well. Located in the southeast corner of Cell #3. (Existing)	17.0	Surficial	1st & 3rd Quarters
MWI-44600	OKC-13 Intermediate Well. Located along the center north side of Cell #4. (Existing)	17.0	Surficial	1st & 3rd Quarters

MWB = Background; MWI = Intermediate; MWC = Compliance, MWP = Piezometer

3. The monitor wells specified in Condition III.B.2 shall be sampled for the parameters listed below:

Parameter Name	*Compliance Well Limit	Units	Sample Type
Specific Conductance (field)	Report	UMHO/CM	Grab
PH	6.5-8.5	SU	Grab
Chloride (as Cl)	250.0	MG/L	Grab
Solids, Total Dissolved (TDS)	500.0 **	MG/L	Grab
Water Level Relative to NGVD	Report	FEET	Measured
Sodium, Total Recoverable	160.0	MG/L	Grab

* This column summarizes Class G-II maximum contaminant level criteria applicable at the Compliance Well. Refer to Rule 62-520.420, F.A.C. These are not effluent limits.

** May be greater if no other maximum contaminant level is exceeded. See Rule 62-550.320(1), Table 6, F.A.C.

4. A Zone of Discharge is hereby established for the time duration of this permit and shall not aerially extend further than one hundred (100) feet beyond the perimeters of the areas of wetted surface of the wastewater holding ponds, nor shall it extend beyond the limits of the property boundaries should such distance be less than one hundred (100) feet. The vertical zone of discharge shall not extend below the semi-confining zones at the base of the water table aquifer. The permittee's discharge to ground water shall not cause a violation of water quality standards for ground waters at the boundary of the zone of discharge in accordance with Rules 62-520.400 and 62-520.420, F.A.C.

5. The permittee's discharge to ground water shall not cause a violation of the minimum criteria for ground water specified in Rule 62-520.400, F.A.C., within the zone of discharge.

6. If the concentration for any constituent listed in Permit Condition III.B.3. in the natural background quality of the ground water is greater than the stated maximum, or in the case of pH is also less than the minimum, the representative natural background quality shall be the prevailing standard.

7. Water levels shall be recorded prior to evacuating the well for sample collection. Elevation references shall include the top of the well casing and land surface at each well site (NGVD allowable) at a precision of plus or minus 0.01 feet.

8. Ground water monitoring wells shall be purged prior to sampling to obtain a representative sample.

9. If a monitoring well becomes damaged or cannot be sampled for some reason, the permittee shall notify the Department immediately and a written report shall follow within seven days detailing the circumstances and remedial measures taken or proposed. Repair or replacement of monitoring wells shall be approved in advance by the Department.

10. Ground water monitoring test results shall be submitted on Part D of DEP Form 62-620.910(10) (attached) and shall be submitted to the address specified in I.E.2. Results shall be submitted with the DMR for each month listed in the following DMR Due Date schedule.

SAMPLE QUARTER	SAMPLE PERIOD	DMR Due Date
1st Quarter	January 1 – March 31	April 28
2nd Quarter	April 1 – June 30	July 28
3rd Quarter	July 1 – September 30	October 28
4th Quarter	October 1 – December 31	January 28

IV. Other Land Application Requirements

1. This section is not applicable to this facility.

V. Operation and Maintenance Requirements

A. Operation of Treatment and Disposal Facilities

1. The permittee shall ensure that the operation of this facility is as described in the application and supporting documents.

2. The operation of the pollution control facilities described in this permit shall be under the supervision of a person who is qualified by formal training and/or practical experience in the field of water pollution control.

B. Record keeping Requirements:

1. The permittee shall maintain the following records on the site of the permitted facility and make them available for inspection:

   a. Records of all compliance monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, including, if applicable, a copy of the laboratory certification showing the certification number of the laboratory, for at least three years from the date the sample or measurement was taken;

   b. Copies of all reports, other than those required in items a. and f. of this section, required by the permit for at least three years from the date the report was prepared, unless otherwise specified by Department rule;

   c. Records of all data, including reports and documents used to complete the application for the permit for at least three years from the date the application was filed, unless otherwise specified by Department rule;

   d. A copy of the current permit;

   e. A copy of any required record drawings;

   f. Copies of the logs and schedules showing plant operations and equipment maintenance for three years from the date on the logs or schedule.

VI. Schedules

1. The following corrective actions shall be completed in accordance with the following schedule:

	Corrective Action	Scheduled Completion Date
1	Elimination of the sanitary waste stream from the industrial wastewater discharge	90 days from permit issuance.
2	Permittee shall locate and construct a new background monitoring well OKC-14 (53199), in accordance with	180 days from permit issuance.

	Corrective Action	Scheduled Completion Date
	the procedures outlined in Permit Conditions III.A.1, 2, 3, 4 that complies with Rule 62-520.200(3)(12) F.A.C.	

2. No later than 14 calendar days following a date identified in the above schedule(s) of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by an identified date, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

VII. Other Specific Conditions

A. Specific Conditions Applicable to All Permits

1. Drawings, plans, documents or specifications submitted by the permittee, not attached hereto, but retained on file at the South District Office, are made a part hereof.

2. Where required by Chapter 471 (P.E.) or Chapter 492 (P.G.) Florida Statutes, applicable portions of reports to be submitted under this permit, shall be signed and sealed by the professional(s) who prepared them.

3. This permit satisfies Industrial Wastewater program permitting requirements only and does not authorize operation of this facility prior to obtaining any other permits required by local, state or federal agencies.

B. Specific Conditions Related to Construction

1. Within thirty days of completion of construction, the permittee shall submit to the Department a completed "Certification of Completion of Construction" (DEP Form 62-620.910(12)) signed and sealed by the engineer of record or other engineer registered in the state of Florida.

2. Record drawings shall be prepared and made available in accordance with Rule 62-620.410(6), F.A.C., and the Department of Environmental Protection Guide to Wastewater Permitting within six months of placing the facilities into operation.

C. Duty to Reapply

1. The permittee shall submit an application to renew this permit at least 180 days before the expiration date of this permit.

2. The permittee shall apply for renewal of this permit on the appropriate form listed in Rule 62-620.910, F.A.C., and in the manner established in Chapter 62-620, F.A.C., and the Department of Environmental Protection Guide to Wastewater Permitting including submittal of the appropriate processing fee set forth in Rule 62-4.050, F.A.C.

3. An application filed in accordance with subsections 1. and 2. of this part shall be considered timely and sufficient. When an application for renewal of a permit is timely and sufficient, the existing permit shall not expire until the Department has taken final action on the application for renewal or until the last day for seeking judicial review of the agency order or a later date fixed by order of the reviewing court.

4. The late submittal of a renewal application shall be considered timely and sufficient for the purpose of extending the effectiveness of the expiring permit only if it is submitted and made complete before the expiration date.

D. Specific Conditions Related to Existing Manufacturing, Commercial, Mining, and Silviculture Wastewater Facilities or Activities

1. This section is not applicable to this facility.

E. Reopener Clause

1. The permit shall be revised, or alternatively, revoked and reissued in accordance with the provisions contained in Rules 62-620.325 and 62-620.345 F.A.C., if applicable, or to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2) and 307(a)(2) of the Clean Water Act (the Act), as amended, if the effluent standards, limitations, or water quality standards so issued or approved:

   a. Contains different conditions or is otherwise more stringent than any condition in the permit/or;

   b. Controls any pollutant not addressed in the permit.

   The permit as revised or reissued under this paragraph shall contain any other requirements then applicable.

2. The permit may be reopened to adjust effluent limitations or monitoring requirements should future Water Quality Based Effluent Limitation determinations, water quality studies, DEP approved changes in water quality standards, or other information show a need for a different limitation or monitoring requirement.

3. The Department may develop a Total Maximum Daily Load (TMDL) during the life of the permit. Once a TMDL has been established and adopted by rule, the Department shall revise this permit to incorporate the final findings of the TMDL.

VIII. General Conditions

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit are binding and enforceable pursuant to Chapter 403, Florida Statutes. Any permit noncompliance constitutes a violation of Chapter 403, Florida Statutes, and is grounds for enforcement action, permit termination, permit revocation and reissuance, or permit revision. *[62-620.610(1), F.A.C]*

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviations from the approved drawings, exhibits, specifications or conditions of this permit constitute grounds for revocation and enforcement action by the Department. *[62-620.610(2), F.A.C.]*

3. As provided in Subsection 403.087(6), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor authorize any infringements of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other Department permit or authorization that may be required for other aspects of the total project which are not addressed in this permit. *[62-620.610(3), F.A.C.]*

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title. *[62-620.610(4), F.A.C.]*

5. This permit does not relieve the permittee from liability and penalties for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted source; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department. The permittee shall take all reasonable steps to minimize or prevent any discharge, reuse of reclaimed water, or residuals use or disposal in violation of this permit which has a

reasonable likelihood of adversely affecting human health or the environment. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. *[62-620.610(5), F.A.C.]*

6. If the permittee wishes to continue an activity regulated by this permit after its expiration date, the permittee shall apply for and obtain a new permit. *[62-620.610(6), F.A.C.]*

7. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control, and related appurtenances, that are installed and used by the permittee to achieve compliance with the conditions of this permit. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to maintain or achieve compliance with the conditions of the permit. *[62-620.610(7), F.A.C.]*

8. This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit revision, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition. *[62-620.610(8), F.A.C.]*

9. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, including an authorized representative of the Department and authorized EPA personnel, when applicable, upon presentation of credentials or other documents as may be required by law, and at reasonable times, depending upon the nature of the concern being investigated, to

   a. Enter upon the permittee's premises where a regulated facility, system, or activity is located or conducted, or where records shall be kept under the conditions of this permit;

   b. Have access to and copy any records that shall be kept under the conditions of this permit;

   c. Inspect the facilities, equipment, practices, or operations regulated or required under this permit; and

   d. Sample or monitor any substances or parameters at any location necessary to assure compliance with this permit or Department rules.

   [62-620.610(9), F.A.C.]

10. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data, and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except as such use is proscribed by Section 403.111, Florida Statutes, or Rule 62-620.302, F.A.C. Such evidence shall only be used to the extent that it is consistent with the Florida Rules of Civil Procedure and applicable evidentiary rules. [62-*620.610(10), F.A.C.]*

11. When requested by the Department, the permittee shall within a reasonable time provide any information required by law which is needed to determine whether there is cause for revising, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also provide to the Department upon request copies of records required by this permit to be kept. If the permittee becomes aware of relevant facts that were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be promptly submitted or corrections promptly reported to the Department. *[62-620.610(11), F.A.C.]*

12. Unless specifically stated otherwise in Department rules, the permittee, in accepting this permit, agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard. *[62-620.610(12), F.A.C.]*

13. The permittee, in accepting this permit, agrees to pay the applicable regulatory program and surveillance fee in accordance with Rule 62-4.052, F.A.C. *[62-620.610(13), F.A.C.]*

14. This permit is transferable only upon Department approval in accordance with Rule 62-620.340, F.A.C. The permittee shall be liable for any noncompliance of the permitted activity until the transfer is approved by the Department. *[62-620.610(14), F.A.C.]*

15. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a wastewater facility and shall specify what steps will be taken to safeguard public health and safety during and following inactivation or abandonment. *[62-620.610(15), F.A.C.]*

16. The permittee shall apply for a revision to the Department permit in accordance with Rules 62-620.300 and the Department of Environmental Protection Guide to Wastewater Permitting at least 90 days before construction of any planned substantial modifications to the permitted facility is to commence or with Rule 62-620.325(2) for minor modifications to the permitted facility. A revised permit shall be obtained before construction begins except as provided in Rule 62-620.300, F.A.C. *[62-620.610(16), F.A.C.]*

17. The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity, which may result in noncompliance with permit requirements. The permittee shall be responsible for any and all damages, which may result from the changes and may be subject to enforcement action by the Department for penalties or revocation of this permit. The notice shall include the following information:

    a. A description of the anticipated noncompliance;

    b. The period of the anticipated noncompliance, including dates and times; and

    c. Steps being taken to prevent future occurrence of the noncompliance.

    [62-620.610(17), F.A.C.]

18. Sampling and monitoring data shall be collected and analyzed in accordance with Rule 62-4.246, Chapter 62-160 and 62-601, F.A.C. and 40CFR 136, as appropriate.

    a. Monitoring results shall be reported at the intervals specified elsewhere in this permit and shall be reported on a Discharge Monitoring Report (DMR), DEP Form 62-620.910(10).

    b. If the permittee monitors any contaminant more frequently than required by the permit, using Department approved test procedures; the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.

    c. Calculations for all limitations, which require averaging of measurements, shall use an arithmetic mean unless otherwise specified in this permit.

    d. Any laboratory test required by this permit shall be performed by a laboratory that has been certified by the Department of Health (DOH) under Chapter 64E-1, F.A.C., where such certification is required by Rule 62-160.300, F.A.C. The laboratory must be certified for any specific method and analyte combination that is used to comply with this permit. For domestic wastewater facilities, the on-site test procedures specified in Rule 62-160.300(4), F.A.C., shall be performed by a laboratory certified test for those parameters or under the direction of an operator certified under Chapter 62-602, F.A.C.

    e. Field activities including on-site tests and sample collection, whether performed by a laboratory or a certified operator, must follow the applicable procedures described in DEP-SOP-001/01 (January 2002). Alternate field procedures and laboratory methods may be used where they have been approved according to the requirements of Rules 62-160.220, 62-160.330, and 62-160.600, F.A.C.

19. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule detailed elsewhere in this permit shall be submitted no later than 14 days following each schedule date. *[62-620.610(19), F.A.C.]*

20. The permittee shall report to the Department's South District Office any noncompliance, which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within five days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and time, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

    a. The following shall be included as information, which must be reported within 24 hours under this condition:

        1. Any unanticipated bypass which causes any reclaimed water or effluent to exceed any permit limitation or results in an unpermitted discharge,

        2. Any upset which causes any reclaimed water or the effluent to exceed any limitation in the permit,

        3. Violation of a maximum daily discharge limitation for any of the pollutants specifically listed in the permit for such notice, and

        4. Any unauthorized discharge to surface or ground waters.

    b. Oral reports as required by this subsection shall be provided as follows:

        1. For unauthorized releases or spills of untreated or treated wastewater reported pursuant to subparagraph a.4 that are in excess of 1,000 gallons per incident, or where information indicates that public health or the environment will be endangered, oral reports shall be provided to the Department by calling the STATE WARNING POINT TOLL FREE NUMBER (800) 320-0519, as soon as practical, but no later than 24 hours from the time the permittee becomes aware of the discharge. The permittee, to the extent known, shall provide the following information to the State Warning Point:

            (a) Name, address, and telephone number of person reporting;

            (b) Name, address, and telephone number of permittee or responsible person for the discharge;

            (c) Date and time of the discharge and status of discharge (ongoing or ceased);

            (d) Characteristics of the wastewater spilled or released (untreated or treated, industrial or domestic wastewater);

            (e) Estimated amount of the discharge;

            (f) Location or address of the discharge;

            (g) Source and cause of the discharge;

            (h) Whether the discharge was contained on-site, and cleanup actions taken to date;

            (i) Description of area affected by the discharge, including name of water body affected, if any; and

            (j) Other persons or agencies contacted.

2. Oral reports, not otherwise required to be provided pursuant to subparagraph b.1 above, shall be provided to Department's South District Office within 24 hours from the time the permittee becomes aware of the circumstances.

c. If the oral report has been received within 24 hours, the noncompliance has been corrected, and the noncompliance did not endanger health or the environment, the Department's South District Office shall waive the written report.

[62-620.610(20), F.A.C.]

21. The permittee shall report all instances of noncompliance not reported under Conditions VIII.18 and 19 of this permit at the time monitoring reports are submitted. This report shall contain the same information required by Condition VIII.20 of this permit. *[62-620.610(21), F.A.C.]*

22. Bypass Provisions:

a. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless the permittee affirmatively demonstrates that:

1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; and

2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and

3. The permittee submitted notices as required under Condition VIII.22.b of this permit.

b. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Department, if possible at least 10 days before the date of the bypass. The permittee shall submit notice of an unanticipated bypass within 24 hours of learning about the bypass as required in Condition VIII.20 of this permit. A notice shall include a description of the bypass and its cause; the period of the bypass, including exact dates and times; if the bypass has not been corrected, the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the bypass.

c. The Department shall approve an anticipated bypass, after considering its adverse effect, if the permittee demonstrates that it will meet the three conditions listed in Condition VIII.22 a. (1) through (3) of this permit.

d. A permittee may allow any bypass to occur which does not cause reclaimed water or effluent limitations to be exceeded if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provision of Condition VIII.22.a through c. of this permit.

[62-620.610(22), F.A.C.]

23. Upset Provisions:

a. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed contemporaneous operating logs, or other relevant evidence that:

1. An upset occurred and that the permittee can identify the cause(s) of the upset;

2. The permitted facility was at the time being properly operated;

3. The permittee submitted notice of the upset as required in Condition VIII.20 of this permit; and

4. The permittee complied with any remedial measures required under Condition VIII.5 of this permit.

b. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

c. Before an enforcement proceeding is instituted, no representation made during the Department review of a claim that noncompliance was caused by an upset is final agency action subject to judicial review.

[62-620.610(23), F.A.C.]

Executed in Fort Myers.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

Jon M. Iglehart
Acting Director of
District Management

DATE: June 30, 2004

JMI/EJP/cfh

APPENDIX 10.4.3

NEW HOPE POWER PARTNERSHIP SFWMD CONSUMPTIVE USE AND WELL CONSTRUCTION PERMITS

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • FL WATS 1-800-432-2045 • TDD (561) 697-2574
Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680 • www.sfwmd.gov

CON 24

Permit No. 50-03146-W

JAN 27 2000

January 25, 2000

OKEELANTA POWER LIMITED PARTNERSHIP
(OKELANTA COGENERATION PLANT)
PO BOX 8
SOUTH BAY, FL 33493

Dear Permittee:

Enclosed is your **CORRECTED** Permit as authorized by the Governing Board of the South Florida Water Management District at its meeting on DECEMBER 9, 1999. Please replace the permit previously mailed to you with this corrected permit.

It is requested that you read your Permit thoroughly and understand its contents and conditions. If you have any questions, please do not hesitate to contact this office.

Sincerely,

Vern Kaiser
Deputy Clerk
Environmental Resource Regulation Department

Enclosures

cc: Blasland, Bouck & Lee Inc.

Form #0299
Rev. 5/93

CORRECTED PERMIT

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
WATER USE PERMIT NO. RE-ISSUE 50-03146-W

(NON - ASSIGNABLE)

Date Issued: DECEMBER 9, 1999 Expiration Date: December 9, 2004

Authorizing: THE CONTINUATION OF AN EXISTING USE OF GROUNDWATER FROM THE FLORIDAN AQUIFER SYSTEM AND THE SURFICIAL AQUIFER SYSTEM AND SURFACE WATER FROM THE MIAMI CANAL/NORTH NEW RIVER CANAL FOR INDUSTRIAL AND PUBLIC WATER SUPPLY USE WITH AN ANNUAL ALLOCATION OF 879 MILLION GALLONS.

Located In: Palm Beach County, S15,16/T45S/R36E

Issued To: OKEELANTA POWER LIMITED PARTNERSHIP
(OKEELANTA COGENERATION PLANT)
PO BOX 8
SOUTH BAY, FL 33493

This Permit is issued pursuant to Application No. 990527-7 , dated May 27, 1999, for the Use of Water as specified above and subject to the Special Conditions set forth below. Permittee agrees to hold and save the South Florida Water Management District and its successors harmless from any and all damages, claims or liabilities which may arise by reason of the construction, maintenance or use of activities authorized by this permit. Said application, including all plan and specifications attached thereto, is by reference made a part hereof.

Upon written notice to the permittee, this permit may be temporarily modified, or restricted under a Declaration of Water Shortage or a Declaration of Emergency due to Water Shortage in accordance with provisions of Ch. 373, Fla. Statutes, and applicable rules and regulations of the South Florida Water Management District.

This Permit may be permanently or temporarily revoked, in whole or in part, for the violation of the conditions of the permit or for the violation of any provision of the Water Resources Act and regulations thereunder.

This Permit does not convey to the permittee any property rights nor any privileges other than those specified herein, nor relieve the permittee from complying with any law, regulation, or requirement affecting the rights of other bodies or agencies.

Special Conditions are as follows:

SEE PAGES 2-4 OF 4 (22 LIMITING CONDITIONS).

Filed with the Clerk of the South Florida Water Management District

On 1/25/00

By _____ Deputy Clerk

South Florida Water Management District, by its Governing Board

By _____ Assistant Secretary

LIMITING CONDITIONS

1. IN THE EVENT OF A DECLARED WATER SHORTAGE, WATER WITHDRAWAL REDUCTIONS WILL BE ORDERED BY THE DISTRICT IN ACCORDANCE WITH THE WATER SHORTAGE PLAN, CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE. THE APPLICANT IS ADVISED THAT DURING A WATER SHORTAGE PUMPAGE REPORTS SHALL BE SUBMITTED AS REQUIRED BY CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE.

