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BUREAU OF AIR REGULATION

TITLE V PERMIT APPLICATION FLORIDA POWER & LIGHT COMPANY PORT EVERGLADES PLANT FT. LAUDERDALE, FLORIDA

> Prepared For: Florida Power & Light Company 700 Universe Boulevard Juno Beach, Florida 33408

Prepared By: Golder Associates Inc. 6241 NW 23rd Street, Suite 500 Gainesville, Florida 32653-1500

> April 2003 0237560

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Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

I. APPLICATION INFORMATION

<u>ld</u>	<u>Identification of Facility</u>				
1.	Facility Owner/Company Name: F	Florida Po	wer & Light Co	mpany	
2.	Site Name: Port Everglades Plant				
3.	Facility Identification Number:	0110036		[] Unknown	
4.	Facility Location:	1100 E.	1 DI I		
	Street Address or Other Locator: 8				
	City: Ft. Lauderdale	County: B	roward	Zip Code: 33316	
5.	Relocatable Facility?		6. Existing Po	ermitted Facility?	
	[] Yes [X] No		[X] Yes	[] No	
A	oplication Contact			,	
1.	Name and Title of Application Co	ntact:			
	evin Washington – Senior Environn		cialist		
2.	Application Contact Mailing Add				
	Organization/Firm: Florida Power	& Light	- Environmenta	l Services	
	Street Address: 700 Universe Blvd	d.			
	City: Juno Beach	St	ate: Florida	Zip Code: 33408	
3.	Application Contact Telephone N	umbers:			
	Telephone: (561) 691-2877		Fax: (561)	691-7049	
Application Processing Information (DEP Use)					
1.	Date of Receipt of Application:			-	
2.	Permit Number:				
3.	PSD Number (if applicable):				
4.	Siting Number (if applicable):				

Purpose of Application

Air Operation Permit Application

Th	is	Application for Air Permit is submitted to obtain: (Check one)
[]	Initial Title V air operation permit for an existing facility which is classified as a Title V source.
[]	Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.
		Current construction permit number:
[]	Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.
		Current construction permit number:
		Operation permit number to be revised:
[]	Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)
		Operation permit number to be revised/corrected:
[X	Τ[]	Title V air operation permit revision for reasons other than construction or modification of ar emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.
		ration permit number to be revised:_: 0110037-001-AV on for revision:_Renewal of Existing Title V Permit
Ai	r (Construction Permit Application
Th	iis	Application for Air Permit is submitted to obtain: (Check one)
[]	Air construction permit to construct or modify one or more emissions units.
[]	Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.
[]	Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative or Responsible Official

	Name and Title of Owner/Authorized Rody Sanchez	epresentative or Resp	onsible Official:
2.	Owner/Authorized Representative or Re Organization/Firm: Port Everglades Plan Street Address: 8100 Eisenhower Blvd. City: Fort Lauderdale	=	ailing Address: Zip Code: 33316
3.	Owner/Authorized Representative or Re	sponsible Official Te	elephone Numbers:
	Telephone: (954) 527-3601	Fax: (954) 5	527-3636
4.	Owner/Authorized Representative or Re	sponsible Official Sta	atement:
	I, the undersigned, am the owner or authouther responsible official (check here [X] application, whichever is applicable. It formed after reasonable inquiry, that the accurate and complete and that, to the be reported in this application are based upemissions. The air pollutant emissions in this application will be operated and standards for control of air pollutant emand rules of the Department of Environment and that a permit, if granted by the authorization from the Department, and legal transfer of any permitted emissions.], if so) of the Title V hereby certify, based e statements made in est of my knowledge, oon reasonable techn units and air pollution maintained so as to c nissions found in the s nental Protection and he Department, cann I will promptly notify	source addressed in this on information and belief this application are true, any estimates of emissions iques for calculating n control equipment described comply with all applicable statutes of the State of Floridad revisions thereof. I ot be transferred without
	Signature	Date	
	organian C	Date	
	Attach letter of authorization if not current	tly on file.	

1. Professional Engineer Name: Kennard F. Kosky

Registration Number: 14966

City: Gainesville

2. Professional Engineer Mailing Address:

Organization/Firm: Golder Associates, Inc. *

Street Address: 6241 NW 23rd Street, Suite 500

3. Professional Engineer Telephone Numbers:

Telephone: (352) 336-5200 Fax: (352) 336 - 6603

State: Florida

3

Zip Code: 32653

DEP Form No. 62-210.900(1) - Form

Effective: 2/11/99

^{*} Board of Professional Engineers Certificate No. 00001670

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein*, that:

- (1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and
- (2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain a Title V source air operation permit (check here [X], if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

 $\frac{\text{Minul } 1/9 \text{ My}}{\text{Date}} = \frac{4/23/03}{\text{Date}}$

*Attach any exception to certification statement.

DEP Form No. 62-210.900(1) - Form Effective: 2/11/99 62-210.900(1)

Scope of Application

Emissions		Permit	Processing
Unit ID	Description of Emissions Unit	Туре	Fee
01	Fossil Steam Boiler Unit 1	AF2A	N/A
02	Fossil Steam Boiler Unit 2	AF2A	N/A
03	Fossil Steam Boiler Unit 3	AF2A	N/A
04	Fossil Steam Boiler Unit 4	AF2A	N/A
05	Bank of 12 simple cycle Gas Turbines- Units 1-12	AF2B	N/A
06	Unregulated Emission Sources		N/A

Application Processing Fee

Check one: [] Attached - Amount: \$	[X]	Not Applicable
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Construction/Modification Information

 Description of Proposed Project or Altera

- 2. Projected or Actual Date of Commencement of Construction:
- 3. Projected Date of Completion of Construction:

Application Comment

- 1. Renewal of existing Title V Permit
- 2. The Florida Department of Environmental Protection (the "Department"), local environmental authorities and interested citizen groups have been expressing increased concern to FPL over the levels of particulate emissions from the Port Everglades Plant, as well as the need to ensure the Plant's continued compliance with the National Ambient Air Quality Standards and Hazardous Air Pollutant MACT requirements. These concerns have been the subject of negotiations between the Department and FPL over the appropriate air emission controls to be incorporated into FPL's Title V permits for those plants. As a result of the negotiations, the Department and FPL have agreed on new Title V permit conditions requiring lower limits of particulate emissions at the Port Everglades Plant equivalent to New Source Performance Standards. In order to meet the lower particulate limits, FPL will install ESPs (or other equally effective particulate matter control technology) and steam coils on its four fossil-fueled steam boilers at Port Everglades.

The installation of ESPs on the first of the 4 Port Everglades steam boiler units is anticipated to begin in conjunction with the Spring outage of 2005 or sooner absent any unexpected delays in engineering, procurement, or other factors. The remaining units' ESP installations will be completed within the next two years, with the last ESP installed during the Spring outage of 2007. Following the installation of each ESP, a commissioning and optimization period of 180 days is anticipated following each unit's return to service.

The currently installed mechanical dust collectors will be removed from each unit, and steam coils will be added as part of each unit's ESP addition.

The Port Everglades units are anticipated to remain as cycling and load-following units after the installation of the ESPs. Therefore, it is expected that there will be periods coincident with unit start-up and shutdown activities when the ESPs may be marginally effective until reaching the appropriate operating conditions, i.e. temperatures, flows, etc. FPL will strive to minimize the impact of start up/shutdown activities on ambient air quality by using best operating practices during those periods.

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II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

l.	Facility UIM Coor	dinates:					
	Zone: 17	East (km)	: 58′	7383 Nort	th (km): 2885250		
2.	Facility Latitude/Lo	ongitude:					
	Latitude (DD/MM/S	SS): 26-4-8		Longitude (DD/MM	ongitude (DD/MM/SS): 80-7-31		
3.	Governmental	4. Facility Status	5.	Facility Major	6. Facility SIC(s):		
	Facility Code: 0	Code:		Group SIC Code:	4911		
		A	49				
7.	Facility Comment (limit to 500 characters)	Thi	s facility contains for	ur fossil-fuel fired		
ste	am boiler generating	units units, and one bar	nk of	12 simple-cycle gas	turbines.		
				•			
		•					

Facility Contact

1. Name and Title of Facility Contact: Kathryn Pascale
--

2. Facility Contact Mailing Address:

Organization/Firm: FPL Port Everglades Plant

Street Address: P.O. Box 13118

City: Ft. Lauderdale State: Florida Zip Code: 33316

3. Facility Contact Telephone Numbers:

Telephone: (954) 797-1338 Fax: (954) 797-1579

Facility Regulatory Classifications

Check all that apply:

1. [] Small Business Stationary Source? [] Unknown			
2. [X] Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?			
3. [] Synthetic Minor Source of Pollutants Other than HAPs?			
4. [X] Major Source of Hazardous Air Pollutants (HAPs)?			
5. [] Synthetic Minor Source of HAPs?			
6. [] One or More Emissions Units Subject to NSPS?			
7. [X] One or More Emission Units Subject to NESHAP?			
8. [] Title V Source by EPA Designation?			
9. Facility Regulatory Classifications Comment (limit to 200 characters): This facility is located in a former non-attainment area for ozone (redesignated to an air quality maintenance area) therefore several of the generating units are subject to NOx-RACT in rule 62-296.570 F.A.C.			

List of Applicable Regulations

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions	5. Pollutant Comment
		lb/hour	tons/year	Cap	
SO2	A				
NOx	A				
CO	A			-	
PM	A				
PM10	A				
VOC	A				_
H133	A				
SAM	A				·
H106	A				
H107	A				
НАР	A				

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

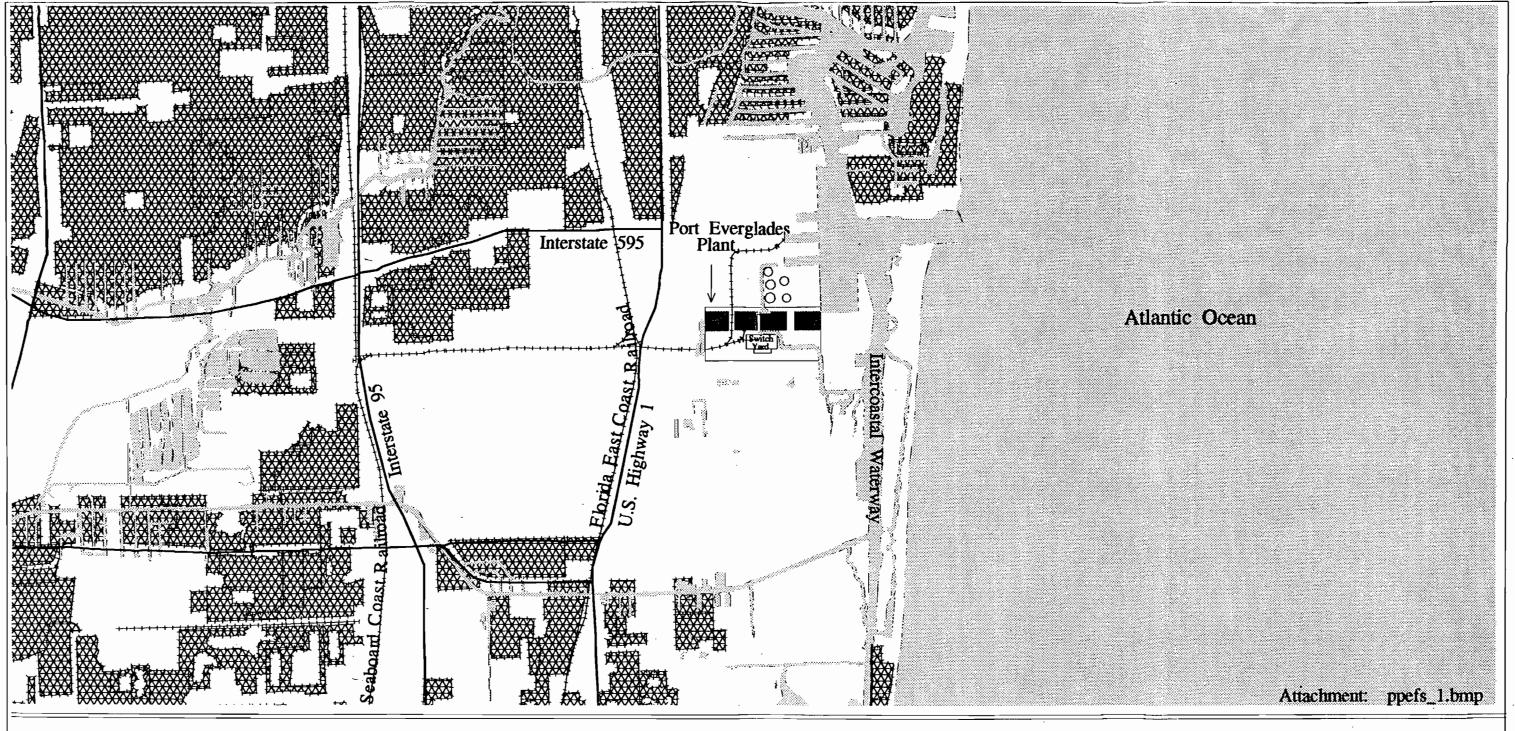
1.	Area Map Showing Facility Location: [X] Attached, Document ID:PPEFS_1.bmp_ [] Not Applicable [] Waiver Requested
2.	Facility Plot Plan: [X] Attached, Document ID:PPEFS_2.bmp[] Not Applicable [] Waiver Requested
3.	Process Flow Diagram(s): [X] Attached, Document ID: PPEFS 3.bmp [] Not Applicable [] Waiver Requested
4.	Precautions to Prevent Emissions of Unconfined Particulate Matter: [X] Attached, Document ID: PPEFS_4.doc [] Not Applicable [] Waiver Requested
5.	Fugitive Emissions Identification: [X] Attached, Document ID: PPEFS_5.doc [] Not Applicable [] Waiver Requested
6.	Supplemental Information for Construction Permit Application: [] Attached, Document ID: [X] Not Applicable
7.	Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities:
[X] Attached, Document ID:PPEFS_7.doc [] Not Applicable
O. List of Equipment/Astisities Deputated and description VI.
9. List of Equipment/Activities Regulated under Title VI:
[X] Attached, Document ID: PPEFS_8.doc_
[] Equipment/Activities On site but Not Required to be Individually Listed
[] Not Applicable
10. Alternative Methods of Operation:
[X] Attached, Document ID: PPEFS_9.doc [] Not Applicable
11. Alternative Modes of Operation (Emissions Trading):
[] Attached, Document ID: [X] Not Applicable
12. Identification of Additional Applicable Requirements:
[] Attached, Document ID: [X] Not Applicable
13. Risk Management Plan Verification:
[] Plan previously submitted to Chemical Emergency Preparedness and Prevention
Office (CEPPO). Verification of submittal attached (Document ID:) or
previously submitted to DEP (Date and DEP Office:)
[] Plan to be submitted to CEPPO (Date required:)
[X] Not Applicable
14. Compliance Report and Plan:
[] Attached, Document ID: [X] Not Applicable
15. Compliance Certification (Hard-copy Required):
[X] Attached, Document ID: PPEFS_14.doc_ [] Not Applicable

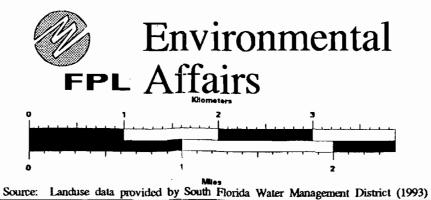
ATTACHMENT PPEFS_1.BMP

AREA MAP SHOWING FACILITY LOCATION



Port Everglades Area Map Broward County

No expressed or implied warranties including, but not limited to the implied warranties of MERCHANTABILITY OF FTINESS FOR A PARTICULAR PURPOSE are made. The materials contained herein are provided 'as is' and may contain inaccuracies and user is warned to utilize the material's accuracy independently and assumes the risk of any and all loss.