2. SOURCE CLASSIFICATION IS:

   GROUNDWATER FROM THE FLORIDAN AQUIFER SYSTEM
   GROUNDWATER FROM THE SURFICIAL AQUIFER SYSTEM
   SURFACE WATER FROM THE MIAMI CANAL/NORTH NEW RIVER CANAL

3. PERMITTEE SHALL MITIGATE ANY ADVERSE IMPACT ON EXISTING LEGAL USES CAUSED BY WITHDRAWALS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, THE DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. ADVERSE IMPACTS ARE:

   A) REDUCTION IN WELL WATER LEVELS THAT IMPAIRS THE ABILITY OF AN ADJACENT WELL, INCLUDING A DOMESTIC WELL, LAWN IRRIGATION WELL, OR PUBLIC WATER SUPPLY WELL, TO PRODUCE WATER BY 10% OR GREATER,
   B) SIGNIFICANT REDUCTION IN LEVELS IN AN ADJACENT WATER BODY SUCH AS A LAKE, POND, OR A CANAL SYSTEM THAT IMPAIRS THE ABILITY TO PRODUCE WATER BY 10% OR GREATER,
   C) SALINE WATER INTRUSION OR INDUCED MOVEMENT OF POLLUTANTS INTO THE WATER SUPPLY OF AN ADJACENT WATER USE, RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND
   D) CHANGE IN WATER QUALITY CAUSED BY THE PERMITTEE THAT RESULTS IN SIGNIFICANT IMPAIRMENT OR LOSS OF USE OF A WELL OR WATER BODY.

4. PERMITTEE SHALL MITIGATE ANY ADVERSE IMPACT ON EXISTING OFF-SITE LAND USE AS A CONSEQUENCE OF WITHDRAWALS PERMITTED HEREIN. IF INCREASED WITHDRAWALS CAUSE AN ADVERSE IMPACT ON EXISTING LAND USE, THE DISTRICT RESERVES THE RIGHT TO CURTAIL FUTURE WITHDRAWAL RATES. ADVERSE IMPACTS ARE:

   A) SIGNIFICANT REDUCTION IN WATER LEVELS IN AN ADJACENT SURFACE WATER BODY, INCLUDING IMPOUNDMENTS, TO THE EXTENT THAT THE DESIGNED FUNCTION OF THE WATER BODY IS IMPAIRED,
   B) LAND COLLAPSE OR SUBSIDENCE CAUSED BY REDUCTION IN WATER LEVELS; AND
   C) DAMAGE TO CROPS AND OTHER TYPES OF VEGETATION.

5. AUTHORIZED REPRESENTATIVES OF THE DISTRICT SHALL BE PERMITTED TO ENTER, INSPECT, AND OBSERVE THE PERMITTED SYSTEM TO DETERMINE COMPLIANCE WITH SPECIAL CONDITIONS.

6. IF ANY CONDITION OF THE PERMIT IS VIOLATED, THE PERMIT SHALL BE SUBJECT TO REVIEW AND POSSIBLE MODIFICATION, ENFORCEMENT ACTION, OR REVOCATION.

7 . APPLICATION FOR A PERMIT MODIFICATION MAY BE MADE AT ANY TIME.

8 . WITHDRAWAL FACILITIES ARE:

GROUNDWATER - EXISTING:

1 - 9" X 1300' X 600 GPM WELL CASED TO 870 FEET
3 - 10" X 80' X 250 GPM WELLS CASED TO 50 FEET

SURFACE WATER - EXISTING:

3 - " X HP X 450 GPM PUMPS

9 . THIS PERMIT SHALL EXPIRE ON DECEMBER 09, 2004.

10. ANNUAL ALLOCATION SHALL NOT EXCEED 879 MG.

MAXIMUM ANNUAL WITHDRAWAL FROM THE SURFICIAL AQUIFER SYSTEM SHALL NOT EXCEED 137 MG.

MAXIMUM DAILY ALLOCATION SHALL NOT EXCEED 3.00 MG.

MAXIMUM DAILY WITHDRAWAL FROM THE SURFICIAL AQUIFER SYSTEM SHALL NOT EXCEED .60 MG.

11. USE CLASSIFICATION IS INDUSTRIAL AND PUBLIC WATER SUPPLY.

12. THE PERMITTEE IS ADVISED THAT THIS PERMIT DOES NOT RELIEVE ANY PERSON FROM THE REQUIREMENT TO OBTAIN ALL NECESSARY FEDERAL, STATE, LOCAL AND SPECIAL DISTRICT AUTHORIZATIONS.

13. THE PERMIT DOES NOT CONVEY ANY PROPERTY RIGHT TO THE PERMITTEE, NOR ANY RIGHTS AND PRIVILEGES OTHER THAN THOSE SPECIFIED IN THE PERMIT AND CHAPTER 40E-2, F.A.C.

14. IF ADVERSE IMPACTS OCCUR TO NATURAL RESOURCES AS A RESULT OF THE PERMITTEE'S WATER WITHDRAWALS, THE PERMITTEE SHALL MITIGATE FOR SUCH IMPACTS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. EXAMPLES OF ADVERSE IMPACTS ARE:

A) REDUCTION IN GROUND WATER LEVELS THAT RESULTS IN SIGNIFICANT LATERAL MOVEMENT OF THE FRESH WATER/SALT WATER INTERFACE,
B) REDUCTION IN WATER LEVELS THAT ADVERSELY IMPACT THE HYDROPERIOD OF PROTECTED WETLAND ENVIRONMENTS,
C) SIGNIFICANT REDUCTION IN WATER LEVELS OR HYDROPERIOD IN A NATURALLY OCCURING WATER BODY SUCH AS A LAKE OR POND,
D) INDUCED MOVEMENT OR INDUCTION OF POLLUTANTS INTO THE WATER SUPPLY RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND

E) SIGNIFICANT HARM TO THE NATURAL SYSTEM INCLUDING DAMAGE TO HABITAT FOR RARE OR ENDANGERED SPECIES.

15. PRIOR TO JUNE 09, 2000, PERMITTEE SHALL PROVIDE THE RESULTS OF THE CALIBRATION TESTING OF THE IDENTIFIED WATER ACCOUNTING METHOD(S) AND EQUIP ALL EXISTING AND PROPOSED WITHDRAWAL FACILITIES WITH APPROVED WATER USE ACCOUNTING METHOD(S) PURSUANT TO SECTION 4.1 OF THE WATER USE BASIS OF REVIEW.

16. PERMITTEE SHALL SUBMIT ALL DATA AS REQUIRED BY THE IMPLEMENTATION SCHEDULE FOR EACH OF THE LIMITING CONDITIONS TO: S.F.W.M.D., SUPERVISING PROFESSIONAL - P.P.C., WATER USE DIVISION (4040), P.O. BOX 24680, WEST PALM BEACH, FL 33416-4680.

17. THE PERMITTEE SHALL MAINTAIN RECORDS OF THE CALIBRATED DAILY WITHDRAWALS FROM EACH PUMP. THESE RECORDS SHALL BE AVAILABLE FOR REVIEW UPON REQUEST BY DISTRICT STAFF. MONTHLY WITHDRAWALS FOR EACH PUMP SHALL BE SUBMITTED TO THE DISTRICT QUARTERLY. MAXIMUM DAILY WITHDRAWALS FOR EACH MONTH FOR THE ENTIRE SYSTEM SHALL BE SUBMITTED TO THE DISTRICT QUARTERLY. THE WATER ACCOUNTING METHOD AND MEANS OF CALIBRATION SHALL BE STATED ON EACH REPORT.

18. THE WATER CONSERVATION PLAN REQUIRED BY CRITERIA 2.4.1 OF THE BASIS OF REVIEW FOR WATER USE PERMIT APPLICATIONS WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT - FEBRUARY 1997, MUST BE IMPLEMENTED IN ACCORDANCE WITH THE IMPLEMENTATION SCHEDULE CONTAINED THEREIN.

19. EVERY TWO YEARS FROM THE DATE OF PERMIT ISSUANCE, THE PERMITTEE SHALL SUBMIT RE-CALIBRATION DATA ON EACH WATER PUMPING ACCOUNTING FACILITY, FOR THOSE PERMITTEES WHOSE ACCOUNTING METHOD(S) REQUIRE RE-CALIBRATION.

20. IF AT ANY TIME THERE IS AN INDICATION THAT THE WELL CASING, VALVES, OR CONTROLS LEAK OR HAVE BECOME INOPERATIVE, REPAIRS OR REPLACEMENT SHALL BE MADE TO RESTORE THE SYSTEM TO AN OPERATING CONDITION. FAILURE TO MAKE SUCH REPAIRS SHALL BE CAUSE FOR FILLING AND ABANDONING THE WELL, IN ACCORDANCE WITH PROCEDURES OUTLINED IN CHAPTERS 40E-3 AND 40E-30, F.A.C.

21. PERMITTEE SHALL SECURE A WELL CONSTRUCTION PERMIT PRIOR TO CONSTRUCTION, REPAIR, OR ABANDONMENT OF ALL WELLS, AS DESCRIBED IN CHAPTERS 40E-3 AND 40E-30, F.A.C.

22. THIS IS AN EXISTING PROJECT. A SURFACE WATER MANAGEMENT PERMIT SHALL BE REQUIRED PRIOR TO ANY CHANGE IN LAND USE OR MODIFICATION OF THE DRAINAGE SYSTEM.

LAST DATE FOR GOVERNING BOARD ACTION:
December 9, 1999

CORRECTED COPY

WATER USE STAFF REVIEW SUMMARY

APPLICATION NUMBER: 990527-7

PERMIT NUMBER: 50-03146-W

PROJECT NAME: OKEELANTA COGENERATION PLANT

WATER USE STATUS: MODIFICATION/RENEWAL

SURFACE WATER MANAGEMENT STATUS: NOT APPLICABLE AT THIS TIME (SEE LIMITING CONDITION NO. 22).

RIGHT OF WAY STATUS: NOT APPLICABLE.

LOCATION: PALM BEACH COUNTY,S15,16/T45S/R36E

APPLICANT'S NAME AND ADDRESS: OKEELANTA POWER LIMITED PARTNERSHIP
PO BOX 8
SOUTH BAY, FL 33493

OWNER'S NAME AND ADDRESS: OKEELANTA POWER LIMITED PARTNERSHIP
PO BOX 8
SOUTH BAY, FL 33493

PURPOSE:

The purpose of this application is to modify/renew existing Water Use Permit No. 50-03146-W by adding the Floridan Aquifer as a source, adding one Floridan aquifer well, increasing the annual allocation from 564 MGY to 879 MGY, and increasing the maximum daily allocation from 2 MGD to 3 MGD.

TOTALS	2700	3.89	116.6	1419

PROJECT DESCRIPTION FOR INDUSTRIAL:

The Okeelanta Power Limited Partnership (OPLP) is located adjacent to the existing Okeelanta Corporation sugar mill and ultimately plans to replace the mill's existing steam production system for the processing of sugarcane. The cogeneration facility uses biomass fuels and coal to generate steam and electricity and currently withdraws water from the North New River and Miami Canals via an internal canal system, as well as from the Surficial Aquifer. The applicant proposes to add the Floridan Aquifer as an additional supply source, with a proposed allocation of 315 MGY (.86 MGD) to supplement the ground water allocation from the Surficial Aquifer and increase steam production. The three original Surficial Aquifer wells (FW-1, FW-2, and FW-3) have had poorer-than-expected water quality due to high concentrations of organics, hydrogen sulfide, and total dissolved solids. This has resulted in a greater volume of reject water from the RO plant used to treat the water. Water from the Floridan Aquifer will be used as makeup for the boilers, after being treated through the RO plant.

The Okeelanta Cogeneration Plant's make-up water pre-treatment facility is capable of treating up to 1.3 MGD by reverse osmosis and demineralization, of which approximately 400,000 gallons can be stored. Average annual in-plant losses consist primarily of evaporation from the cooling tower (934,000 gpd), loss in the steam system (141,000 gpd), and losses in the steam cycle (22,000 gpd). Firewater reserve at the facility is 300,000 gallons. The potable water use is estimated to be 2,000 gallons per day for use of sinks and showers.

SALINE WATER INTRUSION:

Data from an on-site Surficial Aquifer well (total depth approximately 60 feet) indicate the chloride concentration of the shallow groundwater to be approximately 280 mg/L. Chloride concentrations from the Floridan Aquifer well were 410 mg/L. Therefore, this project is considered to be the use of saline water and the withdrawals are not expected to adversely affect other users or the water resource.

The groundwater withdrawn from both aquifers is treated by a reverse osmosis (RO) system. Reject water from the RO system is sent to an on-site 600 acre percolation pond, as permitted by the Department of Environmental Protection.

PROTECTED WETLANDS ENVIRONMENT:

There are no wetlands located in the vicinity of the project. Due to the hydraulic separation between the Floridan and Surficial aquifers, the proposed Floridan withdrawals are not expected to result in any drawdown in the Surficial Aquifer.

The potential for adverse impacts to occur to protected wetland environments as a result of the withdrawal of the recommended allocation is considered minimal.

SOURCES OF POLLUTION:

Volatile organic compounds have been detected in the groundwater at the sugar mill, approximately 1,500 feet northwest of the proposed well. Okeelanta Corporation has remediated the groundwater contamination (Water Use Permit No. 50-01963-W) and the current status of the site is "monitoring only". Due to the hydraulic separation between the Floridan and Surficial aquifers, the proposed Floridan withdrawals are not expected to result in any drawdown in the Surficial Aquifer.

The potential for the induced movement of contaminants from known sources of pollution is considered to be minimal as a result of the withdrawal of the recommended allocation.

CONSERVATION PLAN

Pursuant to Section 2.4.1 of the Basis of Review for Water Use Permit Applications, applicants are required to prepare and implement a Water Conservation Plan for new facilities within two years of permit issuance (Limiting Condition No. 16). The applicant has indicated compliance with the following mandatory components:

1. An audit of the amount of water used in the various operational processes.

All processes at the facility are metered and a summary of the water budget is presented in Exhibit 4.

2. Implementation of programs to decrease water consumption at the facility.

RECOMMENDATIONS

APPLICATION NUMBER: 990527-7

PERMIT NUMBER: 50-03146-W

DATE OF ISSUANCE: December 9, 1999

RECOMMENDATION SUMMARY:

Staff recommends modification/renewal of Water Use Permit No. 50-03146-W for industrial water supply and for public water supply. Withdrawals are from the Floridan Aquifer System via 1 existing withdrawal facility, from Surficial Aquifer System via 3 existing withdrawal facilities and from the Miami Canal/North New River Canal via 3 existing withdrawal facilities. The use is reasonable-beneficial, will not adversely impact presently existing legal uses and is consistent with the public interest. The use is further subject to 22 limiting conditions.

APPLICATION REVIEWER: Donna L. Moscone DATE: 11/22/99
Donna Moscone, P.G.

SUPERVISOR: Jeffrey Rosenfeld DATE: 11/22/99
Jeffrey Rosenfeld, P.G.

WATER USE DIVISION APPROVAL: Wm. Scott Burns DATE: 12/2/99
Wm. Scott Burns, P.G.

7 . APPLICATION FOR A PERMIT MODIFICATION MAY BE MADE AT ANY TIME.

8 . WITHDRAWAL FACILITIES ARE:

GROUNDWATER - EXISTING:

1 - 9" X 1300' X 600 GPM WELL CASED TO 870 FEET
3 - 10" X 80' X 250 GPM WELLS CASED TO 50 FEET

SURFACE WATER - EXISTING:

3 - " X HP X 450 GPM PUMPS

9 . THIS PERMIT SHALL EXPIRE ON DECEMBER 09, 2004.

10. ANNUAL ALLOCATION SHALL NOT EXCEED 879 MG.

MAXIMUM ANNUAL WITHDRAWAL FROM THE SURFICIAL AQUIFER SYSTEM SHALL NOT EXCEED 137 MG.

MAXIMUM DAILY ALLOCATION SHALL NOT EXCEED 3.00 MG.

MAXIMUM DAILY WITHDRAWAL FROM THE SURFICIAL AQUIFER SYSTEM SHALL NOT EXCEED .60 MG.

11. USE CLASSIFICATION IS INDUSTRIAL AND PUBLIC WATER SUPPLY.

12. THE PERMITTEE IS ADVISED THAT THIS PERMIT DOES NOT RELIEVE ANY PERSON FROM THE REQUIREMENT TO OBTAIN ALL NECESSARY FEDERAL, STATE, LOCAL AND SPECIAL DISTRICT AUTHORIZATIONS.

13. THE PERMIT DOES NOT CONVEY ANY PROPERTY RIGHT TO THE PERMITTEE, NOR ANY RIGHTS AND PRIVILEGES OTHER THAN THOSE SPECIFIED IN THE PERMIT AND CHAPTER 40E-2, F.A.C.

14. IF ADVERSE IMPACTS OCCUR TO NATURAL RESOURCES AS A RESULT OF THE PERMITTEE'S WATER WITHDRAWALS, THE PERMITTEE SHALL MITIGATE FOR SUCH IMPACTS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. EXAMPLES OF ADVERSE IMPACTS ARE:

A) REDUCTION IN GROUND WATER LEVELS THAT RESULTS IN SIGNIFICANT LATERAL MOVEMENT OF THE FRESH WATER/SALT WATER INTERFACE,
B) REDUCTION IN WATER LEVELS THAT ADVERSELY IMPACT THE HYDROPERIOD OF PROTECTED WETLAND ENVIRONMENTS,
C) SIGNIFICANT REDUCTION IN WATER LEVELS OR HYDROPERIOD IN A NATURALLY OCCURING WATER BODY SUCH AS A LAKE OR POND,
D) INDUCED MOVEMENT OR INDUCTION OF POLLUTANTS INTO THE WATER SUPPLY RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND
E) SIGNIFICANT HARM TO THE NATURAL SYSTEM INCLUDING DAMAGE TO HABITAT FOR

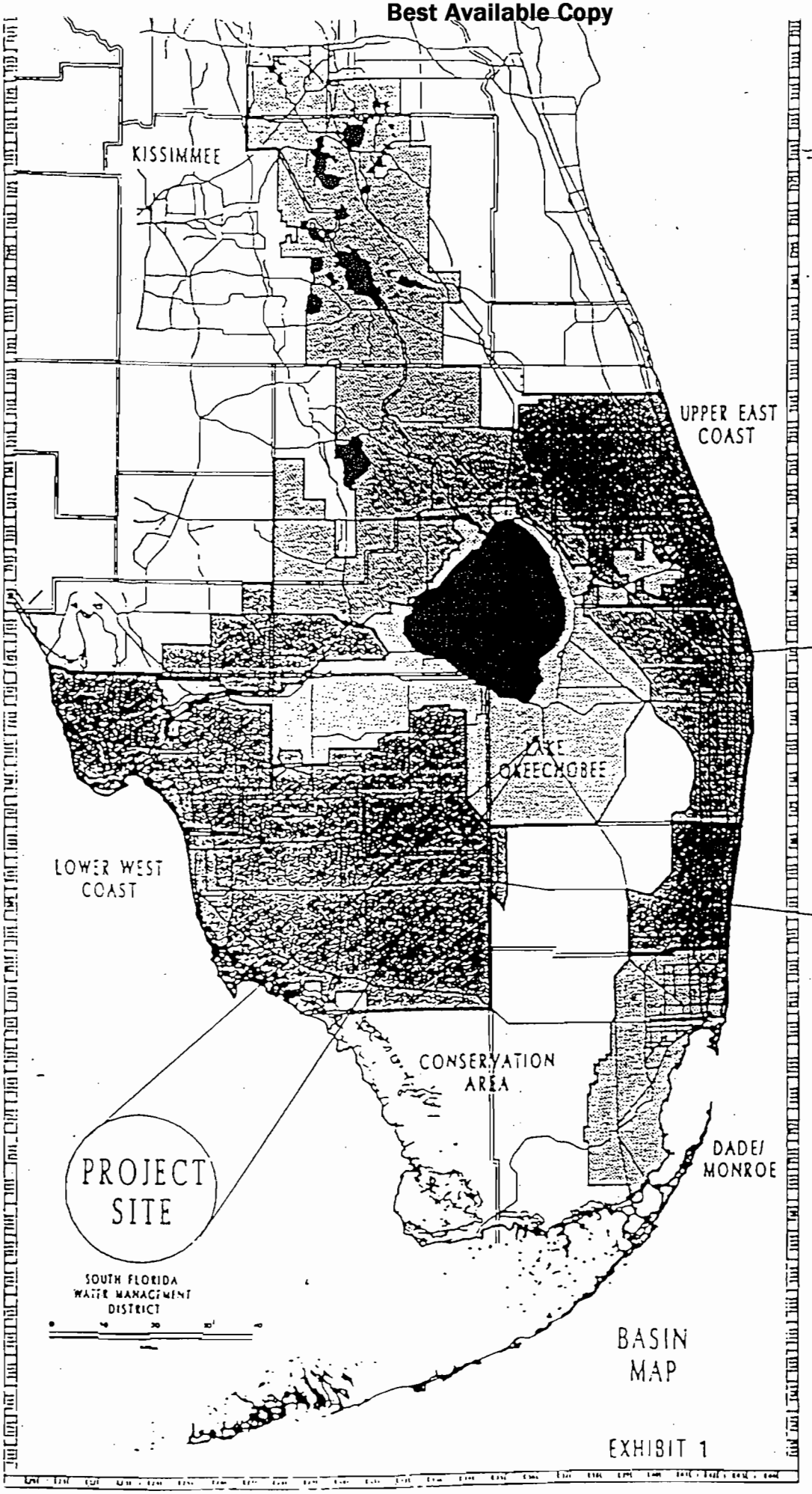
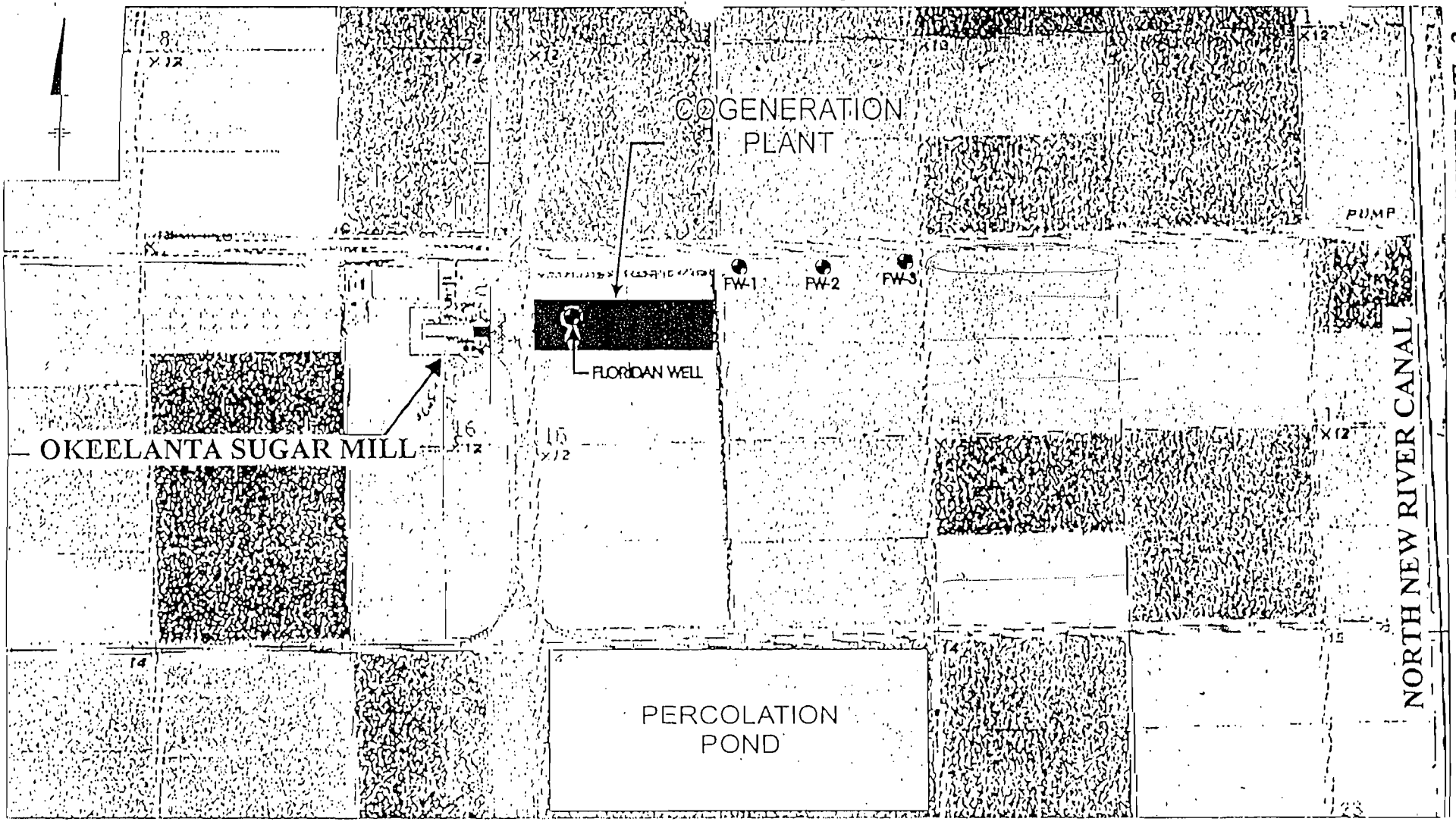
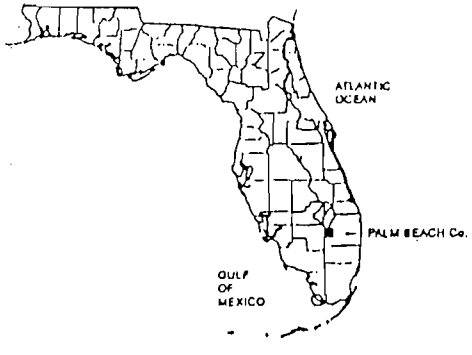


EXHIBIT 3





MAP SOURCE:
UNITED STATES GEOLOGIC SURVEY
TOPOGRAPHIC QUADRANGLE, 7.5 MIN.
SERIES, OKEELANTA, FLORIDA
photo-revised 1984.

0 1000 2000 3000 4000
APPROXIMATE SCALE IN FEET

1/28/99 BOC-54 MJS
01420001/01420005.cdr

OKEELANTA COGENERATION PLANT
SOUTH BAY, FLORIDA
WATER USE PERMIT

BBL BLASLAND, BOUCK & LEE, INC.
engineers & scientists

ITEM
VI-6

WASTEWATER REUSE FLOW

Waste Stream	Grinding Season (gpd)	Off-Season (gpd)
Boiler Blowdown	37,000	37,000
Polisher Effluent	20,000	70,000
Treated Effluent	2,000	2,000
Ash Conditioning Water	10,000	7,000
Total	69,000	116,000

Note:
gpd - Gallons per Day

EXHIBIT 5

Application No 990527-7

MODELING SUMMARY

MODEL NAME: MODFLOW

MODEL SCENARIO: APPLICANT - 90 DAYS NO RECHARGE

NO. OF ROWS: 60

NO. OF COLUMNS: 100

NO. OF LAYERS: 1

NODAL SPACING: 200

PUMPING DURATION: 90

	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DATA SOURCE
TRANSMISSIVITY (GPD/FT):	24400				USGS 1403-G
STORAGE FACTOR (/):	.2				
PERMEABILITY (GPD/SQ FT):					
EFFEC. POROSITY (/):					
THICKNESS (FT):					
LEAKANCE (GPD/CU FT):					
TOTAL PUMPAGE (MGD):	.860				

PRODUCTION ZONE: FLORIDAN AQUIFER SYSTEM

WELL NO.	ROW	COLUMN	PUMPING RATE	UNITS
1			.86	MGD

EXHIBIT

TABLE B
DESCRIPTION OF SURFACE WATER PUMPS

Application Number: 990527-7

PUMP NO	1	2	3
MAP DESIGNATOR	1	2	3
SURFACE WATER BODY	MIAMI CANAL/NORTH NEW RIVER CA	MIAMI CANAL/NORTH NEW RIVER CA	MIAMI CANAL/NORTH NEW RIVER CA
EXISTING/ PROPOSED	E	E	E
PUMP MANUF.			
PUMP TYPE			
CAPACITY (GPM)	450	450	450
HORSEPOWER			
DIAMETER (IN.)			
ELEV OF INTAKE (FT. NGVD)			
TWO WAY PUMP?	N	N	N
PLANAR SOURCE			
PLANAR COORDINATE			
ACCT METHOD			
USE STATUS			

EXHIBIT 9

South Florida Water Management District
Pumpage Report

This report must be completed and submitted to the South Florida Water Management District as required by your Permit.

PLEASE COMPLETE ITEMS 1 THRU 9

1. Permit Number:	50-03146-W
2. Issued to:	Okeelanta Power LP
Address:	P.O. Box 8
City, State, Zip:	South Bay, FL 33493
Phone Number:	
3. Recording Period:	AS REQUIRED BY YOUR PERMIT
4. Report Due:	AS REQUIRED BY YOUR PERMIT

5. Month _____ Year _____

1	Gallons	16	Gallons
2	Gallons	17	Gallons
3	Gallons	18	Gallons
4	Gallons	19	Gallons
5	Gallons	20	Gallons
6	Gallons	21	Gallons
7	Gallons	22	Gallons
8	Gallons	23	Gallons
9	Gallons	24	Gallons
10	Gallons	25	Gallons
11	Gallons	26	Gallons
12	Gallons	27	Gallons
13	Gallons	28	Gallons
14	Gallons	29	Gallons
15	Gallons	30	Gallons
		31	Gallons

TOTAL MONTHLY PUMPAGE _____ GALLONS

6. ACCOUNTING METHOD
_____FLOW METER _____TIME CLOCK_____FUEL_____OTHER _____

7. DATE OF LAST CALIBRATION_____

8. Name of Person Completing Form: (print or type)_____

9. Signature:_____Date:_____

RETURN TO: South Florida Water Management District
ATTENTION: Regulation Department/Water Use Division
PO Box 24680
West Palm Beach, FL 33416-4680

South Florida Water Management District

3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • FL WATS 1-800-432-2045
TDD (561) 697-2574

CON 24-06

July 10, 1998

PERMITTEE
FLORIDA CRYSTALS CORP/OKEELANTA COGEN.
P.O. BOX 9, 6 MILES SOUTH OF SOUTH BAY
SOUTH BAY, FL 33493

CONTRACTOR
CROCCO, LEONARD
5695 NORTH U.S. 1
VERO BEACH, FL 32967
LICENSE NO:7210

WATER WELL CONSTRUCTION PERMIT # SFO70298A
EXPIRATION DATE: January 10, 1999

PROJECT: OKEELANTA COGENERATION PLANT TEST WELL
TYPE OF USE: TEST
COUNTY: PALM BEACH SEC: 16 TWP: 45 RGE: 36

WELL CONSTRUCTION SPECIFICATIONS:	INNER	OUTER
CASING DIAMETER:	10"	18"
CASING DEPTH:	950.00'	250.00'
SCREENED INTERVAL:	-	
OPEN HOLE INTERVAL:	950' - 1400'	
TOTAL DEPTH OF WELL:	1400.00'	
GROUT REQUIREMENT:		

Outer casing shall be grouted bottom to top.

See additional conditions of permit on attached sheet.

We appreciate your assistance and cooperation in better managing the water resources of the District. If you have any questions on this matter, please call Ann-Marie Superchi at extension 6929.

Sincerely,

Jeffrey Rosenfeld, P.G., Supervising Professional
Water Use Division, Regulation Department

Attachment: Additional Conditions of Permit
c:

WELL COMPLETION REPORT *SOUTH FLORIDA WATER MANAGEMENT DISTRICT*

Owner Okeelanta Power Limited Partnership
P.O. Box 86
South Bay, FL 33494

Permit No SF062094A
DER
Completed 07/06/94
Well Use Industrial
Well ID FW-1
Casing Depth 50 Ft
Well Depth 82 Ft
Type of work Construct
Method Rotary Mud

DRILLING SERVICES, INC.
Driller Len Crocco
Contractor David E. Webb Licence No. DER 2145

Contractor's Signature

MATERIALS

	Diam.	Type	From (Ft)	To
Casing Outer				
Inner	10	PVC	0	50
Screen	10	PVC	50	80

GROUT

Annulus	From (Ft)	To	Bags	
2.5	0	40	39	Portland

Slot size .030

DRILL CUTTINGS LOG

Depth (Ft)	Type	Color	Grain Size
0.0	See Attached		

WATER
Static Water Level 6.9 ft. below top of casing. Water: Clear
Pumping Water Level 46 ft. after 2 hrs. at 250 gpm
Pump Size 7.5 h.p. Capacity 300 gpm Conductivity
Pump Type Sub Intake Depth 50 ft. Chlorides mg/l
Flowing gpm

WELL LOCATION
Okeelanta, south side of entrance roadway
to Okeelanta 1 mile west of garded gate
vision Lot Block
Palm Beach
1/4 of the 1/4 of Section 16 Twp. 45 Range 36
Lat. 80-44-38W Long. 26-34-6N

Cuttings sent to the District? No

WELL COMPLETION REPORT *SOUTH FLORIDA WATER MANAGEMENT DISTRICT*

Owner Okeelanta Power Limited Partnership
P.O. Box 86
South Bay, FL 33494

Permit No SF062094B
DER
Completed 07/11/94
Well Use Industrial
Well ID FW-2
Casing Depth 50 Ft
Well Depth 82 Ft
Type of work Construct
Method Rotary Mud

DRILLING SERVICES, INC.
Driller Len Crocco
Contractor David E. Webb Licence No. DER 2145

Contractor's Signature

==========

MATERIALS

	Diam.	Type	From (Ft)	To
Casing				
Outer				
Inner	10	PVC	0	50
Screen	10	PVC	50	80

GROUT

Annulus	From (Ft)	To	Bags	
2.5	0	40	41	Portland
Slot size .030				

DRILL CUTTINGS LOG

Depth (Ft)	Type	Color	Grain Size
0.0	See Attached		

WATER

Static Water Level 6.5 ft. below top of casing. Water: Clear
Pumping Water Level 40.2 ft. after 2 hrs. at 266 gpm
Pump Size 7.5 h.p. Capacity 300 gpm Conductivity
Pump Type Sub Intake Depth 50 ft. Chlorides mg/l
Flowing gpm

WELL LOCATION

Okeelanta, south side of entrance roadway
to Okeelanta 1 mile west of garded gate

Division Lot Block
Palm Beach
of the 1/4 of Section 16 Twp. 45 Range 36
Lat. 80-44-38W Long. 26-34-6N

Cuttings sent to the District? No

WELL COMPLETION REPORT *SOUTH FLORIDA WATER MANAGEMENT DISTRICT*

Owner Okeelanta Power Limited Partnership
P.O. Box 86
South Bay, FL 33494

Permit No SF062094C
DER
Completed 07/15/94
Well Use Industrial
Well ID FW-3
Casing Depth 50 Ft
Well Depth 82 Ft
Type of work Construct
Method Rotary Mud

DRILLING SERVICES, INC.
Driller Len Crocco
Contractor David E. Webb Licence No. DER 2145

Contractor's Signature

MATERIALS					GROUT					DRILL CUTTINGS LOG		
Casing	Diam.	Type	From (Ft)	To	Annulus	From (Ft)	To	Bags		Depth (Ft)	Type	Color	Grain Size
Outer										0.0	See Attached		
Inner	10	PVC	0	50	2.5	0	40	41	Portland				
Screen	10	PVC	50	80	Slot size .040								

WATER
Static Water Level 7.5 ft. below top of casing. Water: Clear
Pumping Water Level 33.3 ft. after 2 hrs. at 269 gpm
Pump Size 7.5 h.p. Capacity 300 gpm Conductivity
Pump Type Sub Intake Depth 50 ft. Chlorides mg/l
Flowing gpm

WELL LOCATION
Okeelanta, south side of entrance roadway
Okeelanta 1 mile west of garded gate
Division Lot Block
County Palm Beach
1/4 of the 1/4 of Section 16 Twp. 45 Range 36
Lat. 80-44-38W Long. 26-34-6N

Cuttings sent to the District? No

APPENDIX 10.4.4

OKEELANTA CORPORATION SFWMD CONSUMPTIVE USE PERMIT

South Florida Water Management District

CON 24

Permit No. 50-01035-W

August 20, 1999

OKEELANTA CORPORATION
(OKEELANTA CORP NON COMMUNITY WATER SYSTEM)
PO BOX 86
SOUTH BAY, FL 33493

Dear Permittee:

Enclosed is your Permit as authorized by the Governing Board of the South Florida Water Management District at its meeting on August 12, 1999.

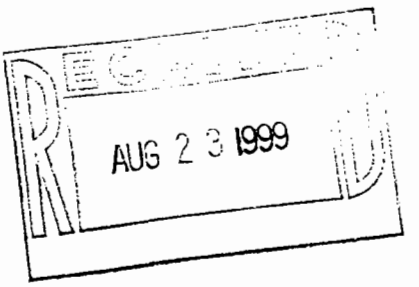
Special Conditions to your Permit require reports to be filed with this District. Please read these Conditions and use the enclosed form(s), as applicable, for your submittal of these required reports.

If you have any questions, please do not hesitate to contact this office.

Sincerely,

Vern Kaiser
Deputy Clerk
Regulation Department

Enclosures



Form #0299
Rev. 5/93

SOUTH FLORIDA WATER MANAGEMENT DISTRICT
WATER USE PERMIT NO. RE-ISSUE 50-01035-W

(NON - ASSIGNABLE)

Date Issued: AUGUST 12, 1999 Expiration Date: August 12, 2004

Authorizing: THE CONTINUATION OF AN EXISTING USE OF GROUNDWATER FROM THE SURFICIAL AQUIFER SYSTEM AND SURFACE WATER FROM THE MIAMI CANAL (C-6) AND THE NORTH NEW RIVER CANAL FOR INDUSTRIAL AND PUBLIC WATER SUPPLY USE WITH AN ANNUAL ALLOCATION OF 2,619 MILLION GALLONS.

Located In: Palm Beach County, S9,16/T45S/R36E

Issued To: OKEELANTA CORPORATION
(OKEELANTA CORP NON COMMUNITY WATER SYSTEM)
PO BOX 86
SOUTH BAY, FL 33493

This Permit is issued pursuant to Application No. 990210-9 , dated February 9, 1999, for the Use of Water as specified above and subject to the Special Conditions set forth below. Permittee agrees to hold and save the South Florida Water Management District and its successors harmless from any and all damages, claims or liabilities which may arise by reason of the construction, maintenance or use of activities authorized by this permit. Said application, including all plan and specifications attached thereto, is by reference made a part hereof.

written notice to the permittee, this permit may be temporarily modified, or restricted under a Declaration Water Shortage or a Declaration of Emergency due to Water Shortage in accordance with provisions of Ch. 373, Fla. Statutes, and applicable rules and regulations of the South Florida Water Management District.

This Permit may be permanently or temporarily revoked, in whole or in part, for the violation of the conditions of the permit or for the violation of any provision of the Water Resources Act and regulations thereunder.

This Permit does not convey to the permittee any property rights nor any privileges other than those specified herein, nor relieve the permittee from complying with any law, regulation, or requirement affecting the rights of other bodies or agencies.

Special Conditions are as follows:

SEE PAGES 2-4 OF 4 (21 LIMITING CONDITIONS).

Filed with the Clerk of the South Florida Water Management District

On 8-19-99

By _____
Deputy Clerk

South Florida Water Management District, by its Governing Board

By _____
Assistant Secretary

LIMITING CONDITIONS

1. IN THE EVENT OF A DECLARED WATER SHORTAGE, WATER WITHDRAWAL REDUCTIONS WILL BE ORDERED BY THE DISTRICT IN ACCORDANCE WITH THE WATER SHORTAGE PLAN, CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE. THE APPLICANT IS ADVISED THAT DURING A WATER SHORTAGE PUMPAGE REPORTS SHALL BE SUBMITTED AS REQUIRED BY CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE.

2. SOURCE CLASSIFICATION IS:

   GROUNDWATER FROM THE SURFICIAL AQUIFER SYSTEM
   SURFACE WATER FROM THE MIAMI CANAL (C-6)
   SURFACE WATER FROM THE NORTH NEW RIVER CANAL

3. PERMITTEE SHALL MITIGATE ANY ADVERSE IMPACT ON EXISTING LEGAL USES CAUSED BY WITHDRAWALS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, THE DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. ADVERSE IMPACTS ARE:

   A) REDUCTION IN WELL WATER LEVELS THAT IMPAIRS THE ABILITY OF AN ADJACENT WELL, INCLUDING A DOMESTIC WELL, LAWN IRRIGATION WELL, OR PUBLIC WATER SUPPLY WELL, TO PRODUCE WATER BY 10% OR GREATER,
   B) SIGNIFICANT REDUCTION IN LEVELS IN AN ADJACENT WATER BODY SUCH AS A LAKE, POND, OR A CANAL SYSTEM THAT IMPAIRS THE ABILITY TO PRODUCE WATER BY 10% OR GREATER,
   C) SALINE WATER INTRUSION OR INDUCED MOVEMENT OF POLLUTANTS INTO THE WATER SUPPLY OF AN ADJACENT WATER USE, RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND
   D) CHANGE IN WATER QUALITY CAUSED BY THE PERMITTEE THAT RESULTS IN SIGNIFICANT IMPAIRMENT OR LOSS OF USE OF A WELL OR WATER BODY.

4. PERMITTEE SHALL MITIGATE ANY ADVERSE IMPACT ON EXISTING OFF-SITE LAND USE AS A CONSEQUENCE OF WITHDRAWALS PERMITTED HEREIN. IF INCREASED WITHDRAWALS CAUSE AN ADVERSE IMPACT ON EXISTING LAND USE, THE DISTRICT RESERVES THE RIGHT TO CURTAIL FUTURE WITHDRAWAL RATES. ADVERSE IMPACTS ARE:

   A) SIGNIFICANT REDUCTION IN WATER LEVELS IN AN ADJACENT SURFACE WATER BODY, INCLUDING IMPOUNDMENTS, TO THE EXTENT THAT THE DESIGNED FUNCTION OF THE WATER BODY IS IMPAIRED,
   B) LAND COLLAPSE OR SUBSIDENCE CAUSED BY REDUCTION IN WATER LEVELS; AND
   C) DAMAGE TO CROPS AND OTHER TYPES OF VEGETATION.

5. AUTHORIZED REPRESENTATIVES OF THE DISTRICT SHALL BE PERMITTED TO ENTER, INSPECT, AND OBSERVE THE PERMITTED SYSTEM TO DETERMINE COMPLIANCE WITH SPECIAL CONDITIONS.

6. IF ANY CONDITION OF THE PERMIT IS VIOLATED, THE PERMIT SHALL BE SUBJECT TO REVIEW AND POSSIBLE MODIFICATION, ENFORCEMENT ACTION, OR REVOCATION.

7 . APPLICATION FOR A PERMIT MODIFICATION MAY BE MADE AT ANY TIME.