Port Everglades Plant

Water

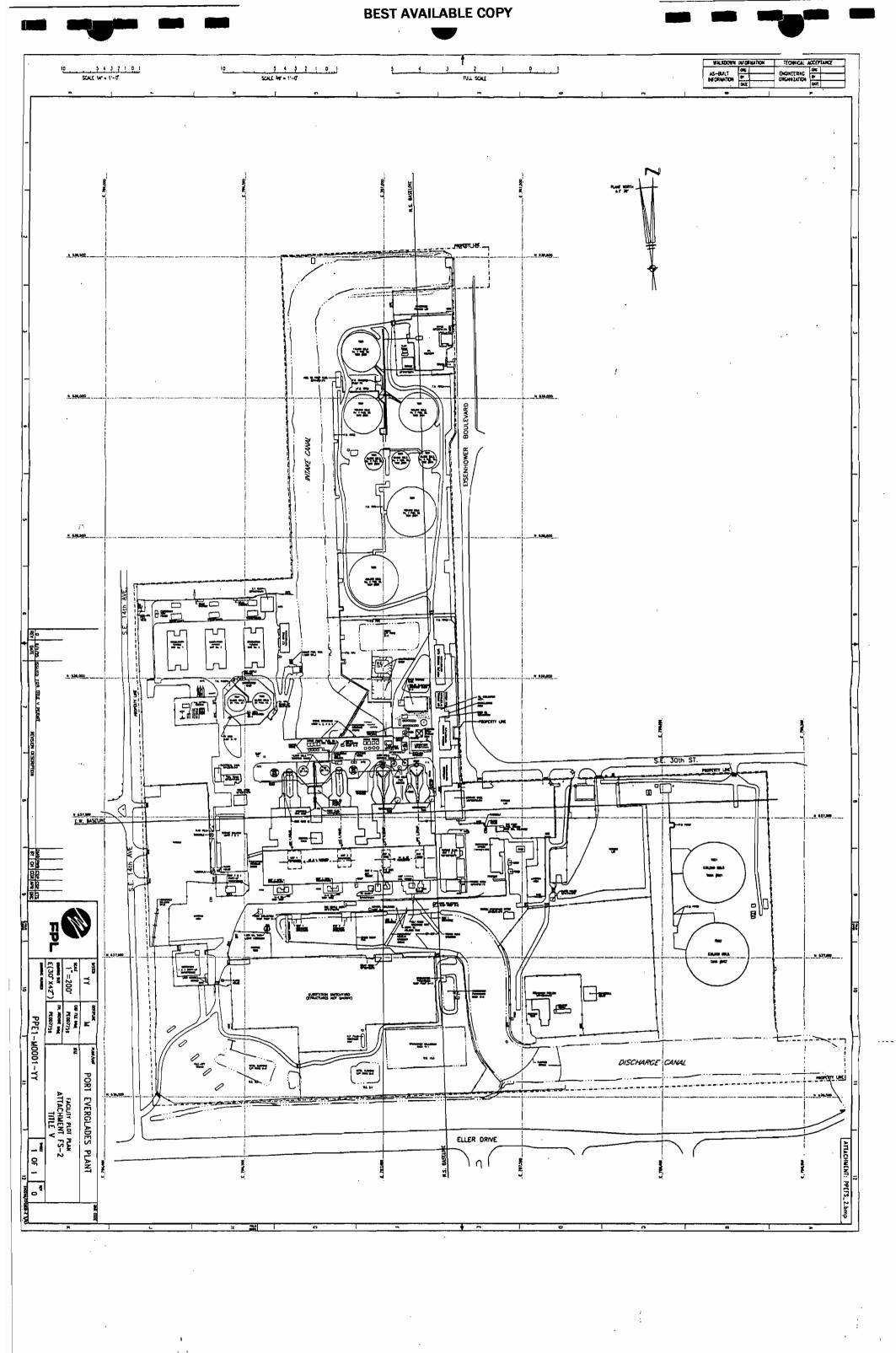
Major Roads

√ Railroads

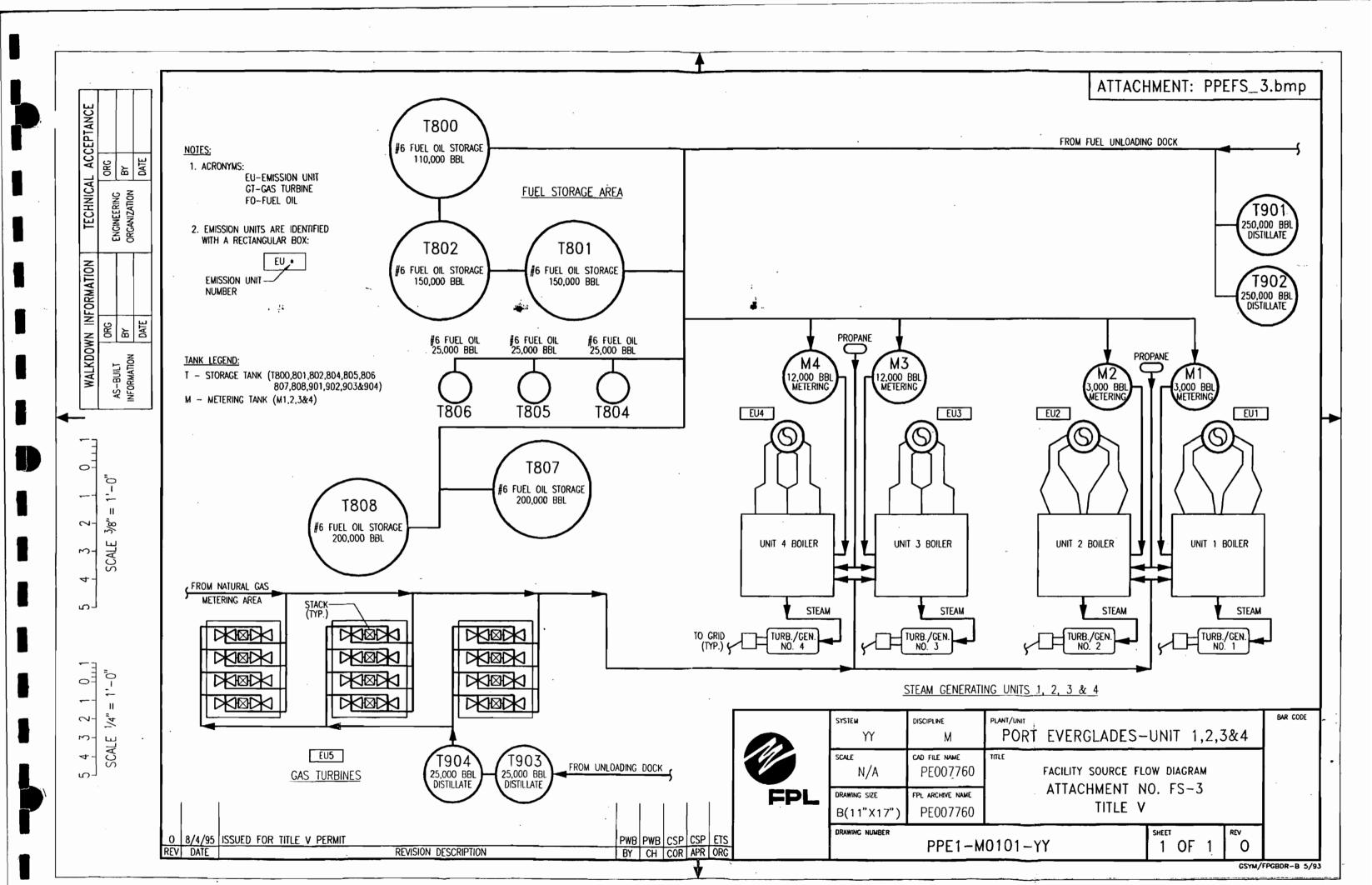
Residential Areas

export/home/ron/poe-site.msp (5-95)

ATTACHMENT PPEFS_2.BMP
FACILITY PLOT PLAN



ATTACHMENT PPEFS 3.BMP PROCESS FLOW DIAGRAM



ATTACHMENT PPEU1_3.DOC

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

Attachment PPEU1_3.doc

Detailed Description of Control Equipment

A. Cyclone Separator – This steam generator (boiler) is supplied with two 104B-GHS #19-684 UOP tubular mechanical dust collectors with side inlet and universal outlet. Each dust collector consists of 695 tubes and four dust collection hoppers. The dust collector has the following efficiency at 2.55 inches of water at peak load:

Particle Range (micron)	Mean Diameter (micron)	Estimated efficiency (percent)
0-5	2.5	30.3
5-10	7.5	66.2
10-20	15	88.6
20-45	32.5	99.1
45+	45	99.5

- **B. Low NOx Burners** Due to RACT requirements in the southern Florida airshed, the Port Everglades facility installed "Low NOx Burners" which have as their primary purpose the reduction of NOx produced during combustion. The installed burners have reduced NOx production by 9.09% on natural gas fuel, and by 10% on residual oil fuel (in lb/mmBtu, comparing baseline emission rates with permitted NOx RACT emission rates.
- **C. Electrostatic Precipitators (ESPs)** ESPs identified in this Title V application are described in more detail in a separate construction permit application. The ESPs (or equivalent) will replace the cyclone separators.

ATTACHMENT PPEFS_4.DOC

PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER

Attachment PPEFS_4.doc Precautions to Prevent Emissions of Unconfined Particulate Matter

The facility has negligible amounts of unconfined particulate matter as a result of the operation of the facility. Potential examples of particulate matter include:

- fugitive dust from unpaved roads
- sandblasting abrasive material from plant maintenance activities
- fugitive particulates from the use of bagged chemical products (soda ash, di-, tri- and monosodium phosphate, and other chemicals as needed)

Several precautions were taken to prevent emissions of particulate matter in the *original design* of the facility. These include:

- Paving of roads, parking areas and equipment yards
- Landscaping and planting of vegetation

Operational measures are undertaken at the facility which also minimize particulate emissions, in accordance with 17-296.310 F.A.C.:

- The facility constructs temporary sandblasting enclosures when necessary, in order to perform sandblasting on fixed plant equipment.
- Maintenance of paved areas as needed
- Regular mowing of grass and care of vegetation
- Limiting access to plant property by unnecessary vehicles.
- Bagged chemical products are stored in weather-tight buildings until they are used. Spills of powdered chemical products are cleaned up as soon as practicable.
- Vehicles are restricted to slow speeds on the plant site

ATTACHMENT PPEFS_5.DOC
FUGITIVE EMISSIONS IDENTIFICATION

Attachment PPEFS_5.doc Fugitive Emission Identification

It should be noted that many fugitive emissions at the plant site have been classified as "insignificant activities", and therefore are not included here. For example, VOC emissions from leaks in the lube oil systems at the facility would be considered fugitive emissions, but have been proposed to be exempted as insignificant, and so appear as such on the *Insignificant Activities* list (Attachment PPEFS 7.DOC).

Criteria and Precursor Air Pollutants

Fugitive particulate emissions are addressed in Attachment PPEFS_4.DOC. FPL is not aware of fugitive emissions of sulfur dioxide, nitrogen oxides, carbon monoxide or lead compounds which would exceed the reporting thresholds defined in the permit application instructions.

Fugitive HAPs Emissions

The fugitive HAPs emissions at the Port Everglades facility have been determined to be less than the relevent reporting thresholds and are therefore not included here. Refer to the Insignificant Activities List (Attachment PPEFS_7.DOC).

ATTACHMENT PPEFS_7.DOC

LIST OF PROPOSED INSIGNIFICANT ACTIVITIES

Attachment PPEFS_7.DOC List of Proposed Insignificant Activities

Following are a detailed listing of insignificant sources for the facility. These are presented in tabular format with the following headings:

Equipment/System - In this column the location of the source is given (e.g., fuel oil system, water treatment system, etc.).