8 . WITHDRAWAL FACILITIES ARE:

GROUNDWATER - EXISTING:

1 - 12" X 60' X 230 GPM WELL CASED TO 30 FEET
1 - 14" X 60' X 210 GPM WELL CASED TO 20 FEET
3 - 14" X 60' X 210 GPM WELLS CASED TO 30 FEET

SURFACE WATER - EXISTING:

1 - 36" X 120 HP X 25000 GPM PUMP
1 - 48" X 128' CULVERT

9 . THIS PERMIT SHALL EXPIRE ON AUGUST 12, 2004.

10. ANNUAL ALLOCATION SHALL NOT EXCEED 2619 MG.

MAXIMUM DAILY ALLOCATION SHALL NOT EXCEED 15.28 MG.

MAXIMUM DAILY WITHDRAWAL FROM THE SURFICIAL AQUIFER SYSTEM SHALL NOT EXCEED .88 MG.

MAXIMUM DAILY WITHDRAWAL FROM THE MIAMI CANAL (C-6) SHALL NOT EXCEED 14.40 MG.

11. USE CLASSIFICATION IS INDUSTRIAL AND PUBLIC WATER SUPPLY.

12. THE PERMITTEE IS ADVISED THAT THIS PERMIT DOES NOT RELIEVE ANY PERSON FROM THE REQUIREMENT TO OBTAIN ALL NECESSARY FEDERAL, STATE, LOCAL AND SPECIAL DISTRICT AUTHORIZATIONS.

13. THE PERMIT DOES NOT CONVEY ANY PROPERTY RIGHT TO THE PERMITTEE, NOR ANY RIGHTS AND PRIVILEGES OTHER THAN THOSE SPECIFIED IN THE PERMIT AND CHAPTER 40E-2, F.A.C.

14. IF ADVERSE IMPACTS OCCUR TO NATURAL RESOURCES AS A RESULT OF THE PERMITTEE'S WATER WITHDRAWALS, THE PERMITTEE SHALL MITIGATE FOR SUCH IMPACTS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. EXAMPLES OF ADVERSE IMPACTS ARE:

A) REDUCTION IN GROUND WATER LEVELS THAT RESULTS IN SIGNIFICANT LATERAL MOVEMENT OF THE FRESH WATER/SALT WATER INTERFACE,
B) REDUCTION IN WATER LEVELS THAT ADVERSELY IMPACT THE HYDROPERIOD OF PROTECTED WETLAND ENVIRONMENTS,
C) SIGNIFICANT REDUCTION IN WATER LEVELS OR HYDROPERIOD IN A NATURALLY OCCURING WATER BODY SUCH AS A LAKE OR POND,

D) INDUCED MOVEMENT OR INDUCTION OF POLLUTANTS INTO THE WATER SUPPLY RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND
E) SIGNIFICANT HARM TO THE NATURAL SYSTEM INCLUDING DAMAGE TO HABITAT FOR RARE OR ENDANGERED SPECIES.

15. PRIOR TO FEBRUARY 12, 2000, PERMITTEE SHALL PROVIDE THE RESULTS OF THE CALIBRATION TESTING OF THE IDENTIFIED WATER ACCOUNTING METHOD(S) AND EQUIP ALL EXISTING AND PROPOSED WITHDRAWAL FACILITIES WITH APPROVED WATER USE ACCOUNTING METHOD(S) PURSUANT TO SECTION 4.1 OF THE WATER USE BASIS OF REVIEW.

16. PERMITTEE SHALL SUBMIT ALL DATA AS REQUIRED BY THE IMPLEMENTATION SCHEDULE FOR EACH OF THE LIMITING CONDITIONS TO: S.F.W.M.D., SUPERVISING PROFESSIONAL - P.P.C., WATER USE DIVISION (4040), P.O. BOX 24680, WEST PALM BEACH, FL 33416-4680.

17. THE PERMITTEE SHALL MAINTAIN RECORDS OF THE CALIBRATED DAILY WITHDRAWALS FROM EACH PUMP. THESE RECORDS SHALL BE AVAILABLE FOR REVIEW UPON REQUEST BY DISTRICT STAFF. MONTHLY WITHDRAWALS FOR EACH PUMP SHALL BE SUBMITTED TO THE DISTRICT QUARTERLY. MAXIMUM DAILY WITHDRAWALS FOR EACH MONTH FOR THE ENTIRE SYSTEM SHALL BE SUBMITTED TO THE DISTRICT QUARTERLY. THE WATER ACCOUNTING METHOD AND MEANS OF CALIBRATION SHALL BE STATED ON EACH REPORT.

18. THE WATER CONSERVATION PLAN REQUIRED BY CRITERIA 2.4.1 OF THE BASIS OF REVIEW FOR WATER USE PERMIT APPLICATIONS WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT - FEBRUARY 1997, MUST BE IMPLEMENTED IN ACCORDANCE WITH THE IMPLEMENTATION SCHEDULE CONTAINED THEREIN.

19. EVERY TWO YEARS FROM THE DATE OF PERMIT ISSUANCE, THE PERMITTEE SHALL SUBMIT RE-CALIBRATION DATA ON EACH WATER PUMPING ACCOUNTING FACILITY, FOR THOSE PERMITTEES WHOSE ACCOUNTING METHOD(S) REQUIRE RE-CALIBRATION.

20. IF AT ANY TIME THERE IS AN INDICATION THAT THE WELL CASING, VALVES, OR CONTROLS LEAK OR HAVE BECOME INOPERATIVE, REPAIRS OR REPLACEMENT SHALL BE MADE TO RESTORE THE SYSTEM TO AN OPERATING CONDITION. FAILURE TO MAKE SUCH REPAIRS SHALL BE CAUSE FOR FILLING AND ABANDONING THE WELL, IN ACCORDANCE WITH PROCEDURES OUTLINED IN CHAPTERS 40E-3 AND 40E-30, F.A.C.

21. PERMITTEE SHALL SECURE A WELL CONSTRUCTION PERMIT PRIOR TO CONSTRUCTION, REPAIR, OR ABANDONMENT OF ALL WELLS, AS DESCRIBED IN CHAPTERS 40E-3 AND 40E-30, F.A.C.

South Florida Water Management District
Pumpage Report

This report must be completed and submitted to the South Florida Water Management District as required by your Permit.

PLEASE COMPLETE ITEMS 1 THRU 9

1. Permit Number:	50-01035-W
2. Issued to:	Okeelanta Corp Non Community Water System
Address:	PO Box 86
City, State, Zip:	South Bay, FL 33493
Phone Number:	
3. Recording Period:	AS REQUIRED BY YOUR PERMIT
4. Report Due:	AS REQUIRED BY YOUR PERMIT

5. Month _____ Year _____

1	Gallons	16	Gallons
2	Gallons	17	Gallons
3	Gallons	18	Gallons
4	Gallons	19	Gallons
5	Gallons	20	Gallons
6	Gallons	21	Gallons
7	Gallons	22	Gallons
8	Gallons	23	Gallons
9	Gallons	24	Gallons
10	Gallons	25	Gallons
11	Gallons	26	Gallons
12	Gallons	27	Gallons
13	Gallons	28	Gallons
14	Gallons	29	Gallons
15	Gallons	30	Gallons
		31	Gallons

TOTAL MONTHLY PUMPAGE _____ GALLONS

6. ACCOUNTING METHOD
_____FLOW METER _____TIME CLOCK_____FUEL_____OTHER _____

7. DATE OF LAST CALIBRATION_____

8. Name of Person Completing Form: (print or type)_____

9. Signature:_____Date:_____

RETURN TO: South Florida Water Management District
ATTENTION: Regulation Department/Water Use Division
PO Box 24680
West Palm Beach, FL 33416-4680

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • FL WATS 1-800-432-2045 • TDD (561) 697-2574
Mailing Address: P.O. Box 24680, West Palm Beach, FL 33416-4680 • www.sfwmd.gov

CON 24-06

Application No.: 020425-11

May 24, 2002

OKEELANTA CORPORATION
PO BOX 86
21250 US HIGHWAY 27
SOUTH BAY, FL 33493

Dear Permittee:

SUBJECT: **Permit No.:** 50-01035-W (MODIFICATION)
Project: OKEELANTA CORP NON COMMUNITY WATER SYSTEM
Location: PALM BEACH COUNTY S9,16/T45S/R36E
Permittee: OKEELANTA CORPORATION

District staff has reviewed the information submitted in support of the referenced application for permit modification(s) and determined that the proposed activities are in compliance with the previous permit and the appropriate provisions of Rule 40E-2.331 (4)(a), Florida Administrative Code. The permit modification(s) include the following:

The applicant proposes to install a new well (PW-6) to replace production well PW-1, which will be plugged and abandoned in accordance with Chapters 40E-3 and 40E-30, Florida Administrative Code. See Exhibits 1 and 2.

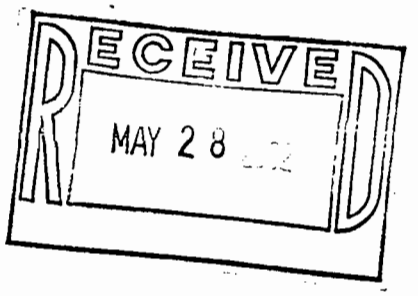
Please understand that your permit remains subject to the 21 Limiting Conditions and all other terms of the permit authorization as previously issued.

Sincerely,

Thomas Colios

Thomas Colios
Supervising Hydrogeologist
Water Use Regulation Division

TDC / dm



LE - A

Description Of Wells.

Application Number: 020425-11

Well ID	21854	21856	21858	21861	21863	118172
Name	1	2	3	4	5	6
Map Designator	1	2	3	4	5	6
FLUWID Number						
Well Field						
Existing/Proposed	E	E	E	E	E	P
Well Diameter(Inches)	14	14	14	14	12	16
Total Depth(feet)	60	60	60	60	60	40
Cased Depth(feet)	20	30	30	30	30	20
Facility Elev. (ft. NGVD)						
Screened Interval						
From	0	0	0	0	0	
To	0	0	0	0	0	
Pumped Or Flowing	P	P	P	P	P	P
Pump Type	submersible	submersible	submersible	submersible	submersible	submersible
Pump Int. Elev.						
Feet (NGVD)						
Feet (BLS)	-35	-35	-35	-35	-35	-35
Pump Capacity(GPM)	0	210	210	210	230	210
Year Drilled			1987	1987	1995	2002
Planar Location						
Source	REVIEWER	APPLICANT	APPLICANT	APPLICANT	APPLICANT	DIGITIZED
Feet East	738518	737656	736822	736211	735627	735082
Feet North	816953	816925	817008	817009	817008	817005
Accounting Method	unspecified	unspecified	unspecified	unspecified	unspecified	unspecified
Use Status	To be Plugged and Abandoned	Secondary	Primary	Primary	Primary	Secondary
Water Use Type	Industrial	Industrial	Industrial	Industrial	Industrial	Industrial
Aquifer	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System	Surficial Aquifer System

Exhibit No: 2

Best Available Copy

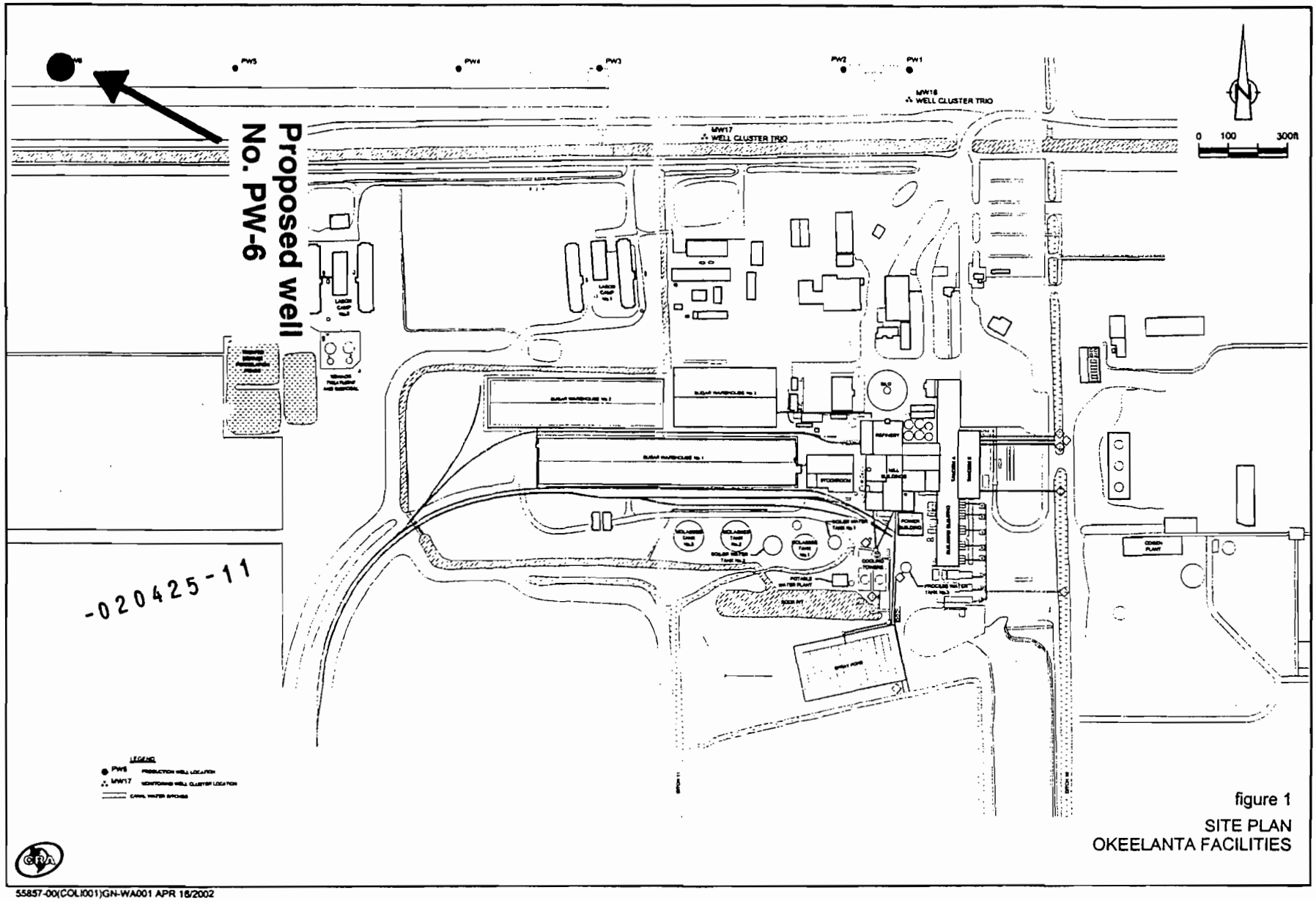


figure 1
SITE PLAN
OKEELANTA FACILITIES

55857-00(COLI001)GN-WA001 APR 18/2002

EXHIBIT 1

South Florida Water Management District

CON 24-06

August 3, 1999

RECEIVED
AUG 04 1999
OKEELANTA
ADMINISTRATION

Okeelanta Corporation
PO Box 86
South Bay, FL 33493

Subject: Application No. 990210-9, **Okeelanta Corp Non Community Water System**
Palm Beach County, S9,16/T45S/R36E

Enclosed is a copy of this District's staff report covering the permit application referenced therein. It is requested that you read this staff report thoroughly and understand its contents. The recommendations as stated in the staff report will be presented to our Governing Board for consideration on **August 12, 1999.**

Should you wish to object to the staff recommendation or file a petition, please provide written objections, petitions and/or waivers (refer to the attached "Notice of Rights") to:

Vern Kaiser, Deputy Clerk
South Florida Water Management District
Post Office Box 24680
West Palm Beach, Florida 33416-4680

The "Notice of Rights" addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. You are advised, however, to be prepared to defend your position regarding the permit application when it is considered by the Governing Board for final agency action, even if you agree with the staff recommendation, as the Governing Board may take final agency action which differs materially from the proposed agency action.

Please contact the District if you have any questions concerning this matter. If we do not hear from you prior to the date on the "Notice of Rights", we will assume you concur with our recommendations.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a "Notice of Rights" has been mailed to the addressee this day of August 3 1999, in accordance with Section 120.60 (3), Florida Statutes.

Sincerely,

Kenneth G. Ammon, P.E.
Deputy Director
Regulation Department

CERTIFIED # Z-082-064-287
RETURN RECEIPT REQUESTED

NOTICE OF RIGHTS

Section 120.569(1), Fla. Stat. (1997), requires that "each notice shall inform the recipient of any administrative hearing or judicial review that is available under this section, s. 120.57, or s. 120.68; shall indicate the procedure which must be followed to obtain the hearing or judicial review, and shall state the time limits which apply." Please note that this Notice of Rights is not intended to provide legal advice. Not all the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

Petition for Administrative Proceedings

1. A person whose substantial interests are affected by the South Florida Water Management District's (SFWMD) action has the right to request an administrative hearing on that action. The affected person may request either a formal or an informal hearing, as set forth below. A point of entry into administrative proceedings is governed by Rules 28-106.111 and 40E-1.511, Fla. Admin. Code, (also published as an exception to the Uniform Rules of Procedure as Rule 40E-0.109), as set forth below. Petitions are deemed filed upon receipt of the original documents by the SFWMD Clerk.

a. Formal Administrative Hearing: If a genuine issue(s) of material fact is in dispute, the affected person seeking a formal hearing on a SFWMD decision which does or may determine their substantial interests shall file a petition for hearing pursuant to Sections 120.569 and 120.57(1), Fla. Stat. or for mediation pursuant to Section 120.573, Fla. Stat. within 21 days, except as provided in subsections c. and d. below, of either written notice through mail or posting or publication of notice that the SFWMD has or intends to take final agency action. Petitions must substantially comply with the requirements of Rule 28-106.201(2), Fla. Admin. Code, a copy of the which is attached to this Notice of Rights.

b. Informal Administrative Hearing: If there are no issues of material fact in dispute, the affected person seeking an informal hearing on a SFWMD decision which does or may determine their substantial interests shall file a petition for hearing pursuant to Sections 120.569 and 120.57(2), Fla. Stat. or for mediation pursuant to Section 120.573, Fla. Stat. within 21 days, except as provided in subsections c. and d. below, of either written notice through mail or posting or publication of notice that the SFWMD has or intends to take final agency action. Petitions must substantially comply with the requirements of Rule 28-106.301(2), Fla. Admin. Code, a copy of the which is attached to this Notice of Rights.

c. Administrative Complaint and Order: If a Respondent objects to a SFWMD Administrative Complaint and Order, pursuant to Section 373.119, Fla. Stat. (1997), the person named in the Administrative Complaint and Order may file a petition for a hearing no later than 14 days after the date such order is served. Petitions must substantially comply with the requirements of either subsection a. or b. above.

d. State Lands Environmental Resource Permit: Pursuant to Section 373.427, Fla. Stat., and Rule 40E-1.511(3), Fla. Admin. Code (also published as an exception to the Uniform Rules of Procedure as Rule 40E-0.109(2)(c)), a petition objecting to the SFWMD's agency action regarding consolidated applications for Environmental Resource Permits and Use of Sovereign Submerged Lands (SLERPs), must be filed within 14 days of the notice of consolidated intent to grant or deny the SLERP. Petitions must substantially comply with the requirements of either subsection a. or b. above.

e. Emergency Authorization and Order: A person whose substantial interests are affected by a SFWMD Emergency Authorization and Order, has a right to file a petition under Sections 120.569, 120.57(1), and 120.57(2), Fla. Stat., as provided in subsections a. and b. above. However, the person, or the agent of the person responsible for causing or contributing to the emergency conditions shall take whatever action necessary to cause immediate compliance with the terms of the Emergency Authorization and Order.

f. Order for Emergency Action: A person whose substantial interests are affected by a SFWMD Order for Emergency Action has a right to file a petition pursuant to Rules 28-107.005 and 40E-1.611, Fla. Admin. Code, copies of which are attached to this Notice of Rights, and Section 373.119(3), Fla. Stat., for a hearing on the Order. Any subsequent agency action or proposed agency action to initiate a formal revocation proceeding shall be separately noticed pursuant to section g. below.

g. Permit Suspension, Revocation, Annulment, and Withdrawal: If the SFWMD issues an administrative complaint to suspend, revoke, annul, or withdraw a permit, the permittee may request a hearing to be conducted in accordance with Sections 120.569 and 120.57, Fla. Stat., within 21 days of either written notice through mail or posting or publication of notice that the SFWMD has or intends to take final agency action. Petitions must substantially comply with the requirements of Rule 28-107.004(3), Fla. Admin. Code, a copy of the which is attached to this Notice of Rights.

2. Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the SFWMD's final action may be different from the position taken by it previously. Persons whose substantial interests may be affected by

any such final decision of the SFWMD shall have, pursuant to Rule 40E-1.511(2), Fla. Admin. Code (also published as an exception to the Uniform Rules of Procedure as Rule 40E-0.109(2)(c)), an additional 21 days from the date of receipt of notice of said decision to request an administrative hearing. However, the scope of the administrative hearing shall be limited to the substantial deviation.

3. Pursuant to Rule 40E-1.511(4), Fla. Admin. Code, substantially affected persons entitled to a hearing pursuant to Section 120.57(1), Fla. Stat., may waive their right to such a hearing and request an informal hearing before the Governing Board pursuant to Section 120.57(2), Fla. Stat., which may be granted at the option of the Governing Board.

4. Pursuant to Rule 28-106.111(3), Fla. Admin. Code, persons may file with the SFWMD a request for extension of time for filing a petition. The SFWMD, for good cause shown, may grant the extension. The request for extension must contain a certificate that the petitioner has consulted with all other parties, if any, concerning the extension and that the SFWMD and all other parties agree to the extension.

CIRCUIT COURT

5. Pursuant to Section 373.617, Fla. Stat., any substantially affected person who claims that final agency action of the SFWMD relating to permit decisions constitutes an unconstitutional taking of property without just compensation may seek judicial review of the action in circuit court by filing a civil action in the circuit court in the judicial circuit in which the affected property is located within 90 days of the rendering of the SFWMD's final agency action.

6. Pursuant to Section 403.412, Fla. Stat., any citizen of Florida may bring an action for injunctive relief against the SFWMD to compel the SFWMD to enforce the laws of Chapter 373, Fla. Stat., and Title 40E, Fla. Admin. Code. The complaining party must file with the SFWMD Clerk a verified complaint setting forth the facts upon which the complaint is based and the manner in which the complaining party is affected. If the SFWMD does not take appropriate action on the complaint within 30 days of receipt, the complaining party may then file a civil suit for injunctive relief in the 15th Judicial Circuit in and for Palm Beach County or circuit court in the county where the cause of action allegedly occurred.

7. Pursuant to Section 373.433, Fla. Stat., a private citizen of Florida may file suit in circuit court to require the abatement of any stormwater management system, dam, impoundment, reservoir, appurtenant work or works that violate the provisions of Chapter 373, Fla. Stat.

DISTRICT COURT OF APPEAL

8. Pursuant to Section 120.68, Fla. Stat., a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal pursuant to Florida Rule of Appellate Procedure 9.110 in the Fourth District Court of Appeal or in the appellate district where a party resides and filing a second copy of the notice with the SFWMD Clerk within 30 days of rendering of the final SFWMD action.

LAND AND WATER ADJUDICATORY COMMISSION

9. A party to a "proceeding below" may seek review by the Land and Water Adjudicatory Commission (LAWAC) of SFWMD's final agency action to determine if such action is consistent with the provisions and purposes of Chapter 373, Fla. Stat. Pursuant to Section 373.114, Fla. Stat., and Rules 42-2.013 and 42-2.0132, Fla. Admin. Code, a request for review of (a) an order or rule of the SFWMD must be filed with LAWAC within 20 days after rendition of the order or adoption of the rule sought to be reviewed; (b) an order of the Department of Environmental Protection (DEP) requiring amendment or repeal of a SFWMD rule must be filed with LAWAC within 30 days of rendition of the DEP's order, and (c) a SFWMD order entered pursuant to a formal administrative hearing under Section 120.57(1), Fla. Stat., must be filed no later than 20 days after rendition of the SFWMD's final order. Simultaneous with filing, a copy of the request for review must be served on the DEP Secretary, any person named in the SFWMD or DEP final order, and all parties to the proceeding below. A copy of Rule 42-2.013, Fla. Admin. Code is attached to this Notice of Rights.

PRIVATE PROPERTY RIGHTS PROTECTION ACT

10. A property owner who alleges a specific action of the SFWMD has inordinately burdened an existing use of the real property, or a vested right to a specific use of the real property, may file a claim in the circuit court where the real property is located within 1 year of the SFWMD action pursuant to the procedures set forth in Subsection 70.001(4)(a), Fla. Stat.

LAND USE AND ENVIRONMENTAL DISPUTE RESOLUTION

11. A property owner who alleges that a SFWMD development order (as that term is defined in Section 70.51(2)(a), Fla. Stat. to include permits) or SFWMD enforcement action is unreasonable, or unfairly burdens the use of the real property, may file a request for relief with the SFWMD within 30 days of receipt of the SFWMD's order or notice of agency action pursuant to the procedures set forth in Subsections 70.51(4) and (6), Fla. Stat.

MEDIATION

12. A person whose substantial interests are, or may be, affected by the SFWMD's action may choose mediation as an alternative remedy under Section 120.573, Fla. Stat. Pursuant to Rule 28-106.111(2), Fla. Admin. Code, the petition for mediation shall be filed within 21 days of either written notice through mail or posting or

publication of notice that the SFWMD has or intends to take final agency action. Choosing mediation will not adversely affect the right to an administrative hearing if mediation does not result in settlement.

Pursuant to Rule 28-106.402, Fla. Admin. Code, the contents of the petition for mediation shall contain the following information:

(1) the name, address, and telephone number of the person requesting mediation and that person's representative, if any;

(2) a statement of the preliminary agency action;

(3) an explanation of how the person's substantial interests will be affected by the agency determination; and

(4) a statement of relief sought.

As provided in Section 120.573, Fla. Stat. (1997), the timely agreement of all the parties to mediate will toll the time limitations imposed by Sections 120.569 and 120.57, Fla. Stat., for requesting and holding an administrative hearing. Unless otherwise agreed by the parties, the mediation must be concluded within 60 days of the execution of the agreement. If mediation results in settlement of the dispute, the SFWMD must enter a final order incorporating the agreement of the parties. Persons whose substantial interest will be affected by such a modified agency decision have a right to petition for hearing within 21 days of receipt of the final order in accordance with the requirements of Sections 120.569 and 120.57, Fla. Stat., and SFWMD Rule 28-106.201(2), Fla. Admin. Code. If mediation terminates without settlement of the dispute, the SFWMD shall notify all parties in writing that the administrative hearing process under Sections 120.569 and 120.57, Fla. Stat., remain available for disposition of the dispute, and the notice will specify the deadlines that then will apply for challenging the agency action.

VARIANCES AND WAIVERS

13. A person who is subject to regulation pursuant to a SFWMD rule and believes the application of that rule will create a substantial hardship or will violate principles of fairness (as those terms are defined in Subsection 120.542(2), Fla. Stat.) and can demonstrate that the purpose of the underlying statute will be or has been achieved by other means, may file a petition with the SFWMD Clerk requesting a variance from or waiver of the SFWMD rule. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have concerning the SFWMD's action. Pursuant to Rule 28-104.002(2), Fla. Admin. Code, the petition must include the following information:

(a) the caption shall read:
Petition for (Variance from) or (Waiver of) Rule (Citation)

(b) The name, address, telephone number and any facsimile number of the petitioner;

(c) The name, address telephone number and any facsimile number of the attorney or qualified representative of the petitioner, (if any);

(d) the applicable rule or portion of the rule;

(e) the citation to the statue the rule is implementing;

(f) the type of action requested;

(g) the specific facts that demonstrate a substantial hardship or violation of principals of faimess that would justify a waiver or variance for the petitioner;

(h) the reason why the variance or the waiver requested would serve the purposes of the underlying statute; and

(i) a statement of whether the variance or waiver is permanent or temporary, If the variance or waiver is temporary, the petition shall include the dates indicating the duration of the requested variance or waiver.

A person requesting an emergency variance from or waiver of a SFWMD rule must clearly so state in the caption of the petition. In addition to the requirements of Section 120.542(5), Fla. Stat. pursuant to Rule 28-104.004(2), Fla. Admin. Code, the petition must also include:

a) the specific facts that make the situation an emergency; and

b) the specific facts to show that the petitioner will suffer immediate adverse effect unless the variance or waiver is issued by the SFWMD more expeditiously than the applicable timeframes set forth in Section 120.542, Fla. Stat.

WAIVER OF RIGHTS

14. Failure to observe the relevant time frames prescribed above will constitute a waiver of such right.

28-106.201 INITIATION OF PROCEEDINGS
(INVOLVING DISPUTED ISSUES OF MATERIAL FACT)

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding, and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate;

(e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and

(f) A demand for relief.

28-106.301 INITIATION OF PROCEEDINGS
(NOT INVOLVING DISPUTED ISSUES OF MATERIAL FACT)

(2) All petitions filed under these rules shall contain:

(a) The name and address of each agency affected and each agency's file or identification number, if known;

(b) The name, address, and telephone number of the petitioner; the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding, and an explanation of how the petitioner's substantial interests will be affected by the agency determination;

(c) A statement of when and how the petitioner received notice of the agency decision;

(d) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and

(e) A demand for relief.

28-107.004 SUSPENSION, REVOCATION, ANNULMENT, OR WITHDRAWAL

(3) Requests for hearing filed in accordance with this rule shall include:

(a) The name and address of the party making the request, for purposes of service;

(b) A statement that the party is requesting a hearing involving disputed issues of material fact, or a hearing not involving disputed issues of material fact; and

(c) A reference to the notice, order to show cause, administrative complaint, or other communication that the party has received from the agency.

42-2.013 REQUEST FOR REVIEW PURSUANT TO SECTION 373.114 OR 373.217

(1) In any proceeding arising under Chapter 373, F.S., review by the Florida Land and Water Adjudicatory Commission may be initiated by the Department or a party by filing a request for such review with the Secretary of the Commission and serving a copy on any person named in the rule or order, and on all parties to the proceeding which resulted in the order sought to be reviewed. A certificate of service showing completion of service as required by this subsection shall be a requirement for a determination of sufficiency under Rule 42-2.0132. Failure to file the request with the Commission within the time period provided in Rule 42-2.0132 shall result in dismissal of the request for review.

(2) The request for review shall identify the rule or order requested to be reviewed, the proceeding in which the rule or order was entered and the nature of the rule or order. A copy of the rule or order sought to be reviewed shall be attached. The request for review shall state with particularity:

(a) How the order or rule conflicts with the requirements, provisions and purposes of Chapter 373, F.S., or rules duly adopted thereunder;

(b) How the rule or order sought to be reviewed affects the interests of the party seeking review;

(c) The oral or written statement, sworn or unsworn, which was submitted to the agency concerning the matter to be reviewed and the date and location of the statement, if the individual or entity requesting the review has not participated in a proceeding previously instituted pursuant to Chapter 120, F.S., on the order for which review is sought;

(d) If review of an order is being sought, whether and how the activity authorized by the order would substantially affect natural resources of statewide or regional significance, or whether the order raises issues of policy, statutory interpretation, or rule interpretation that have regional or statewide significance from a standpoint of agency precedent, and all the factual bases in the record which the petitioner claims support such determination(s); and

(e) The action requested to be taken by the Commission as a result of the review, whether to rescind or modify the order, or remand the proceeding to the water management district for further action, or to require the water management district to initiate rulemaking to adopt, amend or repeal a rule.

28-107.005 EMERGENCY ACTION

(1) If the agency finds that immediate serious danger to the public health, safety, or welfare requires emergency action, the agency shall summarily suspend, limit, or restrict a license.

(2) the 14-day notice requirement of Section 120.569(2)(b), F. S., does not apply and shall not be construed to prevent a hearing at the earliest time practicable upon request of an aggrieved party.

(3) Unless otherwise provided by law, within 20 days after emergency action taken pursuant to paragraph (1) of this rule, the agency shall initiate a formal suspension or revocation proceeding in compliance with Sections 120.569, 120.57. and 120.60, F.S.

40E-1.611 EMERGENCY ACTION

(1) An emergency exists when immediate action is necessary to protect public health, safety or welfare; the health of animals, fish or aquatic life; the works of the District; a public water supply, or recreational, commercial, industrial, agricultural or other reasonable uses of land and water resources.

(2) The Executive Director may employ the resources of the District to take whatever remedial action necessary to alleviate the emergency condition without the issuance of an emergency order, or in the event an emergency order has been issued, after the expiration of the requisite time for compliance with that order.

LAST DATE FOR GOVERNING BOARD ACTION:
August 12, 1999

DRAFT
Subject to Governing Board Approval

WATER USE STAFF REVIEW SUMMARY

APPLICATION NUMBER: 990210-9

PERMIT NUMBER: 50-01035-W

PROJECT NAME: OKEELANTA CORP NON COMMUNITY WATER SYSTEM

WATER USE STATUS: RENEWAL

SURFACE WATER MANAGEMENT STATUS: PERMITTED (NO. 50-00656-S).

RIGHT OF WAY STATUS: NOT APPLICABLE.

LOCATION: PALM BEACH COUNTY,S9,16/T45S/R36E

APPLICANT'S NAME AND ADDRESS: OKEELANTA CORPORATION
PO BOX 86
SOUTH BAY, FL 33493

OWNER'S NAME AND ADDRESS: OKEELANTA CORPORATION
PO BOX 86
SOUTH BAY, FL 33493

PURPOSE:

The purpose of this application is to renew Water Use Permit No. 50-01035-W. In addition, the permit is modified to include both the North New River Canal and the Miami Canal as sources of surface water.

STAFF RECOMMENDATIONS

DATE OF ISSUANCE: August 12, 1999
PERMIT DURATION: 5.00 YEARS
EXPIRATION DATE: August 12, 2004

USE CLASS(ES): INDUSTRIAL
PUBLIC WATER SUPPLY

GROUNDWATER FROM THE SURFICIAL AQUIFER SYSTEM

SURFACE WATER FROM THE MIAMI CANAL (C-6)

SURFACE WATER FROM THE NORTH NEW RIVER CANAL

RECOMMENDED ALLOCATION:

ANNUAL ALLOCATION: 2619 MILLION GALLONS (MG)

MAXIMUM DAILY ALLOCATION: 15.28 MILLION GALLONS (MG)

SPECIFIC SOURCE LIMITATIONS - GROUNDWATER:

	MGD	MGM	MGY
SURFICIAL AQUIFER SYSTEM	.88		

SPECIFIC SOURCE LIMITATIONS - SURFACE WATER:

	MGD	MGM	MGY
	14.40		

EXISTING WITHDRAWAL FACILITIES - GROUNDWATER:

GW SOURCE: SURFICIAL AQUIFER SYSTEM

1 - 12" X 60' X 230 GPM WELL CASED TO 30 FEET
1 - 14" X 60' X 210 GPM WELL CASED TO 20 FEET
3 - 14" X 60' X 210 GPM WELLS CASED TO 30 FEET

EXISTING WITHDRAWAL FACILITIES - SURFACE WATER:

SW SOURCE: NORTH NEW RIVER CANAL

1 - 36" X 120 HP X 25000 GPM PUMP

EXISTING WITHDRAWAL FACILITIES - CULVERTS:

CULVERT SOURCE: MIAMI CANAL (C-6)

1 - 48" X 128' CULVERT

TOTAL RATED CAPACITY:

		GPM	MGD	MGM	MGY
SURFICIAL AQUIFER SYSTEM	E	1070	1.54	46.2	562
NORTH NEW RIVER CANAL	E	25000	36.00	1080.0	13140
TOTALS		26070	37.54	1126.2	13702

PROJECT DESCRIPTION FOR INDUSTRIAL:

INDUSTRIAL AND PUBLIC WATER SUPPLY USE

The Surficial Aquifer water is used as feed water to the reverse osmosis water treatment system and the resulting treated water is used in the refinery, as boiler make-up water, general service water, and potable drinking water (see Exhibit 7). On a maximum day basis, approximately 85% of the maximum day allocation of 0.88 MGD is used for industrial purposes.

Surface water is withdrawn from both the Miami Canal (culvert) to the west and the North New River Canal (pump) to the east and enters the facility through a single intake on the north side of the facility. The water is used for brine dilution for the RO plant, general service water, and scrubber after for pollution control (see Exhibit 7). No change is requested in surface water withdrawal quantities of 14.4 MGD.

PREVIOUS PUBLIC WATER SUPPLY PERMIT

Water Use Permit No. 50-01035-W superseded Water Use Permit No. 50-02096-W and currently includes the non-community public water supply use of 70 MG on an annual basis and 0.4 MG on a maximum daily basis.

CONSERVATION PLAN

Pursuant to Section 2.4.1 of Appendix 1, "Basis of Review of Water Use Permit Applications", a Water Conservation Plan has been developed for the Okeelanta Mill and Refinery operations.

A Reverse Osmosis Water Treatment Plant (RO WTP) was constructed which provides boiler feed make-up water in the summer months and refinery process water, potable water, and general services water throughout the year. The RO WTP reduced the water demands previously supplied by the South Bay Water Treatment Plant.

Several water conservation studies have been conducted since the original permit was issued. These studies have identified leaks, provided flow meters on distribution lines and along with the start-up of the Okeelanta Power LP Cogeneration Plant (COGEN), have reduced more than 100,000 gpd of finished water use. The permittee will continue to audit and update the system on a periodic basis.

Okeelanta will continue its existing employee awareness program to educate its employees and further emphasize the importance of the recovery and recycling of water throughout the mill and refinery processes.

WATER USE ACCOUNTING

Pursuant to Limiting Condition No. 17, the permittee shall maintain records of daily withdrawals from each pump. Monthly withdrawals from each pump and the maximum daily withdrawals for each month for both ground water and surface water shall be submitted to the District quarterly. Pursuant to Limiting Condition No. 19, the permittee shall submit recalibration data on each pump every two years from the date of permit issuance.

IMPACT EVALUATION SUMMARY

RESOURCE SAFE YIELD:

Withdrawals from the Surficial aquifer were simulated using the Theis Non-Equilibrium Model. The simulations are representative of withdrawals occurring over a 90 day time period at the recommended maximum monthly allocation with no recharge (Exhibits 9 through 11). The existing maximum daily allocation of 15.28 MG is supplied from both groundwater and surface water. The impact analysis focuses only on the allocation from the Surficial aquifer (maximum daily allocation 0.88 MG).

Land surface elevation is approximately 12 feet NGVD. The base of the Surficial aquifer is estimated to be 213 feet below land surface, or -201 feet NGVD, at the project site (USGS Water Resources Investigations Report 86-4067). The dry season water level at the site is estimated to be +9 feet NGVD. The total available drawdown is approximately 210 feet. The amount of drawdown in the aquifer is estimated to be approximately 6 feet in the vicinity of Okeelanta Wells No. 3 and 4, which is less than the total available drawdown (Exhibit 10).

Surface water from both the Miami Canal (C-6) and the North New River Canal (L-20) supplies industrial process water for the Okeelanta Corporation sugar mill and refinery. No increase in withdrawals is requested and the allocation is recommended to be continued at the present rate. The Okeelanta Power Limited Partnership Cogeneration Plant (COGEN), Permit No. 50-03146-W, will continue to replace existing surface water withdrawals. COGEN estimates that their facility will eventually reduce existing industrial process water needs at the mill and refinery by approximately 40%.

The sustained yield of the aquifer and the surface water basin are not expected to be exceeded as a result of the continued withdrawal of the recommended allocation.

EXISTING LEGAL USERS:

With the exception of projects controlled by the Okeelanta Corporation, there are no existing legal users of the Surficial aquifer in the project area.

The withdrawal facility of the nearest existing legal user of surface water (the Bolles Canal - L-21), South Bay Growers (Permit No. 50-00312-W), is located approximately 3 miles to the northeast of the project. L-21 is maintained at a control elevation of between +11 and +13 feet NGVD. The invert elevation of the South Bay Growers culvert is located at +7 feet NGVD, or 5 feet below the average maintained water level of the Bolles Canal.

The potential for adverse impacts to occur to existing legal users as a result of the withdrawal of the recommended allocation is considered minimal.

LEGAL DOMESTIC USERS:

There are no residential homes in the project area, which consists

predominantly of farmland. Modeling shows that the 0.1 foot cone of influence caused by the use of the project's wells is located within the Okeelanta property (Exhibit 6C).

The potential for adverse impacts to occur to existing legal domestic users as a result of the withdrawal of the recommended allocation is considered minimal.

SALINE WATER INTRUSION:

The project is located approximately 44 miles from the nearest source of surface saline water. Data collected from Well No. 4, which has a total depth of 60 feet BLS and a cased depth of 30 feet BLS, shows a chloride concentration of approximately 533 mg/L, indicating that the groundwater source is saline. Section 3.4.1 of the Basis of Review states that the use of saline water may cause saline intrusion, but not to the extent of adversely affecting other existing legal uses of water, the applicant, or the public health, safety, and general welfare. The recommended allocation is the same as in the previous permit and reflects historical withdrawals.

The groundwater withdrawn is treated for boiler, process, and potable use by a reverse osmosis (RO) system. Concentrate from the RO system is diluted to or below background TDS levels with water from an on-site rock pit before discharge to an on-site 75 acre percolation pond. The RO system and discharge method have been permitted by the Florida Department of Environmental Protection (DEP Permit No. IC50-233096).

Staff considers that the potential for saline water intrusion to occur as a result withdrawal of the recommended allocation is minimal.

PROTECTED WETLANDS ENVIRONMENT:

The project area is comprised mainly of farmland. There are no wetlands located in the project area. The 0.1 foot cone of influence caused by withdrawals from the project wells does not extend outside the Okeelanta property boundaries (Exhibit 6C).

The potential for adverse impacts to occur to protected wetland environments as a result of the withdrawal of the recommended allocation is considered minimal.

SOURCES OF POLLUTION:

A plume of groundwater contaminated with volatile organic compounds (VOC) was formerly located approximately 1230 feet southeast of Well No. 3. Water Use Permit No. 50-01963-W was issued to the Okeelanta Corporation for aquifer remediation. This area has undergone remediation, and is now under a "Monitoring Only" status. The potential for the induced movement of contaminants from known sources of pollution to occur as a result of the withdrawal of the recommended allocation is considered minimal.

RECOMMENDATIONS

DRAFT
Subject to Governing
Board Approval

APPLICATION NUMBER: 990210-9

PERMIT NUMBER: 50-01035-W

DATE OF ISSUANCE: August 12, 1999

RECOMMENDATION SUMMARY:

Staff recommends renewal of Water Use Permit No. 50-01035-W for industrial water supply and for public water supply. Withdrawals are from the Surficial Aquifer System via 5 existing withdrawal facilities, from the Miami Canal (C-6) via 1 existing withdrawal facility and from the North New River Canal via 1 existing withdrawal facility. The use is reasonable-beneficial, will not adversely impact presently existing legal uses and is consistent with the public interest. The use is further subject to 21 limiting conditions.