Size/Source - This column presents the size and quantity of the vent or emission release point(s).

Type of Emission - This column presents the variety of pollutant or other substance emitted from the equipment/system.

Rationale - This column presents the reason that the emission source is proposed to be exempted as insignificant (e.g., Item 10 in the "Title V Insignificant Source Summary for the Electric Utility Industry", "no regulated pollutants emitted", etc.).

List of Insignificant Emissions Units and/or Activities (from Existing Title V Permit):

The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-2 10.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule 62-2 10.300(3)(a), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule 62.210.300(3)(a), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

Brief Description of Emissions Units and/or Activities

- 1. Spent boiler chemical cleaning liquid evaporation
- 2. Laboratory equipment used exclusively for chemical or physical analysis.
- 3. Brazing, soldering or welding equipment.
- 4. Surface coating facilities provided that 6.0 gallons of coatings per day or less are applied.
- 5. Hydrazine feed line vent
- 6. Lube oil system
- 7. Oil/water separators and related equipment
- 8. Misc. mobile vehicle operation
- 9. Paint & lube oil building
- 10. Chemical storage building
- 11. Hazardous waste storage area
- 12. Natural gas metering station
- 13. Internal combustion engine used for transportation (added)
- 14. Fire and safety equipment (added)

INSIGNIFICANT ACTIVITIES LIST PORT EVERGLADES PLANT

EXEMPT/PRESUMPTIVELY EXEMPT SOURCES

UNITS 1 & 2 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale
Steam & Condensate	Condensate Storage Tanks - 6" Vent	Water Vapor, Air, Steam	H ₂ O not a Pollutant
	Gland Steam Condenser Maintenance Vents		
	Gland Steam Condenser Relief Valve		
	Gland Steam Condenser Vent Fans - 6"		
	Deaerator Vent Condenser - 2" Maintenance Vent		
	Deaerator Heater Relief Valve		
	Heaters Maintenance Vents		
	Heaters Relief Valves		
	Boiler Feed Pumps Inlet Relief Valves		
	Boiler Feed Pumps Outlet-Maintenance Vent		
	Feedwater At Heaters - Relief Valves		

UNITS 1 & 2 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale
Steam & Condensate (Continued)	Feedwater At Heaters - Maintenance Vent	Water Vapor, Air, Steam	H ₂ O not a Pollutant
	Condensate Pumps Relief Valves		
	Vacuum Pumps Tank - 6" Maintenance Vent		
	Gland Drain Tank Loop Seal Vent		
	Condensate Recovery Collection Tank Vents		
	Condensate Receiver Flash Tank - Relief Valve	Water Vapor	
	Vent Condenser ¾" Vent		
	Condensate Cooler – 3/4" Vent		
	Miscellaneous Aux. Steam Relief Valves		
	Service Building Hot Water Storage Tank - Relief Valve		
Service & Instrument Air	Instrument Air Receivers - Relief Valve	Air	Air not a Pollutant
	Service Air Receivers - Relief Valve		

	UNITS 1 & 2 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale	
Service & Instrument Air (Continued)	Service Air Intercooler Relief Valve	Air	Air not a Pollutant	
	Service Air Aftercooler Relief Valve			
	Instrument Air Aftercoolers Relief Valves			
	Instrument Air Filters A, B, C & D Relief Valves			
	Instrument Air Dryer System Absorbers A & B Relief Valves			
	Miscellaneous Air Relief Valves			
Boiler Steam & Feed	Phosphate Feed Tanks - 50 Gal.			
	Steam Drum Maintenance Vents	Steam		
	Steam Drum Relief Valves with Silencers			
	Super Heater Outlet Header Relief Valves with Silencers			
	Misc. Steam Line 1" Maintenance Vents			

UNITS 1 & 2 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale
Boiler Steam & Feed (Continued)	Reheater Outlet Header Relief Valves with Silencer	Steam	
	Reheater Inlet Header Relief Valves with Silencers		
	Steam Air Heater Drain Tank Maintenance Vent - 1"		
	Steam Air Heater Piping Maintenance Vents		
	Ammonium Hydroxide Feed Tank - 350 Gal.		
	Hydrazine Feed Tank - 350 Gal.		
Fuel Oil	Fuel Oil Metering Tanks - 10" Vent (3,000 BBL.)	Fuel Oil Vapors (V.O.C.)	
	Fuel Oil Blowback Tanks - Maintenance Vent		
·	Fuel Oil Strainer Vents		
	Fuel Oil Burner Pumps - 1/2" Vent		
	Miscellaneous Fuel Oil Maintenance Vents –		

UNITS	UNITS 1 & 2 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale	
Fuel Oil (Continued)	Fuel Oil Burner Heaters - Maintenance Vent	Fuel Oil Vapors (V.O.C.)		
	Fuel Oil Burner Booster Pump – ¾" Vents			
	Fuel Oil Blowback Tanks - Relief Valves			
	Fuel Additive Storage Tank Vent - 28,000 Gal. (Magnesium Hydroxide)			
Turbine & Lube Oil System	Lube Oil Pump Tank Breather Filter Vent	Lube Oil Vapors (V.O.C.)		
	Lube Oil Filter Unit - Breather Filter			
	Lube Oil Reservoir Vapor Extractor - 6" with Exhaust Hood			
	Generator Loop Seal Tank - Oil Extractor with Exhaust Head			
	Seal Oil Reservoir Maintenance Vent			
	Seal Oil Cooler Maintenance Vent			
	Seal Oil Drain 3" Highpoint Vent			

UNITS 1 & 2 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale
Turbine & Lube Oil System (Continued)	Gland Steam Controller - 6" Relief Valves	Steam	Steam not a Pollutant
	Lube Oil Coolers – ¾" Vent		
Cooling Water	Boiler Circulation Pumps – ¾" Maintenance Vents	Water	H ₂ O not a Pollutant
	Closed Cooling Water Surge Tank - 8" Vent		
	Turbine Lube Oil Coolers – ¾" Maintenance Vent		
	Instrument Air Compressor Aftercooler – ¾" Maintenance Vent		
	Service Air Compressors - Inter & After Coolers - Maintenance Vents		
	Vacuum Pump Heat Exchangers 3" - Discharge Continuous Vent		
	Exciter Air Cooler – ½" Maintenance Vents		
	Hydrogen Cooler 1A & 1B – ½" Maintenance Vents		

UNITS 1 & 2 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale
Cooling Water (Continued)	Hydrogen Seal Oil Coolers ¾" Vents	Water	H ₂ O not a Pollutant
	Closed Cooling Water Heat Exchangers Inlet Maintenance Vent –		
	Closed Cooling Water Heat Exchangers Inlet Relief Valves		
	Closed Cooling Water Heat Exchanger ¾" Maintenance Outlet Vent		
	Closed Cooling Water Heat Exchanger Outlet Relief Valve		
	Priming Ejector Separator Silencer with Exhaust Head		
	Separator - 1" High Point Vent		
	Misc. Water Maintenance Vents		

UNITS 1 & 2 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale
Water Treatment	Elevated Water Storage Tank Vent (100,000 Gal.)	Water	H ₂ O not a Pollutant
	City Water Storage Tank Vent (100,000 Gal.)		

UNITS 3 & 4 BOILER/STEAM GENERATOR POWER BLOCK				
Equipment/Source	Size/Source	Type of Emission	Rationale	
Main Steam	Platen Inlet Header Maintenance Vent	Steam	Steam not a Pollutant	
	Pendant Superheater Outlet Header Relief Valves			
	Reheat Outlet Header Relief Valves with Silencers			
	Reheat Inlet Header Relief Valves with Silencers			
	Main Steam Stop Valves Maintenance Vent			
	Gland Steam Condenser 6" Blower Vent			
	Miscellaneous Steam Maintenance Vent			
Condensate	Misc. Condensate Maintenance Vents	Water Vapor	H ₂ O not a Pollutant	
	Intercondenser Maintenance Vent			
	Aftercondenser Maintenance Vent			
	Gland Steam Condenser Inlet Relief Valve			
	Gland Steam Condenser Outlet Maintenance Valve			

UNITS	UNITS 3 & 4 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale	
Feedwater System	Miscellaneous Maintenance Vents	Water	H ₂ O not a Pollutant	
Extraction System	Miscellaneous Maintenance Vents	Steam	Steam not a Pollutant	
Auxiliary Steam System	6" X 10" Relief Valves	Steam	Steam not a Pollutant	
_	Miscellaneous Maintenance Vents			
Cooling & Circ. Water	Miscellaneous Maintenance - 1" Vents	Water	H ₂ O not a Pollutant	
Closed Cooling Water System	Miscellaneous Maintenance Vents	Water	H ₂ O not a Pollutant	
	Closed Cooling Water Surge Tank - 6" Vent			
	Chemical Feed Tank - 1" Vent			
	Boiler Feed Pump Lube Oil Coolers – ½" Vent			
Condensate Make-Up & Recovery	Condensate Storage Tank - 3" Vent	Water Vapor	H ₂ O not a Pollutant	
	Condensate Recovery Tank - 4" Vents			
	Condensate Recovery Flash Tank - 8" Relief Valve			

UNITS 3 & 4 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale
Condensate Make-Up & Recovery (Continued)	Condensate Recovery Cooler ¾" Maintenance Vent	Water Vapor	H₂O not a Pollutant
Heater Vents & Drains	Heaters - 1" Maintenance Vents	Water Vapors	H ₂ O not a Pollutant
	Heaters - 5" X 4" Relief Valves		
Service Water	Miscellaneous Maintenance Vents - 2"	Water	H ₂ O not a Pollutant
Air Evacuation	After Condenser 4" Maintenance Vent	Aír	Air not a Pollutant
	Hogging Ejector 10" Exhaust Head		
	Moisture Separator 10" Exhaust Head		
	After Condenser ½" Maintenance Vent		
	Inter Condenser ½" Maintenance Vent		
	Waterbox Priming Vacuum Pumps - 2" Exhausters & ½" High Point Vent		

UNITS 3 & 4 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale
Lube Oil System	Lube Oil Storage Tank - 2" Vent	Lube Oil Vapors (V.O.C.)	Exempted by D.E.P. Assessment Chart Item 31
	Lube Oil Reservoir Oil Mist Eliminator		
	Generator Loop Seal Tank - 4" Exhaust Head Vent		
	Lube Oil Coolers – ½" Vents Maintenance		
	Lube Oil Filter Tank - Filter Vent		
	Generator Cooling Oil Storage Tank Vent		
	Oil Filter – ½" Maintenance Vent		
	Stand-By Vacuum Pump – ½" Vent		
	Boiler Feed Pump Lube Oil Reservoir Vapor Extractor - 2"		
Caustic Wash System	Caustic Wash Storage Tank		
	Caustic Mixing Tank		
Chemical Feed System	Phosphate Storage Tank		
	Ammonium Hydroxide Storage Tank		

UNITS 3 & 4 BOILER/STEAM GENERATOR POWER BLOCK			
Equipment/Source	Size/Source	Type of Emission	Rationale
Chemical Feed System (Continued)	Amerzine Storage Tank		
	Phosphate Feed Line Maintenance Vent – ½"		
	Amerzine Feed Line – ½" Maintenance Vent		
Fire Protection System	Miscellaneous Maintenance Vents	Water	H ₂ O not a Pollutant
Fuel Oil System	Fuel Oil Metering Tanks - Vent (12,000 BBL.)		
	Fuel Oil Blowback Tanks - Maintenance Vent		
	Fuel Oil Blowback Tanks - Relief Valve		
	Miscellaneous Maintenance Vents		
	Fuel Oil Additive Storage Tank Vent - 4,500 Gal.		

STORAGE TANKS - FUEL OIL TERMINAL			
Equipment/Source	Size/Source	Type of Emission	Rationale
Fuel Oil	F.O. Storage Tank #801 - Vents (150,000 BBL.)	(V.O.C.'s)	
	F.O. Storage Tank #802 - Vents (150,000 BBL.)		
	F.O. Storage Tank #804 - Vents (25,000 BBL.)	·	
	F.O. Storage Tank #805 - Vents (25,000 BBL.)		
	F.O. Storage Tank #806 - Vents (25,000 BBL.)		
	F.O. Storage Tank #807 - Vents (200,000 BBL.)		
	F.O. Storage Tank #808 - Vents (200,000 BBL.)		
	F.O. Storage Tank #901 - Vents (238,000 BBL.)	Fuel Oil Vapors (V.O.C.'s)	
	F.O. Storage Tank #902 - Vents (238,000 BBL.)		
	Lightoil Storage Tank #903 - Vents (24,000 BBL.)		
	Lightoil Storage Tank #904 - Vents (24,000 BBL.)		