APPLICATION REVIEWER: Donna Moscone DATE: 7/30/99
Donna Moscone, P.G.

SUPERVISOR: Jeffrey Rosenfeld DATE: 7/30/99
Jeffrey Rosenfeld, P.G.

WATER USE DIVISION APPROVAL: Wm. Scott Burns DATE: 7/29/99
Wm. Scott Burns, P.G.

LIMITING CONDITIONS

1. IN THE EVENT OF A DECLARED WATER SHORTAGE, WATER WITHDRAWAL REDUCTIONS WILL BE ORDERED BY THE DISTRICT IN ACCORDANCE WITH THE WATER SHORTAGE PLAN, CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE. THE APPLICANT IS ADVISED THAT DURING A WATER SHORTAGE PUMPAGE REPORTS SHALL BE SUBMITTED AS REQUIRED BY CHAPTER 40E-21, FLORIDA ADMINISTRATIVE CODE.

2. SOURCE CLASSIFICATION IS:

   GROUNDWATER FROM THE SURFICIAL AQUIFER SYSTEM
   SURFACE WATER FROM THE MIAMI CANAL (C-6)
   SURFACE WATER FROM THE NORTH NEW RIVER CANAL

3. PERMITTEE SHALL MITIGATE ANY ADVERSE IMPACT ON EXISTING LEGAL USES CAUSED BY WITHDRAWALS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, THE DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. ADVERSE IMPACTS ARE:

   A) REDUCTION IN WELL WATER LEVELS THAT IMPAIRS THE ABILITY OF AN ADJACENT WELL, INCLUDING A DOMESTIC WELL, LAWN IRRIGATION WELL, OR PUBLIC WATER SUPPLY WELL, TO PRODUCE WATER BY 10% OR GREATER,
   B) SIGNIFICANT REDUCTION IN LEVELS IN AN ADJACENT WATER BODY SUCH AS A LAKE, POND, OR A CANAL SYSTEM THAT IMPAIRS THE ABILITY TO PRODUCE WATER BY 10% OR GREATER,
   C) SALINE WATER INTRUSION OR INDUCED MOVEMENT OF POLLUTANTS INTO THE WATER SUPPLY OF AN ADJACENT WATER USE, RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND
   D) CHANGE IN WATER QUALITY CAUSED BY THE PERMITTEE THAT RESULTS IN SIGNIFICANT IMPAIRMENT OR LOSS OF USE OF A WELL OR WATER BODY.

4. PERMITTEE SHALL MITIGATE ANY ADVERSE IMPACT ON EXISTING OFF-SITE LAND USE AS A CONSEQUENCE OF WITHDRAWALS PERMITTED HEREIN. IF INCREASED WITHDRAWALS CAUSE AN ADVERSE IMPACT ON EXISTING LAND USE, THE DISTRICT RESERVES THE RIGHT TO CURTAIL FUTURE WITHDRAWAL RATES. ADVERSE IMPACTS ARE:

   A) SIGNIFICANT REDUCTION IN WATER LEVELS IN AN ADJACENT SURFACE WATER BODY, INCLUDING IMPOUNDMENTS, TO THE EXTENT THAT THE DESIGNED FUNCTION OF THE WATER BODY IS IMPAIRED,
   B) LAND COLLAPSE OR SUBSIDENCE CAUSED BY REDUCTION IN WATER LEVELS; AND
   C) DAMAGE TO CROPS AND OTHER TYPES OF VEGETATION.

5. AUTHORIZED REPRESENTATIVES OF THE DISTRICT SHALL BE PERMITTED TO ENTER, INSPECT, AND OBSERVE THE PERMITTED SYSTEM TO DETERMINE COMPLIANCE WITH SPECIAL CONDITIONS.

6. IF ANY CONDITION OF THE PERMIT IS VIOLATED, THE PERMIT SHALL BE SUBJECT TO REVIEW AND POSSIBLE MODIFICATION, ENFORCEMENT ACTION, OR REVOCATION.

7 . APPLICATION FOR A PERMIT MODIFICATION MAY BE MADE AT ANY TIME.

8 . WITHDRAWAL FACILITIES ARE:

GROUNDWATER - EXISTING:

1 - 12" X 60' X 230 GPM WELL CASED TO 30 FEET
1 - 14" X 60' X 210 GPM WELL CASED TO 20 FEET
3 - 14" X 60' X 210 GPM WELLS CASED TO 30 FEET

SURFACE WATER - EXISTING:

1 - 36" X 120 HP X 25000 GPM PUMP
1 - 48" X 128' CULVERT

9 . THIS PERMIT SHALL EXPIRE ON AUGUST 12, 2004.

10. ANNUAL ALLOCATION SHALL NOT EXCEED 2619 MG.

MAXIMUM DAILY ALLOCATION SHALL NOT EXCEED 15.28 MG.

MAXIMUM DAILY WITHDRAWAL FROM THE SURFICIAL AQUIFER SYSTEM SHALL NOT EXCEED .88 MG.

MAXIMUM DAILY WITHDRAWAL FROM SURFACE WATER SHALL NOT EXCEED 14.40 MG.

11. USE CLASSIFICATION IS INDUSTRIAL AND PUBLIC WATER SUPPLY.

12. THE PERMITTEE IS ADVISED THAT THIS PERMIT DOES NOT RELIEVE ANY PERSON FROM THE REQUIREMENT TO OBTAIN ALL NECESSARY FEDERAL, STATE, LOCAL AND SPECIAL DISTRICT AUTHORIZATIONS.

13. THE PERMIT DOES NOT CONVEY ANY PROPERTY RIGHT TO THE PERMITTEE, NOR ANY RIGHTS AND PRIVILEGES OTHER THAN THOSE SPECIFIED IN THE PERMIT AND CHAPTER 40E-2, F.A.C.

14. IF ADVERSE IMPACTS OCCUR TO NATURAL RESOURCES AS A RESULT OF THE PERMITTEE'S WATER WITHDRAWALS, THE PERMITTEE SHALL MITIGATE FOR SUCH IMPACTS. WHEN ADVERSE IMPACTS OCCUR, OR ARE IMMINENT, DISTRICT RESERVES THE RIGHT TO CURTAIL WITHDRAWAL RATES. EXAMPLES OF ADVERSE IMPACTS ARE:

A) REDUCTION IN GROUND WATER LEVELS THAT RESULTS IN SIGNIFICANT LATERAL MOVEMENT OF THE FRESH WATER/SALT WATER INTERFACE,
B) REDUCTION IN WATER LEVELS THAT ADVERSELY IMPACT THE HYDROPERIOD OF PROTECTED WETLAND ENVIRONMENTS,
C) SIGNIFICANT REDUCTION IN WATER LEVELS OR HYDROPERIOD IN A NATURALLY OCCURING WATER BODY SUCH AS A LAKE OR POND,
D) INDUCED MOVEMENT OR INDUCTION OF POLLUTANTS INTO THE WATER SUPPLY

RESULTING IN A SIGNIFICANT REDUCTION IN WATER QUALITY, AND
E) SIGNIFICANT HARM TO THE NATURAL SYSTEM INCLUDING DAMAGE TO HABITAT FOR RARE OR ENDANGERED SPECIES.

15. PRIOR TO FEBRUARY 12, 2000, PERMITTEE SHALL PROVIDE THE RESULTS OF THE CALIBRATION TESTING OF THE IDENTIFIED WATER ACCOUNTING METHOD(S) AND EQUIP ALL EXISTING AND PROPOSED WITHDRAWAL FACILITIES WITH APPROVED WATER USE ACCOUNTING METHOD(S) PURSUANT TO SECTION 4.1 OF THE WATER USE BASIS OF REVIEW.

16. PERMITTEE SHALL SUBMIT ALL DATA AS REQUIRED BY THE IMPLEMENTATION SCHEDULE FOR EACH OF THE LIMITING CONDITIONS TO: S.F.W.M.D., SUPERVISING PROFESSIONAL - P.P.C., WATER USE DIVISION (4040), P.O. BOX 24680, WEST PALM BEACH, FL 33416-4680.

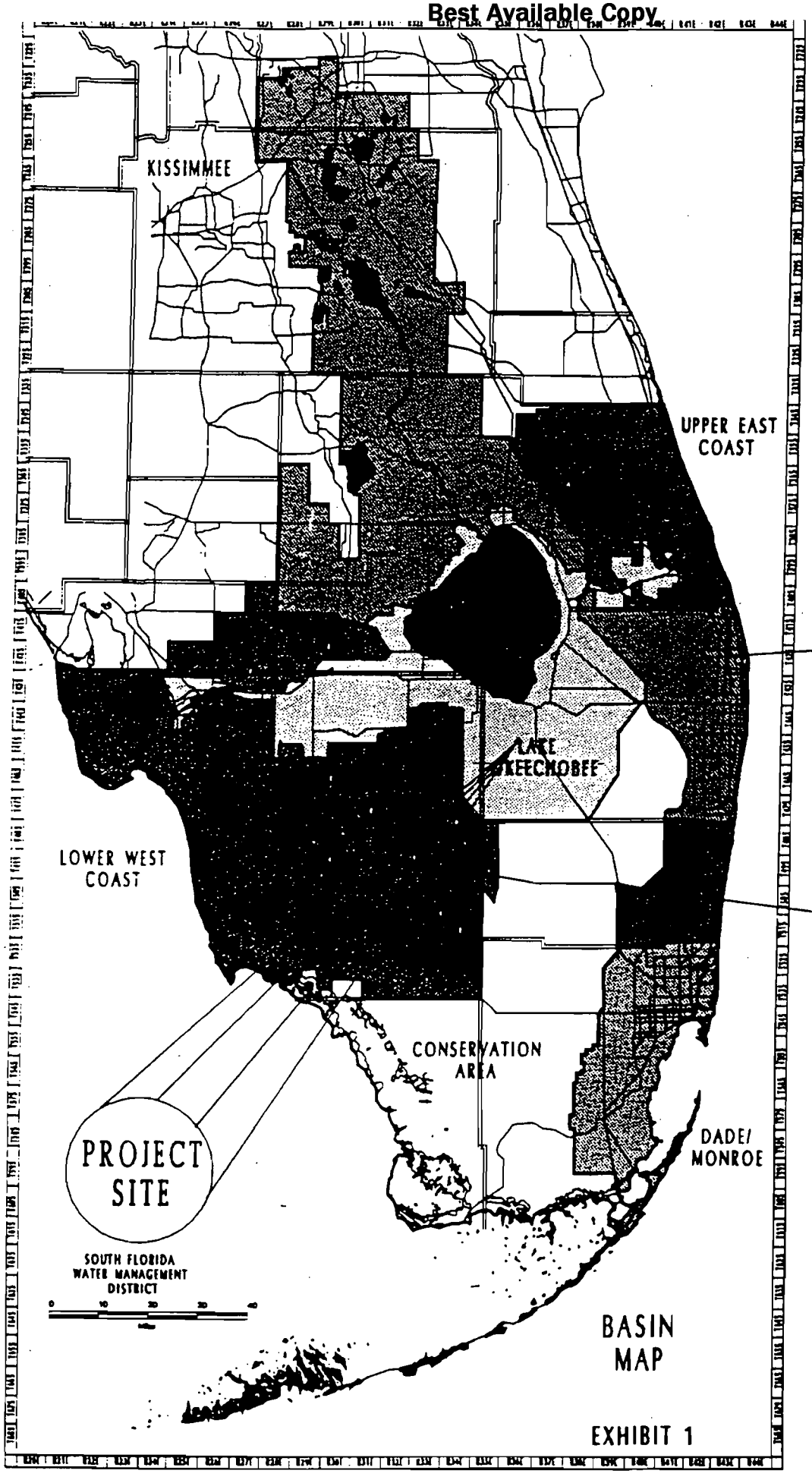
17. THE PERMITTEE SHALL MAINTAIN RECORDS OF THE CALIBRATED DAILY WITHDRAWALS FROM EACH PUMP. THESE RECORDS SHALL BE AVAILABLE FOR REVIEW UPON REQUEST BY DISTRICT STAFF. MONTHLY WITHDRAWALS FOR EACH PUMP SHALL BE SUBMITTED TO THE DISTRICT QUARTERLY. MAXIMUM DAILY WITHDRAWALS FOR EACH MONTH FOR THE ENTIRE SYSTEM SHALL BE SUBMITTED TO THE DISTRICT QUARTERLY. THE WATER ACCOUNTING METHOD AND MEANS OF CALIBRATION SHALL BE STATED ON EACH REPORT.

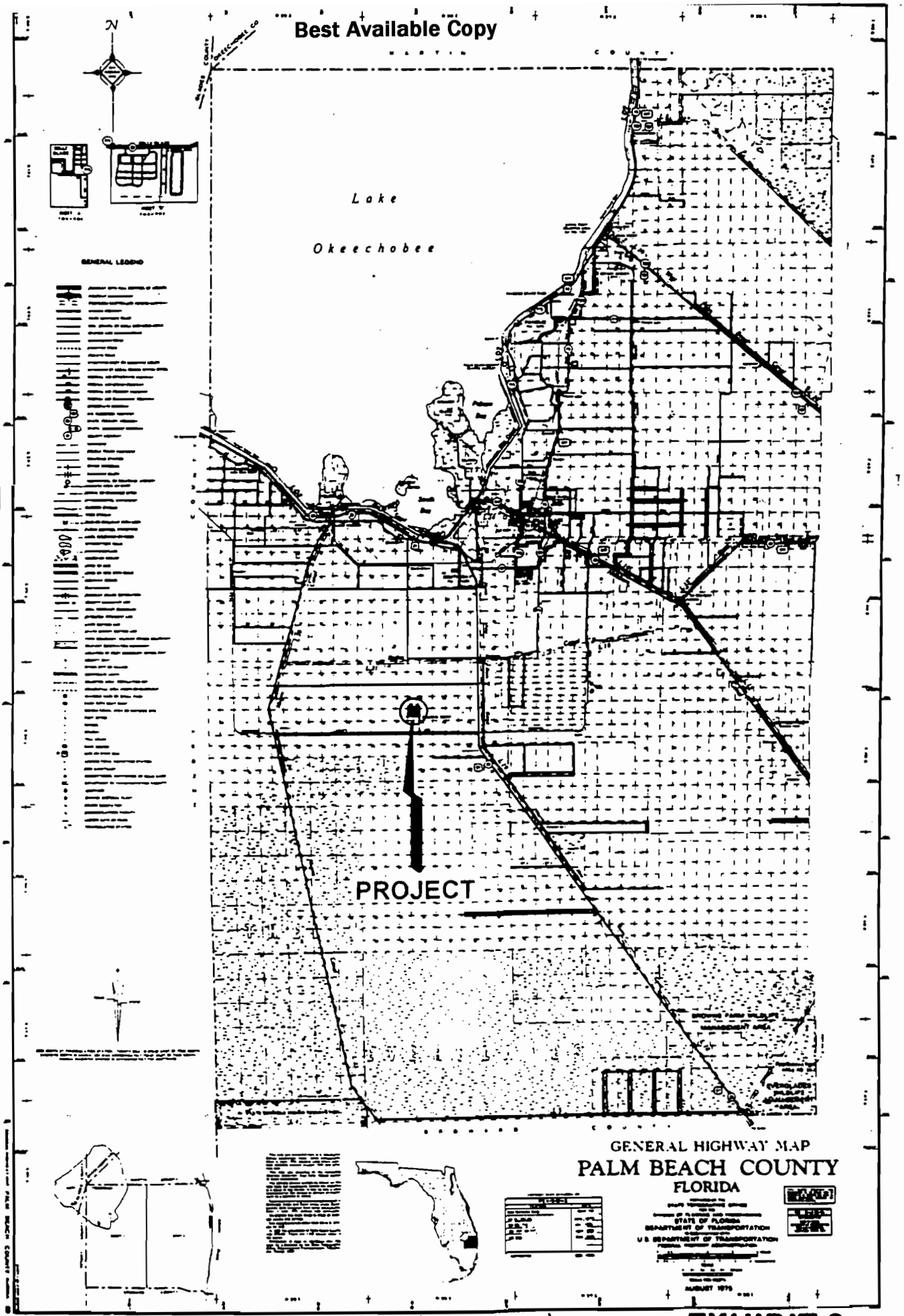
18. THE WATER CONSERVATION PLAN REQUIRED BY CRITERIA 2.4.1 OF THE BASIS OF REVIEW FOR WATER USE PERMIT APPLICATIONS WITHIN THE SOUTH FLORIDA WATER MANAGEMENT DISTRICT - FEBRUARY 1997, MUST BE IMPLEMENTED IN ACCORDANCE WITH THE IMPLEMENTATION SCHEDULE CONTAINED THEREIN.

19. EVERY TWO YEARS FROM THE DATE OF PERMIT ISSUANCE, THE PERMITTEE SHALL SUBMIT RE-CALIBRATION DATA ON EACH WATER PUMPING ACCOUNTING FACILITY, FOR THOSE PERMITTEES WHOSE ACCOUNTING METHOD(S) REQUIRE RE-CALIBRATION.

20. IF AT ANY TIME THERE IS AN INDICATION THAT THE WELL CASING, VALVES, OR CONTROLS LEAK OR HAVE BECOME INOPERATIVE, REPAIRS OR REPLACEMENT SHALL BE MADE TO RESTORE THE SYSTEM TO AN OPERATING CONDITION. FAILURE TO MAKE SUCH REPAIRS SHALL BE CAUSE FOR FILLING AND ABANDONING THE WELL, IN ACCORDANCE WITH PROCEDURES OUTLINED IN CHAPTERS 40E-3 AND 40E-30, F.A.C.

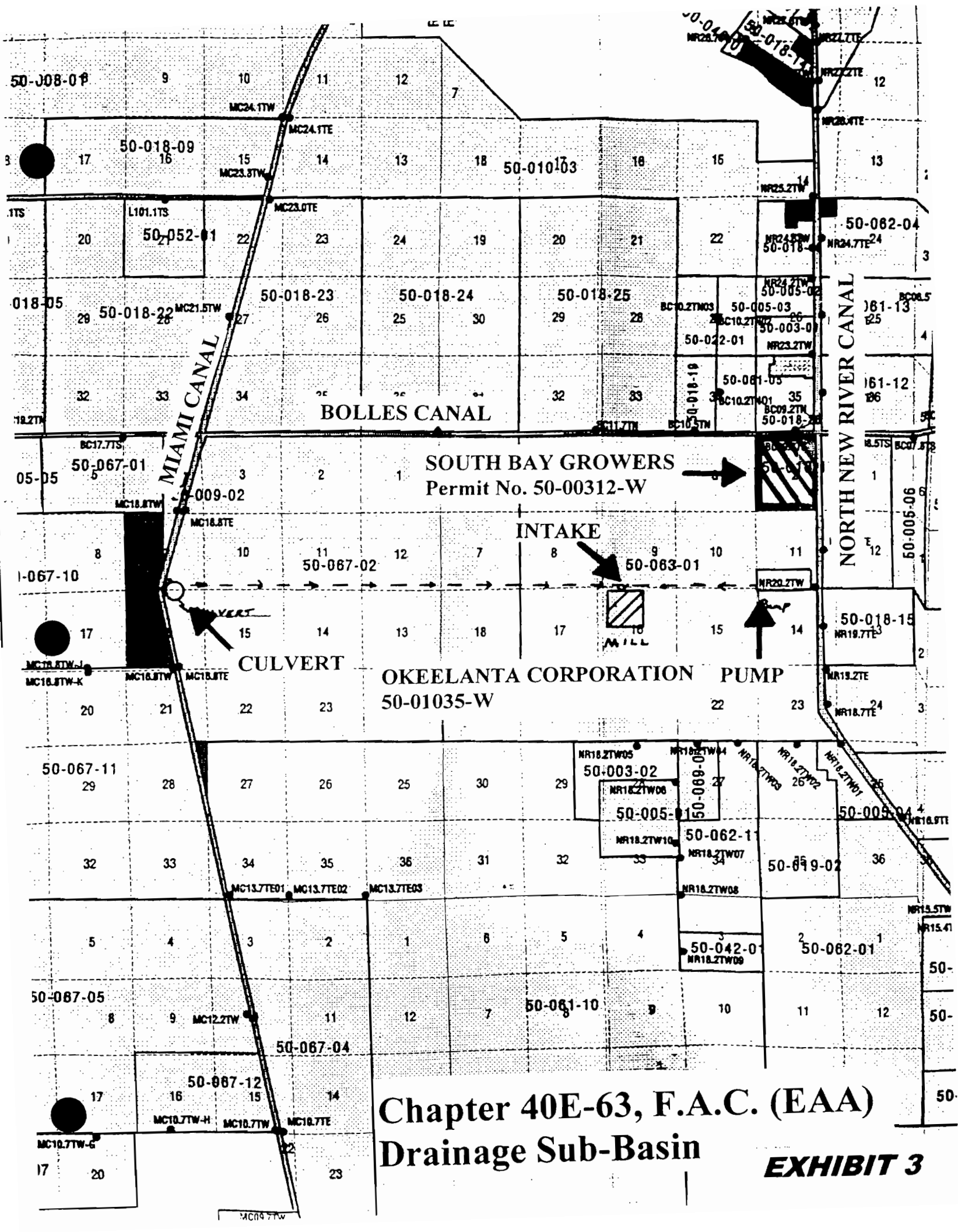
21. PERMITTEE SHALL SECURE A WELL CONSTRUCTION PERMIT PRIOR TO CONSTRUCTION, REPAIR, OR ABANDONMENT OF ALL WELLS, AS DESCRIBED IN CHAPTERS 40E-3 AND 40E-30, F.A.C.