GENERAL SITE			
Equipment/Source	Size/Source	Type of Emission	Rationale
Miscellaneous Building H.V.A.C. (Cooling/Heating)	G.T. Area Office Stores Building Control Building Service Buildings Fitness Building Switchyard Building C.E.M. Buildings Switchgear Room Water Treatment/Lab Elevators System Protection Office F.O. Terminal Office Relay Rooms Unit 3 & 4 Tool Room Gas Metering Office	Continuous	Exempted by D.E.P. Assessment Chart Item 17
Sanitary Vents/Stacks	Stores Building Control Building Recreation Pavilion Service Buildings G.T. Area Offices Port-A-Johns F.O. Terminal Office	Continuous	Exempted by D.E.P. Assessment Chart Item 23

GENERAL SITE			
Equipment/Source	Size/Source	Type of Emission	Rationale
Miscellaneous Buildings Vent/Exhaust Systems	Unit 3 & 4 Tool Room Service Buildings Chemical Lab Chemical Storage Bldg. Switchyard Control Battery Rooms Paint & Lube Oil Bldg. Dry Storage Bldg. Electrical Bldg. Warehouses Boiler Feed Pump Bldg. Control Bldg. Chlorination Bldg. Gas Metering Office Elevators G.T. Buildings	Continuous	Exempted by D.E.P. Assessment Chart Items 18 & 22
Kitchen Vent/Exhaust Systems	Control Room Service Bldg. Recreation Pavilion	Air, Kitchen Vapors	Exempted by D.E.P. Assessment Chart Item 22
C.E.M. Equipment	Monitoring Gases	Nitrogen, Sulfur Dioxide, CO _s	Exempted by D.E.P. Assessment Chart Item 15

GENERAL SITE			
Equipment/Source	Size/Source	Type of Emission	Rationale
Hydrogen Storage	Bulk Liquid Hydrogen Tank 2" Vent - (1,500 Gal.)	Hydrogen Vapors	Vapors less than 1 tpy
Gas Bottle Storage	Nitrogen, CO ₂ , Hydrogen, Oxygen, Acetylene, Argon	Various Gases	Gases Non-Regulated Substances
Oily Waste Water	Sumps	Water Vapor with Small Amounts of V.O.C.	Fuel Oil Vapors less than 1 tpy
Filling Station	2000 Gallon Unleaded Fuel Tank 2" Vent	V.O.C.	Vapors Exempted by E.P.A. Tanks 2 Program
Hazardous Waste Storage Area	Sealed Drums & Containers	Paint & Oil V.O.C.'s	Exempted by D.E.P. Assessment Chart Item 38
Natural Gas	Gas Metering Station	Methane gas Vapors	Methane Vapors less than 1 tpy
Ignition Gas (Liquid Propane)	Propane Storage Tank	Minute Releases of Methane Gas Vapors	Methane Vapors much less than 1 tpy
Water Treatment	Chemical Storage Area		Exempted by D.E.P. Assessment Chart Item
Waste Water Treatment	Storm Water Sumps	Mostly Water Vapors	Exempted by D.E.P. Assessment Chart Item 28
	Oil/Water Separator Tank Vent		
	Waste Neutralization Basin		
	Storm Water Basin		
	Ash Disposal Basin		

GENERAL SITE			
Equipment/Source	Size/Source	Type of Emission	Rationale
Home Heating and Comfort Heating with a gross maximum heat output of less than one million BTU/hour	Various	Air	Exempted by Rule 62-210.300(3) F.A.C.
Internal combustion engines in boats, aircraft and vehicles used for transportation of passengers or freight	Various	V.O.C.'s Exhaust Emissions	Exempted by Rule 62-210.300(3) F.A.C.
Vacuum Pumps used in laboratory operations	Various	Air	Exempted by Rule 62-210.300(3) F.A.C.
Equipment used for steam cleaning	Various	Air, Steam	Exempted by Rule 62-210.300(3) F.A.C.
Belt or drum sanders having a total sanding surface of five square feet or less and other equipment used exclusively on wood or plastics or their products having a density of 20 pounds per cubic foot or more	Various	Air, Particulates	Exempted by Rule 62-210.300(3) F.A.C.

GENERAL SITE			
Equipment/Source	Size/Source	Type of Emission	Rationale
Equipment used exclusively for space heating, other than boilers	Various	Air	Exempted by Rule 62-210.300(3) F.A.C.
Laboratory equipment used exclusively for chemical or physical analysis	Various	Various	Exempted by Rule 62-210.300(3) F.A.C.
Brazing, soldering or welding equipment	Various	Metal Fumes, Particulate	Exempted by Rule 62-210.300(3) F.A.C.
Laundry dryers, extractors, or tumblers for fabrics cleaned with only water solutions of bleach or detergents	Various	Air	Exempted by Rule 62-210.300(3) F.A.C.
Fire & Safety Equipment	Various	CO ₂ , Halon, Dry Chemical	Exempted by Rule 62-210.300(3) F.A.C.
Surface coating facilities in ozone attainment area (provided that 6.0 gallons of coatings per day are applied)	Various	V.O.C.'s	Exempted by Rule 62-210.300(3) F.A.C.

GENERAL SITE			
Equipment/Source	Size/Source	Type of Emission	Rationale
Degreasing units using heavier-than-air vapors exclusively, except any such unit using or emitting any substance classified as a hazardous air pollutant	Various	V.O.C.'s	Exempted by Rule 62-210.300(3) F.A.C.
Miscellaneous Activities	Plant Grounds Maintenance		Exempted by D.E.P. Chart Item 8
	Routine Maintenance/Repair Activities	Air, Various Vapors	Exempted by D.E.P. Chart Item 10
	Non-Halogenated Solvent Cleaning Operations	Vapors	Exempted by D.E.P. Chart Item 13
	Internal Combustion Engines which drive Compressors, Generators, Water Pumps or other auxiliary equipment	Propane, Gasoline or Diesel Fuel Combustion Products	Exempted by D.E.P. Chart Item 16
	Transformers, Switches and Switchgear, Processing & Venting		Exempted by D.E.P. Chart Item 19
	Electrically Heated Equipment used for Heat Treating, Tracing, Drying, Soaking, Case Hardening or Surface Conditioning		Exempted by D.E.P. Chart Item 24

	GENER	AL SITE	
Equipment/Source	Size/Source	Type of Emission	Rationale
Miscellaneous Activities (Continued)	Air Compressors and Centrifuges used for Compressing Air		Exempted by D.E.P. Chart Item 34
	Storage of Product in Sealed Containers		Exempted by D.E.P. Chart Item 41
	Painting of Plant Equipment	Paint Fumes	Presumptive Exempted by D.E.P. Chart Item 23
	Solvent Cleaning Operations (Parts Washers)	Mineral Spirits & Diesel Fuel (V.O.C.'s)	
Miscellaneous Mobile Vehicle Operation	Cars, Light Trucks, Heavy Duty Trucks, Back Hoes, Tractors, Forklifts, Cranes, Etc.	Combustion Emissions	Exempted by D.E.P. Rule F.D.E.P. 62- 210.300(3)
Miscellaneous Mobile Equipment Operation	Compressors, Chain Saws, Small Generators, (<100KW) Welding Machines, Electric Saws & Drills, Etc.		Exempted by D.E.P. Chart Item 16
Gas Turbine Area - Miscellaneous	Waste Fuel Tank - 10" & 2" Vent (1,200 Gal.)	V.O.C. Fuel Oil Vapors	Fuel Vapors less than 1 tpy
	Misc. Gas Maintenance and Relief Valves	Methane Vapors	Methane Vapors less than 1 tpy
	Sonic Caustic Parts Washer		

GENERAL SITE			
Equipment/Source	Size/Source	Type of Emission	Rationale
F.O. Terminal Miscellaneous	10,000 Gal. Oil Slop Tank	V.O.C.	
	8,000 Gal. Oil Slop Tank		
Switchyard Miscellaneous	Mineral Oil Storage Tank 2" Vent (27,000 Gal.)	Mineral Oil Vapors V.O.C.	
	Propane Fueled Generator (12.5KW) with 1½" Exhaust		
	250 Lb. Propane Storage Tanks (2) for Generator	Propane	Vapors less than 1 tpy

ATTACHMENT PPEFS_8.DOC

EQUIPMENT/ACTIVITIES REGULATED UNDER TITLE VI

Attachment PPEFS_8.doc

Equipment/Activities Regulated Under Title Vi

The Port Everglades facility currently has only one piece of equipment containing more than 50 pounds of CFC's (see below). However, there are many refrigerators and air conditioners at the plant site that contain smaller quantities of CFC's.

Service Building Air Conditioner (A & B)

120 lbs CFC's

ATTACHMENT PPEFS_9.DOC

ALTERNATIVE METHODS OF OPERATION

Attachment PPEFS_9.doc Alternative Methods of Operation

There are no known methods of operation at the current time at Port Everglades plant which would simultaneously affect emissions at more than one emissions unit but would not constitute emissions trading.

ATTACHMENT PPEFS_14

COMPLIANCE CERTIFICATION

FLORIDA

BEST AVAILABLE COPY Department of

Environmental Protection

Division of Air Resource Management

STATEMENT OF COMPLIANCE - TITLE V SOURCE

⊠	Annual Requirement (Partial) □ Transfer of Permit □	Permanent Facility Shutdown
	REPORTING PERIOD*	REPORT DEADLINE**
	January 1, through March 6, of 2003 (year)	July 1, 2003
inc	e statement of compliance must cover all conditions that were in effect d luding any conditions that were added, deleted, or changed through perme Rule 62-213.440(3)(a)2., F.A.C.	
Facil	ity Owner/Company Name: FLORIDA POWER & LIGHT COMPA	NY
Site 1	Name: PORT EVERGLADES PLANT Facility ID No. 0110036-00	1-AV County: BROWARD
СОМ	PLIANCE STATEMENT (Check only one of the following three op	ions)
X	A. This facility was in compliance with all terms and conditions of tapplicable, the Acid Rain Part, and there were no reportable in requirements associated with any malfunction or breakdown of proequipment, or monitoring systems during the reporting period identification.	cidents of deviations from applicable cess, fuel burning or emission control
	B. This facility was in compliance with all terms and conditions of tapplicable, the Acid Rain Part; however, there were one or more rapplicable requirements associated with malfunctions or breakdown control equipment, or monitoring systems during the reporting period to the Department. For each incident of deviation, the following informations of the conditions of the	eportable incidents of deviations from s of process, fuel burning or emission l identified above, which were reported
	 Date of report previously submitted identifying the incident of d Description of the incident.* *SEE ATTACHMENTS 	eviation.*
	C. This facility was in compliance with all terms and conditions of tapplicable, the Acid Rain Part, EXCEPT those identified in the reportable incidents of deviations from applicable requirements associated process, fuel burning or emission control equipment, or monitorial identified above, which were reported to the Department. For each information is included:	pages attached to this report and any stated with malfunctions or breakdowns ng systems during the reporting period
	 Emissions unit identification number. Specific permit condition number (note whether the permit condition period). 	ition has been added, deleted, or
	3. Description of the requirement of the permit condition.	
	4. Basis for the determination of noncompliance (for monitored pa was continuous, i.e., recorded at least every 15 minutes, or inter-	rameters, indicate whether monitoring mittent).
	5. Beginning and ending dates of periods of noncompliance.	
	 Identification of the probable cause of noncompliance and descr preventative measures implemented. 	iption of corrective action or
	7. Dates of any reports previously submitted identifying this incide	nt of noncompliance.
	For each incident of deviation, as described in paragraph B. above, th	e following information is included:

DEP Form No. 62-213.900(7)

Description of the incident.

Effective: 6-02-02

Date of report previously submitted identifying the incident of deviation.

STATEMENT OF COMPLIANCE - TITLE V SOURCE

RESPONSIBLE OFFICIAL CERTIFICATION

I, the undersigned, am a responsible official (Title V air permit application or responsible official notification form on file with the Department) of the Title V source for which this document is being submitted. With respect to all matters other than Acid Rain program requirements, I hereby certify, based on the information and belief formed after reasonable inquiry, that the statements made and data contained in this document are true, accurate, and complete.

MMM.	3/6/03
(Signature of Title V Source Responsible Official)	(Daté)
Name: Rudy Sanchez	Title: Plant General Manager

DESIGNATED REPRESENTATIVE CERTIFICATION (only applicable to Acid Rain source)

I, the undersigned, am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

- namy m Kersel		4-7-03
(Signature of Acid Rdin Source Designate	ed Representative)	(Date)
Name: Nancy M. Kierspe	Title: Designated	Representative

{Note: Attachments, if required, are created by a responsible official or designated representative, as appropriate, and should consist of the information specified and any supporting records. Additional information may also be attached by a responsible official or designated representative when elaboration is required for clarity. This report is to be submitted to both the compliance authority (DEP district or local air program) and the U.S. Environmental Protection Agency(EPA) (U.S. EPA Region 4, Air and EPCRA Enforcement Branch, 61 Forsyth Street, Atlanta GA 30303).}

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DEP Form No. 62-213.900(7)

Effective: 6-02-02

Emissions	Unit In	formation	Section	1	of	6	
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#### III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

#### A. GENERAL EMISSIONS UNIT INFORMATION (All Emissions Units)

#### **Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one)						
[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).						
[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.						
[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.						
2. Regulated or Unregulated Emissions Unit? (Check one)						
[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.						
[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.						
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Port Everglades Boiler Unit 1						
4. Emissions Unit Identification Number: 001 [ ] No ID [ ] ID Unknown						
5. Emissions Unit Startup Status Code: A Date: 05/01/60 7. Emissions Unit Major Group SIC Code: 49 [Y]						
9. Emissions Unit Comment: (Limit to 500 Characters): The generator nameplate rating given reflects information provided to the Florida Public Service Commission (PSC) in the 10-Year Site Plan. Actual generator output may exceed the stated value, and may vary seasonally, or with changes in unit efficiency, and with fluctuations in system load demand.						

<b>Emissions Unit Information Section</b>	1	of	6	
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#### **Emissions Unit Control Equipment**

- 1. Control Equipment/Method Description (Limit to 200 characters per device or method):
- A. Low NOx Burners
- B. Multiple Cyclones w/ Fly Ash Reinjection
- C. Staged Combustion
- D. Electrostatic Precipitators (Proposed ca. 2005 & 2006)

2. Control Device or Method Code(s): A = 024, B = 077, C = 025, D = 011

#### **Emissions Unit Details**

1. Package Unit:

Manufacturer: Combustion Engineering / Westinghouse

Model Number:

2. Generator Nameplate Rating:

225 MW

3. Incinerator Information:

Dwell Temperature:

٥F

Dwell Time:

seconds

Incinerator Afterburner Temperature:

٥F

Emissions	Unit In	formation	Section	1	of	6	

### B. EMISSIONS UNIT CAPACITY INFORMATION (Regulated Emissions Units Only)

#### **Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	24	00 mmBtu/hr		
2. Maximum Incineration Rate:	lb/hr	tons/day		
3. Maximum Process or Through	nput Rate:			
4. Maximum Production Rate:				
5. Requested Maximum Operating Schedule:				
	hours/day	days/week		
	weeks/year	8760 hours/year		
6. Operating Capacity/Schedule  The maximum heat input given at firing residual oil is 2300 mmbtu/analysis.	pove reflects natural gas firin	g. Maximum heat input while		

Emissions	<b>Unit Information</b>	Section	1	of	6	
	O MIL THIOLIMATION	Section	-	OI.	•	

## C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

#### **List of Applicable Regulations**

FDEP Title V Core List, Attachment PPEU1_C	·
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<b>Emissions</b>	<b>Unit Information</b>	Section	1	of	6	

#### D. EMISSION POINT (STACK/VENT) INFORMATION (Regulated Emissions Units Only)

#### **Emission Point Description and Type**

Identification of Point on Plant Flow Diagram? Unit 1 boiled.		2. Emission Po	oint Type Code: 1		
Descriptions of Emission Pour 100 characters per point): 1      ID Numbers or Descriptions	NA .				
Emissions Unit 1, Port Everglad					
5. Discharge Type Code: V	6. Stack Height: 343 feet		7. Exit Diameter: 14 feet		
8. Exit Temperature: 289 °F	9. Actual Vol Rate: 813	umetric Flow 928.9 acfm	10. Water Vapor:	%	
11. Maximum Dry Standard Flo	ow Rate: dscfm	12. Nonstack Er	mission Point Height:	feet	
13. Emission Point UTM Coordinates:					
Zone: 17	ast (km): 587.4	Nort	h (km): 2885.2		
14. Emission Point Comment (limit to 200 characters): Information provided in item #9 above from initial Title V application. Flow rates vary depending on operating conditions.					

<b>Emissions Unit Information Section</b> 1 of	1 of 6
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#### E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Rate: Segment101/						
Segment Description (Process/Fuel Type) (limit to 500 characters):     Natural gas burned in Unit 1 boiler						
2. Source Classification Code 1-01-006-01	e (SCC):	3. SCC Units:	Millions of cubic feet			
4. Maximum Hourly Rate: 2.29	5. Maximum 20022.86	Annual Rate:	6. Estimated Annual Activity Factor:			
7. Maximum % Sulfur: 0.0031	8. Maximum	% Ash:	9. Million Btu per SCC Unit: 1050			
10. Segment Comment (limit to variable combination of No. 6 specification used oil from FP.	residual oil, nat	•	* <b>-</b>			
Segment Description and Ra	ite: Segment	_2 of7				
Segment Description (Proc No. 6 oil burned in Unit		(limit to 500 cha	racters):			
2. Source Classification Code 1-01-004-01	e (SCC):	3. SCC Units:	Thousand gallons burned			
4. Maximum Hourly Rate: 15.24	5. Maximum 133472.56	Annual Rate:	6. Estimated Annual Activity Factor:			
7. Maximum % Sulfur: 2.5 8. Maximum % Ash: 9. Million Btu per SCC Unit 152						
10. Segment Comment (limit to 200 characters): The unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or onspecification used oil from FPL operations.						

<b>Emissions Unit Information Section</b>	1	of	6	
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Segment Description and l	Rate: Segment	3	of 7	
Seguirent Seberripinen unu :	tantoi Dogittoitt	-	O	

1.	Segment Description (Process/Fuel Type)	(limit to	500 char	acters):
Ut	nit 1 boiler burning No. 2 fuel oil			

2. Source Classification Code (SCC):	3. SCC Units: Thousand gallons burned
1-01-005-01	

- 1	1 01 003 01		
	4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity
	16.9	148147.1	Factor:
	7. Maximum % Sulfur: 0.5	8. Maximum % Ash:	9. Million Btu per SCC Unit:
			136

10. Segment Comment (limit to 200 characters): The unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or onspecification used oil from FPL operations.

#### Segment Description and Rate: Segment 4 of 7

1.	Segment Description (Process/Fuel Type)	(limit to 500 characters):
	Propane burned in Unit 1 boiler	

<u> </u>		•		
2. Source Classification Code (SCC):		3. SCC Units: Millions of cubic feet		
1-01-006-01			·	
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:	6. Estimated Annual Activity	
2.4	21024		Factor:	

7. Maximum % Sulfur: 8. Maximum % Ash: 9. Million Btu per SCC Unit: 1000

10. Segment Comment (limit to 200 characters): The unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or onspecification used oil from FPL operations.

DDT	¥7 .	
PPE	Unit	1 1

Segment Description and Ra     Segment Description (Proc     On-specification used of	cess/Fuel Type)	(limit to 500 cha	aracters):			
2. Source Classification Code 1-01-013-02	e (SCC):	3. SCC Units:	Thousand gallons burned			
4. Maximum Hourly Rate: 22.43	5. Maximum . 1,500	Annual Rate:	6. Estimated Annual Activity Factor:			
7. Maximum % Sulfur: 2.5	8. Maximum	% Ash:	9. Million Btu per SCC Unit: 136			
Segment Description and Ra	nte: Segment	_6of7				
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 1 boiler co-firing all possible combinations of natural gas, residual oil, on-specification used oil, #2 fuel oil, and propane.						
2. Source Classification Code 1-01	e (SCC):	3. SCC Units:	: Millions of cubic feet			
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:	6. Estimated Annual Activity Factor:			
7. Maximum % Sulfur: 8. Maximum % Ash: 9. Million Btu per SCC Unit:						
10. Segment Comment (limit to 200 characters): The unit is currently permitted to burn a variable combination of above fuels in a ratio that will result in a max. SO ₂ emission of 2.75 lb/mmbtu.						

Emissions	Unit	Information	Section	1	οf	6	
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Segment Description and Rate: Segment 7 of 7

2. Segment Description (Process/Fuel Type) (limit to 500 characters):

Boiler chemical cleaning waste evaporated in Unit 1 boiler. This process may be undertaken while firing natural gas or residual oil.

2. Source Classification Code (SCC):1-01-013-013. SCC Units: Thousand gallons

4. Maximum Hourly Rate: 5. Maximum Annual Rate: 500 Factor:

7. Maximum % Sulfur: 8. Maximum % Ash: 9. Million Btu per SCC Unit:

10. Segment Comment (limit to 200 characters): Items 6, 7, 8, & 9 do not apply. This activity to be undertaken on a periodic basis in accordance with DARM guidance, and EPA waste rules (40 CFR 279.72).

## F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1. Pollutant Emitted	2. Primary Control	3. Secondary Control	4. Pollutant
	Device Code	Device Code	Regulatory Code
SO2	NA	NA	EL
NOx	024	NA	EL
СО	NA	NA	. NS
PM	· 011 (Future)	077 (Existing)	EL
PM10	011	077	EL
	(Future)	(Existing)	
VOC	NA	NA	NS
H133	NA	NA	NS
H106	NA	NA	NS
H107	NA	NA	NS
SAM	NA	NA	NS
HAP	NA	NA	NS
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			·

Emissions Unit Information Section	1_	_ of _	6	_	PPE Unit 1
Pollutant Detail Information Page	1	of	3		Sulfur Dioxide

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

#### **Pollutant Detail Information**

1. Pollutant Emitted: SO ₂	2. Total Percent Efficiency of Control:			
3. Potential Emissions:	4. Synthetically			
6325 lb/hour 27703.5 tons/y	year Limited? [N]			
5. Range of Estimated Fugitive Emissions:				
[ ] 1 [ ] 2 [ ] 3	to tons/year			
6. Emission Factor: 2.75 lb/mmbtu	7. Emissions			
Reference: DEP Rule 62-296.405 (1)(c)1.j. Method				
8. Calculation of Emissions (limit to 600 charac	cters):			
,	•			
2.75 lb/mmbtu* 2300 mmbtu/hr = 6325 lb/hr				
(6325 lb/hr* 8760 hr/yr) / 2000 lb/ton = 27703	5 tons/ vr			
(0323 10/111 0700 111/91)/ 2000 10/1011 27703	.5 tons/ yr			
0 Pollytent Potential/Eusitive Emissions Com-	mont (limit to 200 abarractors).			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):				
Allowable Emissions Allowable Emissions	_1_ of1_			
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable			
Emission limit required by rule	Emissions:			
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:			
2.75 lb/mmbtu	6325 lb/hour 27703.5 tons/year			
5. Method of Compliance (limit to 60 character	rs): Fuel sampling & analysis			
6. Allowable Emissions Comment (Desc. of Op	perating Method) (limit to 200 characters):			
2.75 lb/mmbtu is the current regulatory limit on				
(1)(c)1.j.]. Equivalent allowable emissions are g	iven for liquid fuel firing.			

<b>Emissions Unit Information Section</b>	1_	_ of _	6	PPE Unit 1
Pollutant Detail Information Page	2	of	3	Nitrogen Oxide

Emissions-Limited and Preconstruction Review Pollutants Only)

#### **Pollutant Detail Information**

1. Pollutant Emitted: NOx	2. Total Percent Efficiency of Control:			
3. Potential Emissions:	4. Synthetically			
828 lb/hour 3626.64 tons/ye	ear Limited? [N]			
5. Range of Estimated Fugitive Emissions:	,			
	totons/year			
6. Emission Factor: 2.75 lb/mmbtu	7. Emissions			
Reference: DEP Rule 62-296.570 (4)(b	Method Code: 0			
8. Calculation of Emissions (limit to 600 charac	cters):			
0.36 lb/mmbtu* 2300 mmbtu/hr = 828lb/hr (oi	il)			
(828 lb/br* 8760 br/rm) / 2000 lb/ton = 2626 6	4 tong/im (oil)			
(828 lb/hr* 8760 hr/yr) / 2000 lb/ton = 3626.64	4 tons/ yr (on)			
9. Pollutant Potential/Fugitive Emissions Com				
provided is for oil firing. Facility uses a 30-day rolling average for NOx compliance. Limit =				
0.20 on natural gas fuel.				
Allowable Emissions Allowable Emissions	lof2			
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable			
Emission limit required by rule	Emissions:			
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:			
0.36 lb/mmbtu	828 lb/hour 3626.64 tons/year			
5. Method of Compliance (limit to 60 character	rs): Continuous Emissions Monitor			
6. Allowable Emissions Comment (Desc. of Op	perating Method) (limit to 200 characters):			
0.36 lb/mmbtu is the current regulatory limit on				
Equivalent allowable emissions are given for liq	uid fuel firing.			
I .				

<b>Emissions Unit Information Section</b>	1 of6	PPE Unit 1
Pollutant Detail Information Page	2 of 3	Nitrogen Oxide

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

#### Pollutant Detail Information

1 ondtant Detail Information				
1. Pollutant Emitted: NOx	2. Total Percent Efficiency of Control:			
3. Potential Emissions:	4. Synthetically			
lb/hour tons/year	Limited? []			
5. Range of Estimated Fugitive Emissions:	2			
	_ to tons/year			
6. Emission Factor:	7. Emissions			
	Method Code:			
Reference:				
8. Calculation of Emissions (limit to 600 charac	cters):			
O. P. H P	- (I)			
9. Pollutant Potential/Fugitive Emissions Comm	nent (limit to 200 characters):			
Allowable Emissions Allowable Emissions	_2_ of2_			
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable			
Emission limit required by rule	Emissions:			
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:			
0.2 lb/mmbtu	480 lb/hour 2102.4 tons/year			
5. Method of Compliance (limit to 60 characters): Continuous Emissions Monitor				
6. Allowable Emissions Comment (Desc. of Or	perating Method) (limit to 200 characters):			
0.2 lb/mmbtu is the current regulatory limit on N				
Equivalent allowable emissions are given for liqu				

Emissions Unit Information Section1	of6	PPE Unit 1
Pollutant Detail Information Page3	of3	Particulate Matter - Total

#### G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units Emissions-Limited and Preconstruction Review Pollutants Only)

Emissions-Limited and Frecons	if uction Review 1 offutants Only)			
Pollutant Detail Information				
Pollutant Emitted: Particulate Matter - Total	2. Total Percent Efficiency of Control:			
3. Potential Emissions: 287.5 lb/hour 1259.25 tons/	/year 4. Synthetically Limited? [N]			
5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3	totons/year			
6. Emission Factor: 0.125 lb/mmbtu  Reference: DEP Rule 62-296.405 (1)(b) and 62-210.700(3)  7. Emissions  Method Cod				
8. Calculation of Emissions (limit to 600 chara	cters):			
0.125 lb/mmbtu* 2300 mmbtu/hr = 287.5 lb/h	r			
(287.5 lb/hr* 8760 hr/yr) / 2000 lb/ton = 1259	.25 tons/ yr			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): The particulate matter emission limit for 3 hrs/24hrs at 0.3 lb/mmbtu and 21 hrs/24hrs at 0.1 lb/mmbtu is equivalent to an average of 0.125 lb/mmbtu.				
Allowable Emissions Allowable Emissions	_1 of4			
Basis for Allowable Emissions Code:     Emissions limit required by law	2. Future Effective Date of Allowable Emissions:			
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:			
0.1 lb/mmbtu	230 lb/hour 881.45 tons/year			
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.				
6. Allowable Emissions Comment (Desc. of O 0.1 lb/mmbtu is the current regulatory limit on F emissions are given for liquid fuel firing.				