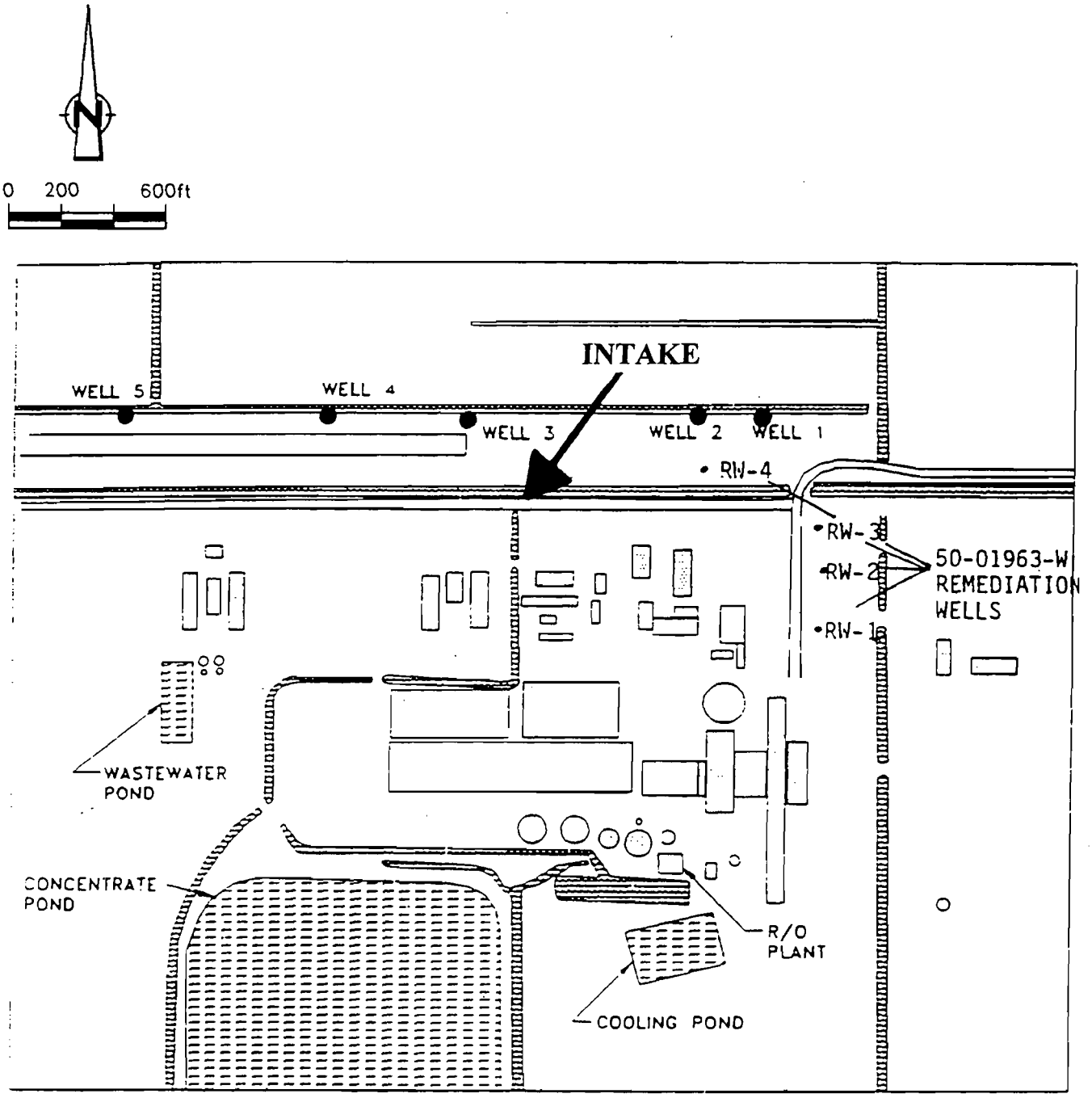
GENERAL HIGHWAY MAP
PALM BEACH COUNTY
FLORIDA

EXHIBIT 2



Chapter 40E-63, F.A.C. (EAA)
Drainage Sub-Basin

EXHIBIT 3



EXPLANATION

CANAL

BUILDING

POND

EXISTING WELL

PLAN SOURCE: MURRAY CONSULTANTS, INC.

SITE MAP
OKEELANTA CORPORATION
Okeelanta, Florida

CRA

10873-10(001)GN-AT FEB 05/99

EXHIBIT 4

TABLE A
DESCRIPTION OF WELLS

APPLICATION NUMBER: 990210-9

WELL NUMBER	1	2	3	4	5
MAP DESIGNATOR	1	2	3	4	5
EXISTING/PROPOSED	E	E	E	E	E
DIAMETER (INCHES)	14	14	14	14	12
TOTAL DEPTH (FT)	60	60	60	60	60
CASED DEPTH (FT)	20	30	30	30	30
SCREENED INTERVAL	10	30	30	30	30
PUMPED/FLOWING	P	P	P	P	P
WORKING VALVE	N	N	N	N	N
PUMP MANUF					
PUMP TYPE	SUBMERSIBLE	SUBMERSIBLE	SUBMERSIBLE	SUBMERSIBLE	SUBMERSIBLE
INTAKE DEPTH (FT. NGVD)	-35	-35	-35	-35	-35
PUMP CAPACITY (GPM)	210	210	210	210	230
YEAR DRILLED			1987	1987	1995
PLANAR					
SOURCE		APPLICANT	APPLICANT	APPLICANT	APPLICANT
COORDINATES	737754E 817047N	581357E 816896N	580752E 816879N	580289E 816870N	579621E 816876N
ACCOUNTING METHOD					
USE STATUS	STANDBY	SECONDARY	PRIMARY	PRIMARY	PRIMARY
WELL CONST PERMIT NO					

EXHIBIT 5A

TABLE B
DESCRIPTION OF SURFACE WATER PUMPS

Application Number: 990210-9

PUMP NO	1
MAP DESIGNATOR	1
SURFACE WATER BODY	NORTH NEW RIVER CANAL
EXISTING/ PROPOSED	E
PUMP MANUF.	
PUMP TYPE	
CAPACITY (GPM)	25000
HORSEPOWER	120
DIAMETER (IN.)	36
ELEV OF INTAKE (FT. NGVD)	
TWO WAY PUMP?	N
PLANAR SOURCE	
PLANAR COORDINATE	
ACCT METHOD	
USE STATUS	PRIMARY

EXHIBIT 5B

TABLE C
DESCRIPTION OF IRRIGATION CULVERTS

CULVERT NO	1
MAP DESIGNATOR	CULVERT
SURFACE WATER BODY	MIAMI CANAL (C-6)
EXISTING/ PROPOSED	E
DIAMETER**	48
HEIGHT***	
WIDTH***	
CULVERT TYPE****	
LENGTH	128
INVERT ELEV* (NGVD)	
CONTROL DEVICE	SCREW GATE

EXHIBIT 5C

* NGVD IS APPROXIMATELY EQUAL TO MEAN SEA LEVEL
** FOR CIRCULAR CULVERTS
*** FOR ELLIPTICAL CULVERTS
*** CORRUGATED METAL, REINFORCED CONCRETE, ETC.

EXHIBIT _____

Application No 990210-9

MODELING SUMMARY

MODEL NAME: THEIS

MODEL SCENARIO: EXISTING DRAWDOWN

NO. OF ROWS: 20

NO. OF COLUMNS: 25

NO. OF LAYERS: 1

NODAL SPACING: 1000

PUMPING DURATION: 90 DAYS

	LAYER 1	LAYER 2	LAYER 3	LAYER 4	DATA SOURCE
TRANSMISSIVITY (GPD/FT):	11000				ON-SITE APT
STORAGE FACTOR (/):	.2				CHARACTERISTIC WTA SPECIFIC YIELD
PERMEABILITY (GPD/SQ FT):					
EFFEC. POROSITY (/):					
THICKNESS (FT):	210				USGS WRI 86-4067
LEAKANCE (GPD/CU FT):					
TOTAL PUMPAGE (MGD):	.880				RECOMMENDED ALLOCATION

EXHIBIT 6A

Application No 990210-9

PRODUCTION ZONE: SURFICIAL AQUIFER SYSTEM

WELL NO.	ROW	COLUMN	PUMPING RATE	UNITS
OKEE WELL 3	12.5	12.6	.22	MGD
OKEE WELL 4	12.5	12.2	.22	MGD
OKEE WELL 2	12.5	13.6	.22	MGD
OKEE WELL 5	12.5	11.4	.22	MGD

EXHIBIT 6B

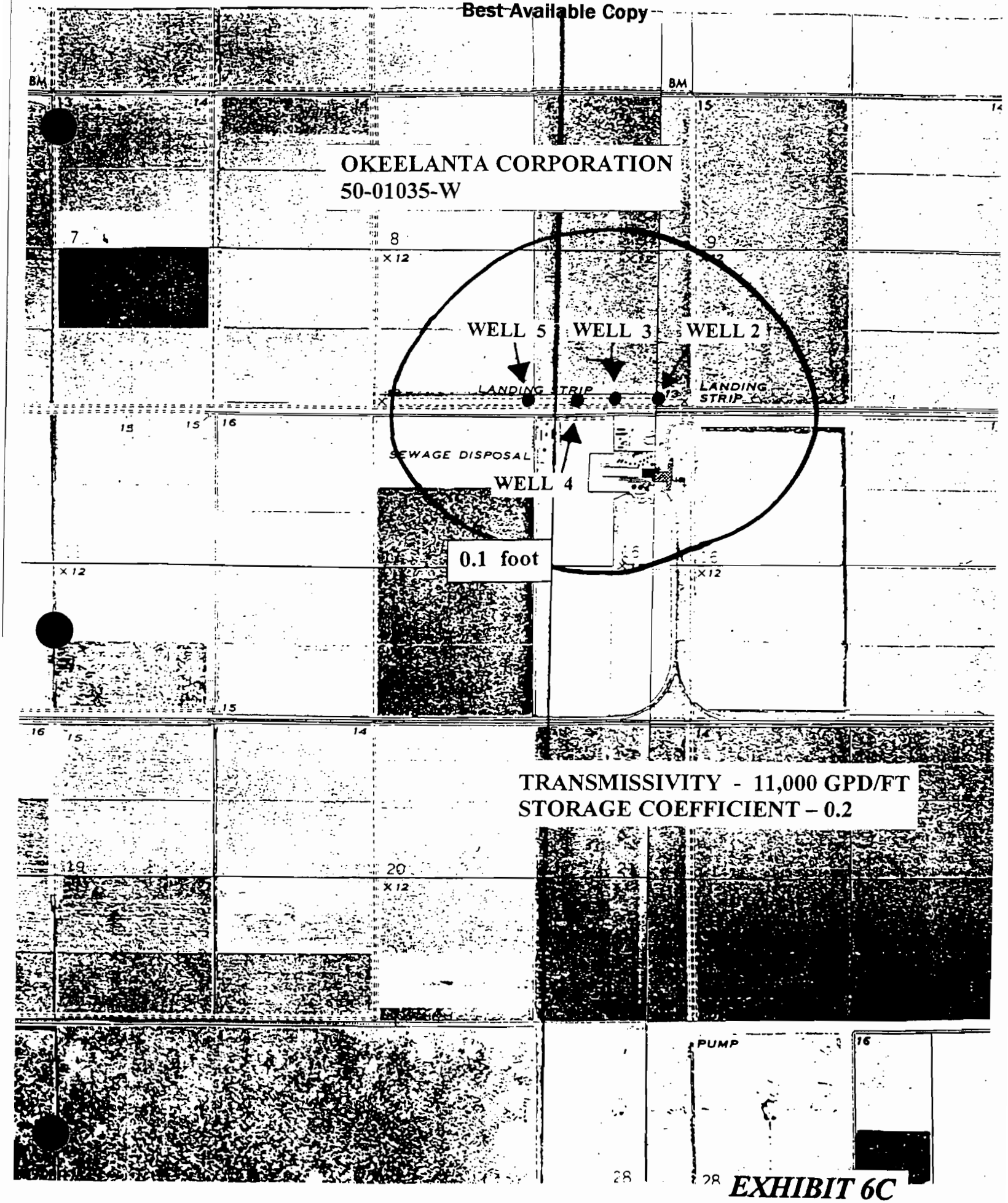


EXHIBIT 6C

PROJECTED WATER USE FOR THE MILL AND REFINERY

Surficial Aquifer	Sugar Refinery	310,000	
	Boiler Make-up	200,000	
	General Service (toilets, washdown, etc.)	80,000	
	Public Water Supply (pop. 250-1000)	10,000	
Subtotal			600,000
Canal Surface Water	To Cogeneration Facility	400,000	
	Brine Dilution for RO	2,600,000	
	General Service (mill floor wash, rinse water)	8,500,000	
Total			14,600,000

EXHIBIT 7

ITEM VI-3
WATER WITHDRAW FOR 12 MONTH PERIOD *
FROM JANUARY 1, 1998 TO DECEMBER 31, 1998

Month	Raw Water Withdraw (gallons/day)	
	Avg. Day	Max. Day
January	567,261	649,500
February	457,374	615,400
March	626,568	755,200
April	632,158	773,500
May	704,665	755,800
June	716,226	778,200
July	599,816	816,400
August	734,981	864,900
September	717,806	824,500
October	640,435	796,500
November	635,348	803,800
December	421,594	593,600
Total	7,454,232	
Average	621,186	

* from the Surficial Aquifer

EXHIBIT 8

STAFF REPORT DISTRIBUTION LIST

PROJECT: OKEELANTA CORP NON COMMUNITY WATER SYSTE APPLICATION NO. 990210-9
APPLICANT: OKEELANTA CORPORATION PERMIT NO. 50-01035-W

INTERNAL DISTRIBUTION
Reviewer:
X Donna Moscone, P.G.

X J. Giddings - LEC
X F. Lund - LEC
X B. Mills, LEC
X R Mireau
B. Pratt - FTM
X P. Walker - GPA
A. Waterhouse - REG
L. Werst - FTM
X Director, Big Cypress Basin
X WU Compliance
Well Construction Permitting
X Office of Counsel
X Permit File

GOVERNING BOARD MEMBERS
Mr. Mitchell W. Berger
Ms. Vera Carter
Mr. Michael Collins
Mr. Gerardo B. Fernandez
Dr. Patrick J. Gleason
Mr. Nicolas Gutierrez
Mr. Michael Minton
Mr. Harkley R. Thornton
Ms. Trudi K. Williams

DEPT. OF ENVIRONMENTAL PROTECTION
X West Palm Beach

EXTERNAL DISTRIBUTION
X Applicant's Consultant:
CONESTOGA ROVERS AND ASSOCIATES

X Engineer, County of:
Palm Beach

Engineer, City of:

Local Drainage District:

Building Dept., County of:

Building Dept., City of:

COUNTY
X Palm Beach-Environmental Res Mgmt
-Health Dept
-Land Development Div
-School Board Growth Mgt
-Zoning Division

BUILDING AND ZONING

OTHER
X David Sinclair
X FDEP
X Florida Fish & Wildlife Conservation Com
Mr. Ed Dailey, President
Patrick Martin, District Engineer

EXHIBIT 9

CRA

1486-A Skees Road
West Palm Beach, Florida 33411
(561) 688-9008 Office (561) 688-9005 Fax

May 21, 1999

Reference No. 10873

Ms. Donna Moscone
South Florida Water Management District
3301 Gun Club Road
West Palm Beach, Florida
33406

Dear Ms. Moscone:

Re: Submittal of Supplemental Information related to Water Use Permit 50-01035-W Renewal

As a follow-up to our recent discussion, we are providing the additional information you requested related to the subject Permit Application. There were four items we discussed and our responses to each are provided below.

Item 1. Clarifications to Item (or Table) VI-3

A revised item VI-3 is enclosed. Please replace this version with the one previously submitted. We have removed the 'Total Groundwater Pumpage' Column. The units in this column were incorrectly labeled as MGD instead of million gallons per month. All this table was intended to do was to provide the total amount of water withdrawn from the surficial aquifer during 1998. The revised table reflects these amounts in a much simpler and more direct format. As indicated, the average daily raw water withdraw rate for 1998 was equal to 631,237 gallons per day. This value was well below the existing maximum allowable permitted value of 880,000 gallons per day.

As requested, the available historical pumpage information has been included.

Item 2. Distribution of the Water Used in the Mill and Refinery

The surficial aquifer water is used as feed water to the reverse osmosis water treatment system and the resulting treated water is used for the following purposes in the approximate amounts listed:

- 310,000 gallons per day used in the refinery process
- 200,000 gallons per day used as boiler make-up water
- 80,000 gallons per day used as general service water (toilets, washing down equipment, etc.)
- 10,000 gallons per day used as potable drinking water for Mill and Refinery employees

The estimated canal surface water uses are provided below:

- 0.4 million gallons per day (MGD) sent to the Cogeneration facility to make steam

- 2.6 MGD used as brine dilution water for the reverse osmosis reject stream
- 2.5 MGD used as service water to mill (floor washings, rinsewater, etc.)
- 8.5 MGD used a scrubber for air pollution abatement systems

The amounts listed above (0.6 MGD and 14 MGD respectively for surficial aquifer and canal surface water) are both below the exisitng permitted maximums of 0.88 MGD for groundwater withdraw and 14.4 MGD for canal water withdraw. We therefore are requesting no changes in the permitted amounts of water from the previous permit cycle and are asking that the subject permit be renewed as a "status quo" renewal.

SEE 6/8/99 THE RESULTING UNACCOUNTED LOSSES ARE EQUAL TO ROUGHLY 21,000 GALLONS/DAY

Item 3. Water Sent to the Cogeneration Facility

There is a total of 400,000 gallons per day of canal surface water that is withdrawn and sent to pre-evaporators. This water is subsequently converted to steam, used by the Cogeneration facility to produce electricity and then sent back to the Mill and Refinery, condensed and then ultimately discharged to the on site zero discharge wastewater treatment facility.

Item 4. Point of Canal Water Withdraw into the Mill and Refinery

As requested, we have modified the attached Figure 2 to show the point of water withdraw from the main canal into the Mill and Refinery compound. This point of withdraw has been shown with an arrow and marked with the "INTAKE" notation on the enclosed revised Figure 2. Please replace this Figure 2 with the one previously contained in our original submittal.

We hope this clarifies all of the outstanding issues and provides the necessary information required to complete permit renewal process.

Yours very truly,

CONESTOGA-ROVERS & ASSOCIATES

Thomas C. Emenhiser
BB/mc/2

c.c.: Matthew Capone

South Florida Water Management District

3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • FL WATS 1-800-432-2045
TDD (561) 697-2574

CON-24-06

March 10, 1999

Thomas Emenhiser
Conestoga-Rovers & Associates
1486-A Skees Road
West Palm Beach, Fl. 33411

Dear Mr. Emenhiser:

Subject: Application No. 990210-9
Project: Okeelanta Corporation
County: Palm Beach

A preliminary review of the above project indicates that additional information will be required in order to complete the evaluation, pursuant to Rule 40E-1.603, Florida Administrative Code (FAC). Please provide answers to all of the following questions.

1. The site map provided did not locate the pump described in your table, Description of Surface Water Pumps. Please submit a site map showing the location of this facility in relation to the property and other facilities and indicate the location where surface water withdrawn from the Miami and the North New River Canals enters the property.

2. In our telephone conversation of March 2, 1999, you indicated that in your table, Water Use for 12 Month Period, the surface water pumpage category included RO production, recycled RO pumpage, water from the North New River and the Miami Canals, and the entire pumpage from four Surficial Aquifer wells. No outgoing distribution of finished water was included in your submittal. Pursuant to Rule 40E-2.4, please provide information on the water balance for the property, including all sources of water (including municipal suppliers and other private/public suppliers) and losses of water utilized in production processes, personal/sanitary needs of employees, treatment losses, and unaccounted uses.

3. Special Condition No. 15 required that withdrawals on a daily basis, separated by each source, be submitted to the District monthly. To date, with the exception of the 12 months of withdrawals for 1998 submitted with the current renewal application, no reports have been received within the past five years. Please provide all historic pumpage records for the facilities listed in the Permit since it was issued March 10, 1994.

Conestoga-Rovers & Associates
Okeelanta Corporation
Application No. 990210-9
March 9, 1999

When the above information is received, we will resume processing your application. Please attach the enclosed transmittal form to your response and include four (4) copies of the response. In accordance with 40E-1.603, FAC, if a response is not received within 90 days, this application may be processed for denial, if not withdrawn by the applicant. If you have any questions regarding this matter, please contact me at (561) 682-6714.