Emissions Unit Information Section _	1_	_ of _	6	PPE Unit 1
Pollutant Detail Information Page _	3_	_ of _	_3_	Particulate Matter - Total

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

Pollutant Detail Information	•,				
Pollutant Emitted: Particulate Matter - Total	2. Total Percent Efficiency of Control:				
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]				
5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3	totons/year				
6. Emission Factor:  Reference:	7. Emissions Method Code:				
8. Calculation of Emissions (limit to 600 charac	cters):				
9. Pollutant Potential/Fugitive Emissions Comm	ment (limit to 200 characters):				
Potential/Fugitive Emissions  Allowable Emissions					
Basis for Allowable Emissions Code:     Emission limit required by rule	2. Future Effective Date of Allowable Emissions:				
3. Requested Allowable Emissions and Units: 0.3 lb/mmbtu	4. Equivalent Allowable Emissions: 690 lb/hour 377.8 tons/year				
5. Method of Compliance (limit to 60 character DEP Rule 62-296.405(1)(e)2.	rs):				
6. Allowable Emissions Comment (Desc. of Op Data is for sootblowing conditions firing fuel oil allowable emissions are given for liquid fuel firi	, worst case [Rule 62-210.700(3)]. Equivalent				

<b>Emissions Unit Information Section</b>	1 of	66	PPE Unit 1
Pollutant Detail Information Page	3 of	3	Particulate Matter - Total

#### G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -**Emissions-Limited and Preconstruction Review Pollutants Only)**

ronutant Detail Information				
1. Pollutant Emitted: Particulate Matter -	2. Total Percent Efficiency of Control:			
Total				
3. Potential Emissions:	4. Synthetically			
lb/hour tons/year	Limited? []			
5. Range of Estimated Fugitive Emissions:				
	to tons/year			
6. Emission Factor:	7. Emissions			
Reference:	Method Code:			
8. Calculation of Emissions (limit to 600 chara	icters):			
	·			
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):			
7. Tottatatt Totottian agitive Emissions Com	ment (mint to 200 characters).			
	<u> </u>			
Allowable Emissions Allowable Emissions	_3 of4			
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable			
OTHER	Emissions: May 31, 2006			
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:			
0.03 lb/mmbtu	69 lb/hour 302.2 tons/year			
5. Method of Compliance (limit to 60 characte	rs):			
DEP Rule 62-296.405(1)(e)2.	•			
6. Allowable Emissions Comment (Desc. of O	nerating Method) (limit to 200 characters):			
Based on its negotiations with the Department, applicant agrees to reduce steady-state PM				
emissions of its fossil fueled steam boilers in Broward County to 0.03 lb/mmbtu. Equivalent				
allowable emissions are given for liquid fuel firm	ing.			

Emissions Unit Information Section _	1_	_ of _	6	PPE Unit 1
Pollutant Detail Information Page	3	of	3	Particulate Matter - Total

#### G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units -

Emissions-Limited and Preconstruction Review Pollutants Only)

Pollutant Detail Information						
Pollutant Emitted: Particulate Matter - Total	2. Total Percent Efficiency of Control:					
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]					
5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3	to tons/year					
6. Emission Factor:  Reference:	7. Emissions Method Code:					
8. Calculation of Emissions (limit to 600 characters):						
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):						
7. Tonatant Totellian agitive Limssions Com	ment (mint to 200 characters).					
Allowable Emissions 4_ of 4_						
Basis for Allowable Emissions Code:     OTHER	2. Future Effective Date of Allowable Emissions: May 31, 2006					
3. Requested Allowable Emissions and Units: 0.1 lb/mmbtu	4. Equivalent Allowable Emissions: 230 lb/hour 125.9 tons/year					
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.						
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce PM emissions of its fossil fueled steam boilers in Broward County. Equivalent allowable emissions are given for liquid fuel firing and soot blowing.						

<b>Emissions Unit Information Section</b>	1	of	6	
Emissions only intollination Section	1	UI	U	

## H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissi	ons Limitation l of 5			
1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity:			
	[X] Rule [ ] Other			
3. Requested Allowable Opacity:				
Normal Conditions: 40 % Exceptional Conditions: %				
Maximum Period of Excess Opacity Allow	ed: min/hour			
4. Method of Compliance: EPA Method 9				
5 Visible Emissions Comment (limit to 200)	homostors), DED Bulo 62 206 405(1)(a) and			
5. Visible Emissions Comment (limit to 200 c				
(1)(e)1., F.A.C. Visible emissions limited to 40	1 · · · · · · · · · · · · · · · · · · ·			
emissions. Compliance testing is performed and	nually using EPA Method 9.			
Visible Emissions Limitation: Visible Emissi	ions Limitation2 of5			
1. Visible Emissions Subtype: VE60	2. Basis for Allowable Opacity:			
	[X] Rule [ ] Other			
3. Requested Allowable Opacity:				
Normal Conditions: 60 % Exceptional Conditions: 100 %				
Maximum Period of Excess Opacity Allowed: 24 min/hour				
	·			
4. Method of Compliance: EPA Method 9				
5. Visible Emissions Comment (limit to 200 c	,			
limits sootblowing & load changing to 60% op	•			
periods of up to 100% opacity if unit has an ope	erational CFM			

<b>Emissions Unit Information Section</b>	1_	_ of _	6	

Visible Emissions Limitation: Visible Emiss	ions Limitation3 of5
1. Visible Emissions Subtype: VE100	Basis for Allowable Opacity:     [X] Rule     [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Ex Maximum Period of Excess Opacity Allow	cceptional Conditions: 100 % red: 60 min/hour
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 of F.A.C. allow up to 100% opacity, for an unlimit 2hrs/24hrs for malfunctions.	
Visible Emissions Limitation: Visible Emiss	ions Limitation4 of5
1. Visible Emissions Subtype: VE20	Basis for Allowable Opacity:     Rule [X] Other
Requested Allowable Opacity:     Normal Conditions: 20 % Ex     Maximum Period of Excess Opacity Allow	cceptional Conditions: % red: min/hour
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 of Department, applicant agrees to reduce visible steam boilers in Broward County to 20%. This Compliance testing is performed annually using	emissions 6-minute average of its fossil fueled limit becomes effective May 31, 2006.

En	missions Unit Information Section1_	of_	6		PPE Unit 1
<u>Vi</u>	sible Emissions Limitation: Visible Emission	ons	Limitation5	_of5	_
1.	Visible Emissions Subtype: VE40	2.	Basis for Allowab [ ] Rule	le Opacity: [X] Oth	ner
3.	Requested Allowable Opacity: Normal Conditions: 40 % Exc Maximum Period of Excess Opacity Allower	•	ional Conditions: 24 min/hour	100 %	
4.	Method of Compliance: EPA Method 9			_	

5. Visible Emissions Comment (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce visible emissions of its fossil fueled steam boilers in Broward County, and limits sootblowing & load changing to 40% opacity for up to 3hrs/24 hrs, with 4, six-minute periods of up to 100% opacity if unit has an operational COM. This limit becomes effective May 31, 2006.

Emissions	Unit	Information	Section	1	of	6	
	~	THE CLEAR STORY	~ CCLOR	-	~ -	•	

# I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring)

<u>Co</u>	ntinuous Monitoring System: Continuous	Monitor1 of3
1.	Parameter Code: EM	2. Pollutant(s): NOx
3.	CMS Requirement:	[X] Rule [ ] Other
4.	Monitor Information:	
	Manufacturer: TEI	
	Model Number: 42c Se	rial Number: 42c-77131-385
5.	Installation Date: 02/04/03	6. Performance Specification Test Date:
		02/19/03
7.	Continuous Monitor Comment (limit to 200	characters): Required by 40 CFR 75.
<u> </u>		
		•

# I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __2__ of ___3__

Parameter Code: EM	2. Pollutant(s): CO ₂		
3. CMS Requirement:	[X] Rule [ ] Other		
4. Monitor Information:			
Manufacturer: Milton Roy			
Model Number: 3300	Serial Number: N312496T		
5. Installation Date: 07/09/94	6. Performance Specification Test Date:		
	09/08/94		
7. Continuous Monitor Comment (limit to 2)	00 characters): Required by 40 CFR 75.		

DEP Form No. 62-210.900(1) – Form Effective: 2/11/99

enoissions.	<b>Unit Information</b>	Section	1	οf	6	
CHH2210H2	Unit Information	Section	I	01	0	

# I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 3 of 3

1.	Parameter Code: EM	2. Pollutant(s): Visible Emissions (opacity)
3.	CMS Requirement:	[X] Rule [ ] Other
4.	Monitor Information:	-
	Manufacturer: Phoenix Instruments, Inc.	
	Model Number: OPAC 20/20	Serial Number: OPAC - 1079
5.	Installation Date: 12/04/00	6. Performance Specification Test Date:
		12/20/00
7.	Continuous Monitor Comment (limit to 200	characters): Required by 40 CFR 75.
		· ·

<b>Emissions Unit Information Section</b>	1	of	6	
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## J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION (Regulated Emissions Units Only)

## **Supplemental Requirements**

1.	Process Flow Diagram
	[X] Attached, Document ID: PPEU1bmp_ [ ] Not Applicable [ ] Waiver Requested
2	Fuel Analysis or Specification
2.	[X] Attached, Document ID: PPEU1_2.doc [ ] Not Applicable [ ] Waiver Requested
	[A] Attached, Document ID. 11 EO1_2.doc [ ] Not Applicable [ ] Walver requested
3.	Detailed Description of Control Equipment
	[X] Attached, Document ID: PPEU1 3.doc [ ] Not Applicable [ ] Waiver Requested
4.	Description of Stack Sampling Facilities
	[X] Attached, Document ID: PPEU1_4.bmp [ ] Not Applicable [ ] Waiver Requested
_	
5.	Compliance Test Report
	[ ] Attached, Document ID:
	[X] Previously submitted, Date:
	[ ] Not Applicable
-	Dunca damag Can Chartan and Chartan
0.	Procedures for Startup and Shutdown  [Y] Attached Decement ID: RRELL 6 dec. [ ] Not Applicable [ ] Weiver Requested
	[X] Attached, Document ID: PPEU1_6.doc [ ] Not Applicable [ ] Waiver Requested
7.	Operation and Maintenance Plan
	[ ] Attached, Document ID: [X] Not Applicable [ ] Waiver Requested
8.	Supplemental Information for Construction Permit Application
	[ ] Attached, Document ID: [X] Not Applicable
	Other Information Description Description
ا ع.	Other Information Required by Rule or Statute
	[ ] Attached, Document ID: [X] Not Applicable
10	. Supplemental Requirements Comment:
	11

<b>Emissions</b>	<b>Unit Information</b>	Section	1	of	6
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# Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[X] Attached, Document ID: PPEU1_ 10.doc [ ] Not Applicable
12 Alternative Medes of Operation (Emissions Trading)
12. Alternative Modes of Operation (Emissions Trading)  [ ] Attached, Document ID: [N/A] Not Applicable
[ ] Attached, Document ID [IVA] Not Applicable
13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID: [ X ] Not Applicable
14 C . 1. A . 14
14. Compliance Assurance Monitoring Plan  [ X] Attached, Document ID: PPEU1_14.doc [ ] Not Applicable
[ A] Attached, Document ID. 11 E01_14.doc [ ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required)
[ X ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: PPEU1_15.doc
Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: N/A
[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:N/A/
Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:N/A
Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:N/A _
Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:N/A
[X] Not Applicable

ATTACHMENT PPEU1_C
EMISSION UNIT INFORMATION

40 C.F.R. 279.72 40 C.F.R. 72.20(a) 40 C.F.R. 72.20(b)
40 C.F.R. 72.20(c) 40 C.F.R. 72.21(a) 40 C.F.R. 72.21(b) 40 C.F.R. 72.21(d)
40 C.F.R. 72.22(a) 40 C.F.R. 72.22(c) 40 C.F.R. 72.22(c) 40 C.F.R. 72.23
40 C.F.R. 72.24(a) 40 C.F.R. 72.30(a) 40 C.F.R. 72.30(b)(2)
40 C.F.R. 72.30(c) 40 C.F.R. 72.30(d) 40 C.F.R. 72.32
40 C.F.R. 72.33(b) 40 C.F.R. 72.33(c) 40 C.F.R. 72.33(d) 40 C.F.R. 72.40(a)
40 C.F.R. 72.40(b) 40 C.F.R. 72.40(c) 40 C.F.R. 72.40(d)
40 C.F.R. 72.51 40 C.F.R. 72.90 40 C.F.R. 72.9(a)(1)(iii) 40 C.F.R. 72.9(a)(1)(i)
40 C.F.R. 72.9(a)(1)(i) 40 C.F.R. 72.9(a)(2) 40 C.F.R. 72.9(b) 40 C.F.R. 72.9(c)(1)(iii)
40 C.F.R. 72.9(c)(2) 40 C.F.R. 72.9(c)(4) 40 C.F.R. 72.9(c)(5)
40 C.F.R. 72.9(d) 40 C.F.R. 72.9(e) 40 C.F.R. 72.9(f) 40 C.F.R. 72.9(g)(4)
40 C.F.R. 72.9(g)(4) 40 C.F.R. 73.33 40 C.F.R. 73.35 40 C.F.R. 75 Appendix A-1
40 C.F.R. 75 Appendix A-2 40 C.F.R. 75 Appendix A-3
40 C.F.R. 75 Appendix A-4 40 C.F.R. 75 Appendix A-5 40 C.F.R. 75 Appendix A-6 40 C.F.R. 75 Appendix B 40 C.F.R. 75 Appendix C-1
40 C.F.R. 75 Appendix C-1 40 C.F.R. 75 Appendix C-2 40 C.F.R. 75 Appendix D 40 C.F.R. 75 Appendix F

40.05.D.46.4. (1. 0.0.
40 C.F.R. 75 Appendix G-2
40 C.F.R. 75 Appendix G-4
40 C.F.R. 75 Appendix H 40 C.F.R. 75.10(a)(1)
40 C.F.R. 75.10(a)(1)
40 C.F.R. 75.10(a)(2) 40 C.F.R. 75.10(a)(3)(i) 40 C.F.R. 75.10(a)(4)
40 C.F.R. 75.10(a)(4)
40 C.F.R. 75.10(b)
40 C.F.R. 75.10(a)(4) 40 C.F.R. 75.10(b) 40 C.F.R. 75.10(c) 40 C.F.R. 75.10(d) 40 C.F.R. 75.10(f) 40 C.F.R. 75.10(g)
40 C.F.R. 75.10(d)
40 C.F.R. 75.10(f)
40 C.F.R. 75.10(g)
40 C.F.R. 75.11(b)(1) 40 C.F.R. 75.11(c)(3) 40 C.F.R. 75.11(d) 40 C.F.R. 75.12(a)
40 C.F.R. 75.11(c)(3)
40 C.F.R. 75.11(d)
40 C.F.R. 75.12(a)
40 C.F.R. 75.12(b)
40 C.F.R. 75.13(a) 40 C.F.R. 75.13(b)
40 C.F.R. 75.13(b)
40 C.F.R. 75.14(a) 40 C.F.R. 75.20(a)(5) 40 C.F.R. 75.20(b)
40 C.F.R. 75.20(a)(5)
40 C.F.R. 75.20(c)
40 C.F.R. 75.20(c) 40 C.F.R. 75.20(d)
40 C.F.R. 75.20(f) 40 C.F.R. 75.20(g) 40 C.F.R. 75.21(a)
40 C.F.R. 75.20(g)
40 C.F.R. 75.21(a)
40 C.F.R. 75.21(b)
40 C.F.R. 75.21(b) 40 C.F.R. 75.21(c)
40 C.F.R. 75.21(d) 40 C.F.R. 75.21(e)
40 C.F.R. 75.21(e)
40 C.F.R. 75.21(f)
40 C.F.R. 75.22 40 C.F.R. 75.24 40 C.F.R. 75.30(a)(1) 40 C.F.R. 75.30(a)(2) 40 C.F.R. 75.30(a)(3)
40 C.F.R. 75.24
40 C.F.R. 75.30(a)(1)
40 C.F.R. 75.30(a)(2)
40 C F R 75 31
40 C.F.R. 75.31 40 C.F.R. 75.32
40 C.F.R. 75.33
40 C.F.R. 75.35
40 C.F.R. 75.36
40 C.F.R. 75.4(a)(4)(ii)
40 C.F.R. 75.5
40 C.F.R. 75.51(c)
40 C.F.R. 75.53(a)
40 C.F.R. 75.53(b)
40 C.F.R. 75.53(a) 40 C.F.R. 75.53(b) 40 C.F.R. 75.53(c) 40 C.F.R. 75.53(d)(1)
40 C.F.R. /3.33(0)(1)
40 C.F.R. 75.54

40 C.F.R. 75.55(c)
40 C.F.R. 75.55(e)
40 C.F.R. 75.55(c)
40 C.F.R. 75.56 40 C.F.R. 75.60(a)
40 C.F.R. 75.60(b)
40 C.F.R. 75.60(c)(3)
40 C.F.R. 75.60(c)(3) 40 C.F.R. 75.61(a)(1) 40 C.F.R. 75.61(a)(5) 40 C.F.R. 75.61(b)
40 C.F.R. 75.61(a)(5)
40 C.F.R. 75.61(b)
40 C.F.R. 75.62
40 C.F.R. 75.63
40 C.F.R. 75.64(a)
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40 C.F.R. 75.64(d) 40 C.F.R. 75.65
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40 C.F.R. 75.66(g)
40 C.F.R. 75.66(h)
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40 C.F.R. 77.3
40 C.F.R. 77.5(b)
40 C.F.R. 77.6
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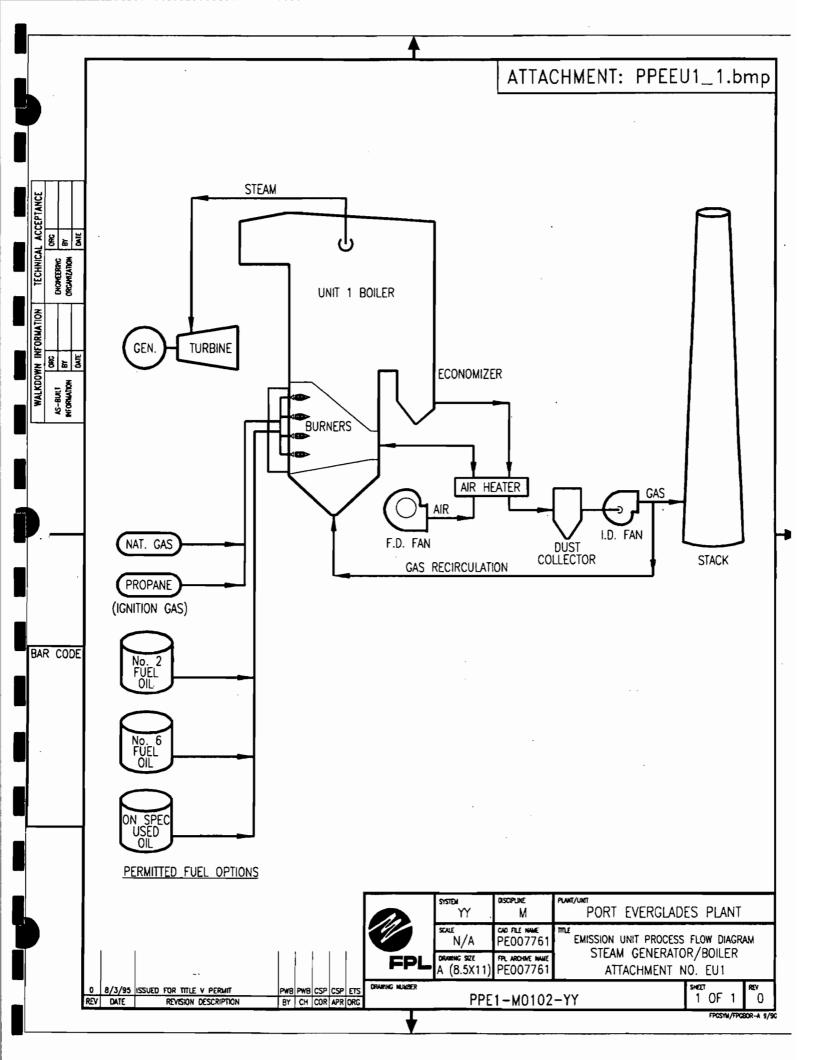
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F.A.C. 62-210.700 (6)	
F.A.C. 62-214.300 F.A.C. 62-214.330	
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F.A.C. 62-296.500(2)(c)	
F.A.C. 62-296.570(4)(a)3.	
F.A.C. 62-296.570(4)(a)4.	
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F A C 62-297 310(1)	
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F.A.C. 62-297.310(2)(3)	
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F.A.C. 62-297.310(4)(e)	
F.A.C. 62-297.310(5)	
F A C. 62-297 310(6)(a)	
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F.A.C. 62-297.310(6)(g) F.A.C. 62-297.310(7)(a)1.	
F.A.C. 62-297.310(7)(a)2.	
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F.A.C. 62-297.310(7)(a)4.	
F.A.C. 62-297.310(7)(a)5.	
F.A.C. 62-297.310(7)(a)9.	
F.A.C. 62-297.310(7)(c)	
F.A.C. 62-297.310(7)(c) F.A.C. 62-297.310(8)	
Table 62-297.310-1	

ATTACHMENT PPEU1_.BMP_
PROCESS FLOW DIAGRAM



ATTACHMENT PPEU1_2.DOC
FUEL ANALYSIS OR SPECIFICATIONS

### Fuel Analysis Natural Gas Analysis (typical)²

Parameter	Typical value	Max value	
Specific gravity(@ 60° F)	0.887	none	
Heat content (Btu/cu ft) 950 -	1124	none	
% sulfur (grains/CCF)	$0.43^{1}$	1 grain / ccf	
% nitrogen (by volume) 0.8		none	
% ash	negligible	none	

- *Note: The values listed are "typical" values based upon information supplied to FPL by Florida Gas Transmission (FGT). However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.
- (1) Data from laboratory analysis
- (2) The values are "typical" based upon the following:
  - . Information gathered by FPL through laboratory analysis, and
- . FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

# Fuel Analysis No.6 Oil Analysis (typical)⁴

Parameter	Typical value	Specifications	
API gravity (@ 60° F)	6 - 12	none	
Heat content(MBtu/bbl) 6,	310 - 6420	$6,340^{1}$	
% Sulfur	1.0	$2.5 \text{ max}^3$	
% Nitrogen	$0.2 - 0.5^2$	none	
% Ash	$0.06 - 0.09^2$	0.10 max ¹	

- (1) Data taken from FPL fuel specifications.
- (2) Data taken from laboratory analysis.
- (3) Maximum permitted from current air operation permit.
- (4) The values are "typical" based upon the following:
  - . Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

# Fuel Analysis No. 2 Distillate oil (typical)³

Parameter	Typical value		Specifications
API gravity (@ 60 F)	$35.0^{2}$		$30 - 40^{T}$
Heat content (MBtu/bbl)	5,700 - 5,800 ²	none	
% sulfur	$0.3 - 0.5^{1}$		0.5 maximum ¹
% nitrogen	no specification	none	
% ash	<0.01 ²		0.011

- (1) Data taken from FPL fuel specifications.
- (2) Data taken from laboratory analysis.
- (3) The values are "typical" based upon the following:
  - . Information gathered by FPL through laboratory analysis, and
- . FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

Fuel Analysis Propane (typical)¹

Emission unit #1 may occasionally light off (start up) on propane fuel, then switch to another fuel, such as No.6 residual oil. The propane fuel is supplied by a commercial vendor and is stored in small tanks located at the bottom of the boiler area. The chemical formula for propane is  $C_3H_8$ .

Parameter	Typical value	Specifications	
Specific gravity (@ 60 F)	$0.51^{1}$	none	
Heat content (MBtu/bbl)	600 - 1,000	none	
% sulfur	0.0031	none	
% nitrogen	no specification	none	
% ash	no specification	none	

- (1) The values are "typical" based upon the following:
  - . Information gathered by FPL through laboratory analysis, and
- FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

### Fuel Analysis On Specification Used Oil

The boiler may occasionally burn used oil during normal operation. All used oil fired in the unit meets the specifications mandated by 40 CFR 279.11. Used oil fired by this boiler is typically derived from plant maintenance activities, and may include used lube oils, transformer oils, etc. that meet the analytical specifications. Criteria for used oil follows:

Parameter		Typical value		Specifications
API gravity (@ 60 F)		$30.0^{1}$		none
Heat content (MBtu/bbl)	$6,000^{1}$		none	
% sulfur		0.31		none
% nitrogen		negligible		none
% ash		$0.01^{1}$		0.01

- (1) The values are "typical" based upon the following:
  - . Information gathered by FPL through laboratory analysis, and
- . FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

ATTACHMENT PPEU1_4.BMP_
DESCRIPTION OF STACK SAMPLING FACILITIES

#### FLORIDA POWER & LIGHT CO. STACK SAMPLING FACILITIES PORT EVERGLADES

#### FOSSIL FUEL STEAM GENERATORS UNITS 1 & 2

# STACK SPECIFICATIONS STACK DIAGRAM SAMPLING DIAMETER: 225.1 in. SAMPLING AREA: 283.8 eq. fl. SAMPLING PORT DEPTH: 24 6/8 in. No. OF PORTS: 4 No. OF POINTS PER TRAVERSE: 6 TOTAL No. OF POINTS: 24 SAMPLING TIME PER POINT: 2.5 min. TOTAL SAMPLING TIME: 60.0 min. NOTE: DRAWING IS NOT TO SCALE PARTICULATE SAMPLING PROBE DIAGRAM a - Marcello Bastello de la Bastello de la 344' 193 SAMPLE PORTS & PLATFORM ь і 29 1/2 40 1/8" 11 7/8" 52 151' 13 3/4" 65 3/4" 16 7/8* 24 1/2

Access to the sampling ports is provided by a ladder. Channel Iron with a trolley system is above each port for probe support. AC power is available on the platform and at the base of thestack.

107 1/8

2.5%

ATTACHMENT PPEU1_6.DOC
PROCEDURES FOR STARTUP AND SHUTDOWN

#### Startup & Shutdown Procedures - Minimizing Excess Emissions

Startup of the fossil-fuel boiler begins when fuel (either natural gas or oil) is introduced into one or more burners within the boiler and lighted (commencement of combustion). Startup is complete and steady-state operation begins when the combustion process has stabilized and the megawatt load on the unit is stable.

Shutdown of the fossil-fuel boilers begins when unit megawatt load is decreased to below 10% of maximum and continues until the final burner gun is removed from service and the final Induced-draft or Forced-draft fan is removed from service.

Excess emissions may be detected during all modes of boiler operation by any one of several continuous emissions monitors. Continuous emission monitors are currently in place for NO_x, SO₂ and opacity. An audible and visual alarm are activated whenever permitted values for any of the above parameters are approached.

Countermeasures which may be taken in the event of excess emissions include, but are not limited to:

- proper excess air adjustments
- recognizing and removal of faulty burners
- fuel oil temperature adjustments
- proper and timely operation of boiler cleaning devices
- removal of the unit from system-dispatch mode
- reduction of unit megawatt load
- stopping and restarting of boiler cleaning devices
- lowering load rate
- pressure rate changes

Best Operational Practices to prevent excess emissions, and knowledge of the appropriate countermeasures to take if an excess emissions condition exists, are taught during routine operator training.

ATTACHMENT PPEU1_10.DOC

ALTERNATIVE MEHTHODS OF OPERATION

# Attachment PPEU1_10.doc Alternative Methods of Operation

#### Operation at Various Capacities and Heat Input Rates

The Port Everglades Unit 1 and 2 boilers may each be operated up to 8760 hours per year at heat input rates from zero to 2,300 MMBtu per hour on No.#6 oil, and from zero to 2,400 MMBtu per hour on natural gas. When a blend of fuel oil and natural gas are burned, the heat input is prorated based upon the percent heat input of each fuel.