Sincerely,

Donna L. Moscone, P.G.
Hydrogeologist
Water Use Division
Regulation Department

Donna L. Moscone

Enclosures

c:
bc. Rosenfeld
Colavecchio
Serbesoff
Piper
Day
Moscone/File

APPENDIX 10.5.1

ARCHAEOLOGICAL RESOURCES

FLORIDA DEPARTMENT OF STATE
Jim Smith
Secretary of State
DIVISION OF HISTORICAL RESOURCES
R.A. Gray Building
500 South Bronough
Tallahassee, Florida 32399-0250
Director's Office (904) 488-1480
Telecopier Number (FAX) (904) 488-3353

PFN: 932220

July 26, 1993

In Reply Refer To:
Susan Hamberstan
Compliance Review
Section, DHR
(904) 487-2333

Ms. Amy C. Dunn
KBN Engineering
5680 West Cypress St., Suite 1
Tampa, Florida 33607

RE: Cultural Resource Assessment Request
Okeelanta Cogeneration Project
Palm Beach County, Florida

Dear Ms. Dunn:

In accordance with this agency's responsibilities under Chapter 483 Florida Statutes, we have reviewed the information in the Florida Master Site File to determine whether any historic properties are recorded in the referenced project area, and also to determine the potential for such resources which are presently unrecorded to be located within it.

A review of the Florida Site File indicates that no significant archaeological or historical sites are recorded for or considered likely to be present within the project area. Furthermore, it is the opinion of this agency that because of the project location and/or nature it is unlikely that any such sites will be affected. Therefore, it is the opinion of this office that the proposed project will have no effect on historic properties listed, or eligible for listing in the National Register of Historic Places.

If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura A. Kammerer

for George W. Percy, Director
Division of Historical Resources
and
State Historic Preservation Officer

GWP/Hsh

APPENDIX 10.5.2

NOISE DATA SHEETS

SLM & RTA Summary

Translated:	9-Sep-03 13:58:53
File Translated:	C:\Projects\Noise\New Hope\01-nhpp0903.slmdl
Model Number:	824
Serial Number:	A0366
Firmware Rev:	3.535
Software Versior	3.08
Name:	Enter Company Name
Descr1:	Enter Address Line 1
Descr2:	Enter Address Line 2
Setup:	SLM&RTA.ssa
Setup Descr:	SLM & Real-Time Analyzer
Location:	New Hope
Note 1:	6-Sep-03
Note 2:	Monitoring Site 1

Overall Measurement

Start Time: 6-Sep-03 9:31:13

Ln Start Level: 15 dB

L 1.00	113.8 dBA
L 5.00	113.8 dBA
L 50.00	69.6 dBA
L 90.00	52.4 dBA
L 95.00	51.2 dBA
L 99.00	50.4 dBA

Interval Records Enabled Number Interval Re 42
History Records: Disabled Number History Re 0

Current Any Data

Start Time: 6-Sep-03 13:21:35
Elapsed Time: 01:30.6

	A Weight	C Weight	Flat
Leq:	53.9 dBA	72.1 dBC	77.0 dBF
SEL:	73.5 dBA	91.6 dBC	96.6 dBF
Peak:	80.0 dBA	95.8 dBC	98.6 dBF
	9/6/2003 13:22	9/6/2003 13:22	9/6/2003 13:22
Lmax (slow):	58.7 dBA	82.5 dBC	87.1 dBF
	9/6/2003 13:23	9/6/2003 13:22	9/6/2003 13:22
Lmin (slow):	48.9 dBA	63.9 dBC	65.8 dBF
	9/6/2003 13:22	9/6/2003 13:22	9/6/2003 13:22
Lmax (fast):	61.3 dBA	86.6 dBC	90.8 dBF
	9/6/2003 13:22	9/6/2003 13:22	9/6/2003 13:22
Lmin (fast):	48.0 dBA	62.5 dBC	63.7 dBF
	9/6/2003 13:22	9/6/2003 13:22	9/6/2003 13:22
Lmax (impulse):	64.9 dBA	89.0 dBC	93.6 dBF
	9/6/2003 13:22	9/6/2003 13:22	9/6/2003 13:22
Lmin (impulse):	48.3 dBA	64.4 dBC	66.8 dBF
	9/6/2003 13:22	9/6/2003 13:22	9/6/2003 13:22

Spectra

Start Time: 6-Sep-03 13:21:35 Run Time: 01:30.6

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 O	Min 1/3 Oc	Min 1/1 Oct
12.5	72.3		64		40.4	
16	71.3	76	61.4	68	42.7	46.8
20	69.6		63.9		42.6	
25	67.4		58.9		43.8	
31.5	64.9	70.3	57.6	61.8	43.7	49.1
40	63.4		52.4		45.3	
50	61.4		50.7		47.4	
63	58.9	64.6	53.9	60.4	49.1	53.2
80	58.5		58.7		48.6	
100	57		57.8		47.2	
125	58.1	61.7	65.9	67.2	48.2	52.5
160	55.3		58.7		47.8	
200	52.9		56.5		44.3	
250	51	55.7	53.9	59.1	41	46.6
315	47.2		50.6		37.9	
400	45		45.4		37.5	
500	43.6	48.5	45.4	51.1	36.2	41.4
630	42.3		47.8		36	
800	43		50.2		36.6	
1000	44.1	48	51.9	54.8	35.7	40.6
1250	42.3		46.2		34.9	
1600	40.8		45.1		33.9	
2000	39.7	44.7	46	49.8	32	37.2
2500	39.1		43.8		30.8	
3150	37.6		43.5		29.6	
4000	36.6	41.6	42.5	47.2	28.3	33.2
5000	36.1		40.7		26.9	
6300	35.4		39.3		25.6	
8000	34.3	39.4	38.9	43.1	25.6	29.9
10000	34.1		36.4		23.9	
12500	31.1		32.8		21.1	
16000	25.2	32.7	30	35.1	23	27.2
20000	23.8		25.5		23	

SLM & RTA Summary

Translated:	9-Sep-03 14:00:57
File Translated:	C:\Projects\Noise\New Hope\02-nhpp0903.slmdl
Model Number:	824
Serial Number:	A0366
Firmware Rev:	3.535
Software Version:	3.08
Name:	Enter Company Name
Descr1:	Enter Address Line 1
Descr2:	Enter Address Line 2
Setup:	SLM&RTA.ssa
Setup Descr:	SLM & Real-Time Analyzer
Location:	New Hope
Note 1:	6-Sep-03
Note 2:	Monitoring Site 2

Overall Measurement

Start Time:	6-Sep-03 13:31:11
Ln Start Level:	15 dB
L 1.00	78.3 dBA
L 5.00	74.9 dBA
L 50.00	61.9 dBA
L 90.00	54.6 dBA
L 95.00	53.7 dBA
L 99.00	52.2 dBA

Interval Records:	Enabled	Number Interval	9
History Records:	Disabled	Number History	0

Current Any Data

Start Time:	6-Sep-03 13:31:11
Elapsed Time:	01:20.8

	A Weight	C Weight	Flat
Leq:	67.7 dBA	83.6 dBC	84.0 dBF
SEL:	86.8 dBA	102.7 dBC	103.1 dBF
Peak:	94.1 dBA	105.0 dBC	105.9 dBF
	9/6/2003 13:32	9/6/2003 13:32	9/6/2003 13:32
Lmax (slow):	78.8 dBA	95.0 dBC	95.5 dBF
	9/6/2003 13:32	9/6/2003 13:32	9/6/2003 13:32
Lmin (slow):	52.2 dBA	68.4 dBC	69.5 dBF
	9/6/2003 13:31	9/6/2003 13:31	9/6/2003 13:31
Lmax (fast):	81.1 dBA	96.6 dBC	97.0 dBF
	9/6/2003 13:32	9/6/2003 13:32	9/6/2003 13:32
Lmin (fast):	50.7 dBA	66.5 dBC	67.4 dBF
	9/6/2003 13:31	9/6/2003 13:31	9/6/2003 13:31
Lmax (impulse):	82.2 dBA	97.3 dBC	97.7 dBF
	9/6/2003 13:32	9/6/2003 13:32	9/6/2003 13:32
Lmin (impulse):	51.5 dBA	69.4 dBC	70.4 dBF
	9/6/2003 13:31	9/6/2003 13:31	9/6/2003 13:31

Spectra

Start Time:	6-Sep-03	13:31:11	Run Time:	01:20.8		
Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 O	Min 1/3 Oc	Min 1/1 Oct
12.5	62		74.6		39.6	
16	59.2	65.1	67	77.6	42.9	46.8
20	59.2		73.8		42.7	
25	59.5		70.3		43.5	
31.5	60.8	65.3	67.7	74.8	45.3	53.6
40	61		71.4		52.4	
50	63.1		73.7		52.9	
63	80	80.8	94.9	95	54.3	60.2
80	72.8		75.8		57.6	
100	79.3		85.3		55.7	
125	73.3	80.4	86.5	89	51.4	57.6
160	66.3		72.5		48	
200	68.6		76.5		48	
250	61.2	69.6	72.6	78.6	41.5	49
315	57.7		69.9		33	
400	57.9		73.6		35.4	
500	59.7	63.3	72.5	77.2	39.1	42.4
630	57.7		70.9		37.6	
800	56.9		66.4		41	
1000	57.3	61.1	65.5	69.9	42	45.4
1250	54.3		62.9		38.1	
1600	52.1		61.2		36.5	
2000	51.9	56.4	66.6	69.6	34.6	39.7
2500	50.7		65.1		32.8	
3150	47.6		60.8		31.2	
4000	45.6	50.6	58.6	63.4	29.2	34.4
5000	43.1		54		27.7	
6300	40.6		49.6		26.2	
8000	38.7	43.7	48.8	54	29.7	32.6
10000	36.4		49.3		26.6	
12500	31.5		40.9		22.4	
16000	27.1	33.4	34.2	41.9	23	27.6
20000	24.5		27.7		23	

SLM & RTA Summary
Translated: 9-Sep-03 14:02:12
File Translated: C:\Projects\Noise\New Hope\03-nhpp0903.slmdl
Model Number: 824
Serial Number: A0366
Firmware Rev: 3.535
Software Version 3.08
Name: Enter Company Name
Descr1: Enter Address Line 1
Descr2: Enter Address Line 2
Setup: SLM&RTA.ssa
Setup Descr: SLM & Real-Time Analyzer
Location: New Hope
Note 1: 6-Sep-03
Note 2: Monitoring Site 3

Overall Measurement
Start Time: 6-Sep-03 13:42:43

Ln Start Level: 15 dB

L 1.00	64.4	dBA
L 5.00	64.1	dBA
L 50.00	63.5	dBA
L 90.00	62.9	dBA
L 95.00	62.8	dBA
L 99.00	62.6	dBA

Interval Records: Enabled Number Interval I 10
History Records: Disabled Number History F 0

Current Any Data
Start Time: 6-Sep-03 13:42:43
Elapsed Time: 01:30.6

	A Weight	C Weight	Flat
Leq:	63.5 dBA	79.2 dBC	82.5 dBF
SEL:	83.1 dBA	98.8 dBC	102.1 dBF
Peak:	83.5 dBA	91.7 dBC	94.3 dBF
	9/6/2003 13:43	9/6/2003 13:43	9/6/2003 13:43
Lmax (slow):	64.7 dBA	80.1 dBC	83.5 dBF
	9/6/2003 13:43	9/6/2003 13:42	9/6/2003 13:43
Lmin (slow):	62.5 dBA	77.3 dBC	80.5 dBF
	9/6/2003 13:43	9/6/2003 13:42	9/6/2003 13:42
Lmax (fast):	65.7 dBA	81.5 dBC	85.6 dBF
	9/6/2003 13:43	9/6/2003 13:43	9/6/2003 13:43
Lmin (fast):	61.9 dBA	76.9 dBC	79.8 dBF
	9/6/2003 13:43	9/6/2003 13:43	9/6/2003 13:43
Lmax (impulse):	68.4 dBA	83.7 dBC	87.5 dBF
	9/6/2003 13:43	9/6/2003 13:43	9/6/2003 13:43
Lmin (impulse):	62.3 dBA	77.2 dBC	80.6 dBF
	9/6/2003 13:43	9/6/2003 13:42	9/6/2003 13:42

Spectra
Start Time: 6-Sep-03 13:42:43 Run Time: 01:30.6

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 O	Min 1/3 Oc	Min 1/1 Oct
12.5	68.8		68.6		55	
16	76.5	83.5	72.5	83.7	63.5	79.1
20	82.4		83.2		79	
25	63.2		56.6		50.8	
31.5	68.4	73.2	62.9	73	58.8	64
40	70.8		72.4		62.1	
50	67		69.2		58.9	
63	68.5	72.1	65.1	72.3	62.4	66
80	66.3		67.2		61.6	
100	63.9		61.1		57.7	
125	63.8	68.3	64.2	68.3	56.4	62.5
160	62.7		64.5		58.8	
200	60.2		60.4		56.9	
250	59.3	63.2	60.2	63.7	54.6	59
315	53.3		52.8		42.7	
400	55.4		55.7		51.9	
500	55.1	59.4	55.6	60.1	51.7	56.1
630	52.9		54.7		50.2	
800	55.3		57.6		52.1	
1000	52.8	58.4	53.5	60.3	50.4	55.6
1250	52.2		54.2		49.5	
1600	51		52.5		48.3	
2000	50.1	55.3	51.5	56.7	47.4	52.7
2500	50.5		51.6		48.1	
3150	49.8		50.5		47.6	
4000	48	53	49.8	54.8	45.7	50.8
5000	46.3		49.9		44.2	
6300	44.2		44.5		42.2	
8000	44	48.2	44.8	48.5	42.3	46.3
10000	41.6		41.2		39.7	
12500	37.9		37.2		35.5	
16000	32.6	39.3	31.6	38.5	30.4	37
20000	27.1		26.3		25.6	

SLM & RTA Summary
Translated: 9-Sep-03 14:03:06
File Translated C:\Projects\Noise\New Hope\04-nhpp0903.slmdl
Model Number 824
Serial Number: A0366
Firmware Rev: 3.535
Software Versi 3.08
Name: Enter Company Name
Descr1: Enter Address Line 1
Descr2: Enter Address Line 2
Setup: SLM&RTA.ssa
Setup Descr: SLM & Real-Time Analyzer
Location: New Hope
Note 1: 6-Sep-03
Note 2: Monitoring Site 4

Overall Measurement
Start Time: 6-Sep-03 13:52:37

Ln Start Level: 15 dB

L 1.00	69.5	dBA
L 5.00	66.2	dBA
L 50.00	55	dBA
L 90.00	50.8	dBA
L 95.00	50.7	dBA
L 99.00	50.5	dBA

Interval Record	Enabled	Number Interval I	10
History Record	Disabled	Number History F	0

Current Any Data
Start Time: 6-Sep-03 13:52:37
Elapsed Time: 01:31.3

	A Weight	C Weight	Flat
Leq:	59.5 dBA	73.9 dBC	79.3 dBF
SEL:	79.2 dBA	93.5 dBC	98.9 dBF
Peak:	85.0 dBA	96.9 dBC	98.9 dBF
	9/6/2003 13:54	9/6/2003 13:53	9/6/2003 13:53
Lmax (slow):	70.5 dBA	81.6 dBC	86.3 dBF
	9/6/2003 13:54	9/6/2003 13:53	9/6/2003 13:53
Lmin (slow):	50.5 dBA	65.2 dBC	70.7 dBF
	9/6/2003 13:53	9/6/2003 13:53	9/6/2003 13:53
Lmax (fast):	72.4 dBA	86.9 dBC	90.5 dBF
	9/6/2003 13:54	9/6/2003 13:53	9/6/2003 13:53
Lmin (fast):	50.1 dBA	62.2 dBC	66.9 dBF
	9/6/2003 13:53	9/6/2003 13:53	9/6/2003 13:53
Lmax (impulse)	73.0 dBA	90.1 dBC	93.0 dBF
	9/6/2003 13:54	9/6/2003 13:53	9/6/2003 13:53
Lmin (impulse)	50.3 dBA	67.7 dBC	73.3 dBF
	9/6/2003 13:53	9/6/2003 13:53	9/6/2003 13:53

Spectra
Start Time: 6-Sep-03 13:52:37 Run Time: 01:31.3

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 O	Min 1/3 Oc	Min 1/1 Oct
12.5	75.6		74.2		60	
16	74.5	79	71	76	59	63.4
20	71.5		59.1		55.8	
25	69.7		66.3		51.8	
31.5	67.1	72.3	61.7	68.1	50.5	56.1
40	64.2		58.4		51.5	
50	61.8		61.9		48.3	
63	58.8	64.3	63.3	66	49.2	52.5
80	56.2		55.3		44.2	
100	55.9		64.7		43.5	
125	55	59.7	63.8	68.7	43.8	48.4
160	53.4		63.3		43.6	
200	51.9		60.3		39.9	
250	48.6	54.7	58.9	65.2	36.1	42.4
315	48.5		61.6		35.3	
400	48.3		61.8		36	
500	49.7	54.6	62.5	67.4	35.5	40.3
630	51		63.4		34.9	
800	51.2		66.6		35.9	
1000	50.9	55.6	63.1	68.9	36	40.7
1250	50.2		60.4		35.8	
1600	48.9		58.9		36.4	
2000	46	51.7	56.5	61.5	36.5	41.3
2500	44.8		53.1		36.8	
3150	44.2		51.8		36.8	
4000	43.8	48.6	49.4	54.9	36.3	41.3
5000	43.6		48.5		36.6	
6300	43.5		47.7		36	
8000	43.9	48	46.6	51.3	35.9	40.4
10000	41.9		44.8		34.8	
12500	39		41.3		32.3	
16000	35.4	41	38	43.3	30.6	35.2
20000	30.2		32.5		26.6	

SLM & RTA Summary

Translated:	9-Sep-03	14:04:02	
File Translated:	C:\Projects\Noise\New Hope\05-nhpp0903.slmdl		
Model Number:	824		
Serial Number:	A0366		
Firmware Rev:	3.535		
Software Version:	3.08		
Name:	Enter Company Name		
Descr1:	Enter Address Line 1		
Descr2:	Enter Address Line 2		
Setup:	SLM&RTA.ssa		
Setup Descr:	SLM & Real-Time Analyzer		
Location:	New Hope		
Note 1:	6-Sep-03		
Note 2:	Monitoring Site 5		

Overall Measurement

Start Time:	6-Sep-03	13:59:47	
Ln Start Level:	15 dB		
L 1.00	74.3 dBA		
L 5.00	72.2 dBA		
L 50.00	65.4 dBA		
L 90.00	63.3 dBA		
L 95.00	62.2 dBA		
L 99.00	61.4 dBA		
Interval Records:	Enabled	Number Interval R	7
History Records:	Disabled	Number History R	0

Current Any Data

Start Time:	6-Sep-03	13:59:47	
Elapsed Time:	01:00.8		

	A Weight	C Weight	Flat
Leq:	67.7 dBA	77.9 dBC	79.0 dBF
SEL:	85.6 dBA	95.8 dBC	96.9 dBF
Peak:	91.6 dBA	95.1 dBC	95.7 dBF
	9/6/2003 13:59	9/6/2003 13:59	9/6/2003 13:59
Lmax (slow):	74.5 dBA	81.2 dBC	81.7 dBF
	9/6/2003 13:59	9/6/2003 13:59	9/6/2003 13:59
Lmin (slow):	61.2 dBA	76.3 dBC	77.1 dBF
	9/6/2003 14:00	9/6/2003 14:00	9/6/2003 14:00
Lmax (fast):	77.0 dBA	82.8 dBC	83.7 dBF
	9/6/2003 13:59	9/6/2003 13:59	9/6/2003 14:00
Lmin (fast):	59.9 dBA	75.8 dBC	76.7 dBF
	9/6/2003 14:00	9/6/2003 14:00	9/6/2003 14:00
Lmax (impulse):	78.1 dBA	83.3 dBC	86.0 dBF
	9/6/2003 13:59	9/6/2003 13:59	9/6/2003 14:00
Lmin (impulse):	60.4 dBA	76.3 dBC	77.2 dBF
	9/6/2003 14:00	9/6/2003 14:00	9/6/2003 14:00

Spectra

Start Time:	6-Sep-03	13:59:47	Run Time: 01:00.8

Freq Hz	Leq 1/3 Oct	Leq 1/1 Oct	Max 1/3 Oct	Max 1/1 O	Min 1/3 Oc	Min 1/1 Oct
12.5	66.3		58.1		50.6	
16	64.7	69.5	54.4	63.8	43.7	53.6
20	62.2		61.7		49.7	
25	60.6		59.3		45.7	
31.5	57.7	63.9	58.3	64	44.1	50.9
40	58.7		60		47.7	
50	61.2		64.6		57.4	
63	77.1	77.5	77.2	78.7	75.1	75.2
80	65.8		72.7		54.1	
100	61.4		64.4		54.4	
125	63.2	66.3	72.4	73.6	53.9	57.7
160	58.8		64.4		48.1	
200	59.5		69.2		49.5	
250	58.8	63.5	68.9	72.9	44.3	51.6
315	57.7		65.3		44.3	
400	58		67		51.1	
500	57.5	62.6	66.3	72.3	48.3	53.6
630	58		68.9		45.2	
800	60.3		70.6		45.3	
1000	61	64.9	68.5	73.1	48.1	52.5
1250	58.9		62.7		48.9	
1600	56.8		58.6		50	
2000	53.5	59.2	54.8	60.7	46.6	52.4
2500	51.1		51.5		44.6	
3150	51		50.1		44.3	
4000	52	55.4	54.6	56.7	45.3	48.7
5000	48.1		49		41.3	
6300	45.7		48		39.1	
8000	43.5	48.5	45.8	50.9	36.8	41.9
10000	40.7		43.5		34.3	
12500	33.1		35.1		28.8	
16000	28.9	34.9	30.9	36.9	26.1	31.4
20000	24.8		26.1		23.6	