#### Different Fuel Types

The units may be fired with a variable combination of No. 6 residual fuel oil, natural gas, or No. 2 fuel oil. The units may occasionally utilize propane fuel to light off (start up) the boiler, then switch to another fuel, such as No.6 residual oil. The unit may also burn on-specification used oil meeting EPA specifications under 40 CFR 279.11. The quantity of on-specification used oil shall not exceed 1,500,000 gallons per year for Units 1 through 4.

Current emissions limitations are as follows:

Pollutant Emission Limit

Particulate matter-steady state 0.1 lb/MMBtu
Particulate matter-soot blowing 0.3 lb/MMBtu
Sulfur dioxide 2.75 lb/MMBtu

Nitrogen oxides 0.2 lb/mmBtu (natural gas, 30-day rolling average)

0.36 lb/mmBtu (residual oil, 30-day rolling average)

### Oil and Gas Co-firing

These emission units may co-fire natural gas with residual oil. When combusting both fuels simultaneously, the percentage of natural gas will be adjusted to ensure that the applicable SO2 emission limit and visible emission limits are complied with.

#### Soot blowing

The units may blow soot for up to 24 hours per day, so long as excess emissions are limited to 60% opacity for 3 hours in 24 hours with not more than four 6-minute periods of up to 100% opacity.

#### **Utilization of Additives**

When residual oil is fired, additives such as Magnesium hydroxide Mg(OH)₂ are added to the boiler on a continuous basis. This material is typically added to the fuel oil just prior to its being fed into the furnace, but it may also be injected into the boiler via the I.K. soot blower lances and through manual hand lances on a batch basis, rather than continuously. The dosage rate is based on the quantity of fuel burned and the amount of ash in the fuel. FPL reserves the right to use other additives if they are suitable.

#### Off-Stoichiometric Combustion

This technique involves operating selected burners at fuel-rich mixture ratios. The proportion of fuel burned at peak temperatures in the presence of excess air is reduced and results in reduced NOx emissions. At Port Everglades, the method for performing off-stoichiometric combustion is to terminate the fuel flow to selected burners and utilize these burners as excess air ports. The other burners are then operated at a fuel-rich mixture ratio. This is also known as a bias-firing scheme.

# Attachment PPEU1_10.doc Alternative Methods of Operation

#### **Evaporation of Spent Boiler Chemical Cleaning Chemicals**

On a periodic basis, as part of routine maintenance, the inside of the steam generator tubes (boiler tubes) at Port Everglades Units 1 and 2 are cleaned using a series of chemical solutions that remove deposited scale which adversely affects the efficiency and reliability of the generating units.

After the second stage treatment, two or more rinses are performed, in order to wash the cleaning solution from the inside of the boiler tubes. The solutions and rinsewaters are collected in large mobile tanks ("frac tanks") pursuant to guidance issued by the Department. Upon completion of the cleaning process and prior to disposal of the spent cleaning solution and rinses, representative sampling of the liquids collected in the "frac tanks" is conducted as per 40 CFR 261, Appendix I, to determine the hazardous waste status of the accumulated wastewater, using Toxicity Characteristic Leaching Procedure (TCLP) analysis for metals.

If the wastewater is determined to be hazardous, it will be managed as such in accordance with 40 CFR 262.34, 40 CFR 265 Subpart I, and 40 CFR 268 with respect to generators accumulating and treating waste in containers and tanks. An appropriate waste analysis plan will be developed to determine and document the pre- and post-treatment characteristics of the wastewater. Hazardous waste may also be transported to an approved offsite hazardous waste facility for the appropriate disposal.

If the spent cleaning solution and rises are determined to be non-hazardous, they are then disposed of by evaporation in the units boiler. Introduction into the boiler will occur at a rate that will not cause an exceedence of the opacity limit of the unit in which evaporation is occurring (in this case, 40 percent opacity).

ATTACHMENT PPEU1_14.DOC

COMPLIANCE ASSURANCE MONITORING PLAN

# Justification for the mechanical Dust Collectors installed within FPL's Fossil Steam Boilers to be excluded from the CAM rule

Based on the January 8, 1998 USEPA letter on Compliance Assurance Monitoring Rule Implementation Question and Answers, the mechanical Dust Collectors installed within FPL's Fossil Steam Boilers are excluded because:

- The mechanical Dust Collector is inherent process equipment contained entirely within the flue gas ductwork.
- The mechanical Dust Collector is a passive method of particle separation from the flue gas stream.
- The mechanical Dust Collector is a device to recover unburned carbon and ash from the flue gas stream.
- The mechanical Dust Collector has no moving parts, no control inputs, nor any controllable parameters.

Based on the characteristics above, the justification to exclude the mechanical Dust Collectors from the CAM rule is appropriate.

ATTACHMENT PPEU1_15
ACID RAIN PART APPLICATION

# Phase II Acid Rain Part Application

For more information, see instructions and refer to 40 CFR 72.30 and 72.31 and Chapter 62-214, F.A.C.

Revised

STEP 1 Identify the source by plant name, State, and ORIS code from NADB

Plant Name PORT EVERGLADES Plant

State FL

ORIS Code 617

STEP 2 Enter the unit ID# for each affected unit and indicate whether a unit is being repowered and the repowering plan being renewed by entering "yes" or "no" at column c. For new units, enter the requested information in columns d and e.

Compliance Plan

d

Unit ID#

Unit will hold allowances

Repowering Plan

**New Units** 

**New Units** 

in accordance with 40 CFR 72.9(c)(1)

Commence Operation Date

Monitor Certification Deadline

	NO	N/A	N/A
Yes			
	NO	N/A	N/A
Yes			
-	NO	N/A	N/A
Yes			
	NO	N/A	N/A
Yes	1		147.
Yes			
Yes			
. 50			
Yes			
Yes			
		-	<del></del>
Yes			
Yes			
	Yes	Yes NO Yes NO Yes Yes Yes Yes Yes Yes Yes Yes	Yes         NO         N/A           Yes         NO         N/A           Yes         NO         N/A           Yes         Yes         Yes           Yes         Yes         Yes

STEP 3 Check the box if the response in column c of Step 2 is "Yes" for any unit For each unit that is being repowered, the Repowering Extension Plan form is included.

DEP Form No. 62-210.900(1)(a) - Form Effective: 4-16-01

STEP 4
Read the standard requirements and certification, enter the name of the designated representative, and sign and date

# Plant Name (from Step 1) PORT EVERGLADES Plant

#### Standard Requirements

#### Acid Rain Part Requirements.

- (1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Submit a complete Acid Rain part application (including a compliance plan) under 40 CFR part 72 and Rules 62-214.320 and 330, F.A.C., in accordance with the deadlines specified in Rule 62-214.320, F.A.C., and
  - (ii) Submit in a timely manner any supplemental information that the Department determines is necessary in order to review an Acid Rain part application and issue or deny an Acid Rain part;
- (2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Operate the unit in compliance with a complete Acid Rain part application or a superseding Acid Rain part issued by the Department; and
  - (ii) Have an Acid Rain Part.

#### Monitoring Requirements.

- (1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75, and Rule 62-214.420, F.A.C.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

#### Sulfur Dioxide Requirements.

- (1) The owners and operators of each source and each Acid Rain unit at the source shall:
   (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
- (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.(2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - (i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
  - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
- (4) Allowance's shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1)(i) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain part application, the Acid Rain part, or an exemption under 40 CFR 72.7, 72.8, or 72.14 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

#### Excess Emissions Requirements.

- (1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
  - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
  - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

#### Recordkeeping and Reporting Requirements.

- (1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the EPA or the Department:
  - (i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
  - (ii) All emissions monitoring information, in accordance with 40 CFR part 75, provided that to the extent that 40 CFR part 75 provides for a 3-year period for recordkeeping, the 3-year period shall apply;
  - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and

#### Recordkeeping and Reporting Requirements (cont)

- (iv) Copies of all documents used to complete an Acid Rain part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.
- (2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

#### Liability.

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain part application, an Acid Rain part, or an exemption under 40 CFR 72.7, 72.8 or 72.14, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.
- (6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans) and 40 CFR 76.11 (NO_X averaging plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 75, 76, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain part application, an Acid Rain part, or an exemption under 40 CFR 72.7, 72.8, or 72.14 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a unit can hold; provided, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
- (3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

#### Certification

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name: Nancy Kierspe	
Signature Lawy Kieropee	4-7-03 Date

<b>Emissions Unit Information Section</b>	2	of	6	
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#### III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

### A. GENERAL EMISSIONS UNIT INFORMATION (All Emissions Units)

# **Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This S	ection: (Check one)				
process or production unit, or activity, whi	[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).				
process or production units and activities v	[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.				
[ ] This Emissions Unit Information Section a process or production units and activities v	•	e or more			
2. Regulated or Unregulated Emissions Unit?	(Check one)				
[X] The emissions unit addressed in this Emission emissions unit.	ons Unit Information Section is a regular	ted			
[ ] The emissions unit addressed in this Emiss emissions unit.	sions Unit Information Section is an unr	egulated			
3. Description of Emissions Unit Addressed in Everglades Boiler Unit 2	This Section (limit to 60 characters): P	ort			
4. Emissions Unit Identification Number: 002 ID:	2 [ ] No ID [ ] ID Unk	known			
5. Emissions Unit Startup 7 Status Code: A Date: 04/01/61	7. Emissions Unit Major 8. Acid Rai Group SIC Code: 49 [Y]	n Unit?			
9. Emissions Unit Comment: (Limit to 500 Characters) The generator nameplate rating given reflects information provided to the Florida Public Service Commission (PSC) in the 10-Year Site Plan. Actual generator output may exceed the stated value, and may vary seasonally, or with changes in unit efficiency, and with fluctuations in system load demand.					

DEP Form No. 62-210.900(1) - Form Effective: 2/11/99

Emissions Unit Information Section 2 of 6
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### **Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters)	rs per device or m	nethod):
-------------------------------------------------------------------	--------------------	----------

A. Low NOx Burners

B. Multiple Cyclones w/ Fly Ash Reinjection

C. Staged Combustion

D. Electrostatic Precipitators (Proposed ca. 2005 & 2006)

2. Control Device or Method Code(s): A = 024, B = 077, C = 025, D = 011

### **Emissions Unit Details**

1. Package Unit:

Manufacturer: Combustion Engineering / Westinghouse

Model Number:

2. Generator Nameplate Rating: 225 MW

3. Incinerator Information:

Dwell Temperature: ٥F

> Dwell Time: seconds

Incinerator Afterburner Temperature:

<b>Emissions Unit Information Section</b>	2	of	6	
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# B. EMISSIONS UNIT CAPACITY INFORMATION (Regulated Emissions Units Only)

## **Emissions Unit Operating Capacity and Schedule**

1.	Maximum Heat Input Rate:	2	2400 mmBtu/hr		
2.	Maximum Incineration Rate:	lb/hr	tons/day		
3.	Maximum Process or Through	put Rate:			
4.	Maximum Production Rate:		· · · · · · · · · · · · · · · · · · ·		
5.	Requested Maximum Operation	g Schedule:			
•		hours/day	days/week		
		weeks/year	8760 hours/year		
7.	7. Operating Capacity/Schedule Comment (limit to 200 characters):				
	ne maximum heat input given ab sidual oil 2300 mmbtu/hr.	ove reflects natural gas firi	ing. Maximum heat input for		

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# C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

# **List of Applicable Regulations**

FDEP Title V Core List, Attachment PPEU1-C	
	-

<b>Emissions</b>	Unit	Information	Section	2	of	6	

# D. EMISSION POINT (STACK/VENT) INFORMATION (Regulated Emissions Units Only)

# **Emission Point Description and Type**

Identification of Point on P1     Flow Diagram? EU 2	ot Plan or	2. Emission Po	oint Type Code: 1	
3. Descriptions of Emission Po 100 characters per point): E				(limit to
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:				
5. Discharge Type Code: V	6. Stack Height: 343 feet		7. Exit Diameter: 14 feet	
8. Exit Temperature:		umetric Flow	10. Water Vapor:	
289 °F	Rate: 813	928.9 acfm		%
11. Maximum Dry Standard Flo	bw Rate:		nission Point Height	•
dscfm				feet
13. Emission Point UTM Coord	linates:			
Zone: 17 E	ast (km): 587.4	Nortl	h (km): 2885.2	
14. Emission Point Comment (I from initial Title V application.		-	-	#9 above

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### E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Ka	<u> </u>	·- ·- ·-		
2. Segment Description (Process/Fuel Type) (limit to 500 characters): Natural gas burned in Unit 2 Boiler				
2. Source Classification Code 1-01-006-01	e (SCC):	3. SCC Units	: Million cubic feet burned	
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity	
2.29	20022.86		Factor:	
7. Maximum % Sulfur: 0.0031	8. Maximum %	6 Ash:	9. Million Btu per SCC Unit: 1050	
10. Segment Comment (limit	to 200 characters)	: This unit is cu	rrently permitted to burn a	
variable combination of No. 6	residual oil, natu	ral gas, No. 2 fi	iel oil, propane, or on-	
specification used oil from FP	L operations			
Segment Description and Ra	ite: Segment	2 of7		
1. Segment Description (Prod	cess/Fuel Type)	(limit to 500 ch	aracters):	
Number 6 fuel oil burned in U	nit 2 Boiler			
2. Source Classification Cod	e (SCC)·	3. SCC Unit	s: Thousand gallons burned	
1-01-004-01	c (BCC).	J. Bee ome	s. Thousand ganons burned	
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity	
15.24	133472.56	initial Rate.	Factor:	
7. Maximum % Sulfur: 2.5	8. Maximum %	6 Ash·	9. Million Btu per SCC Unit:	
/ Waxiiiaii / Gairai. 2.5	o. Maximum /	0 7 1511.	152	
10. Segment Comment (limit	to 200 characters)	: This unit is cu		
variable combination of No. 6				
specification used oil from FP	•	g, 1 (o) =	, pp, e	
,				

Emissions	<b>Unit Information Section</b>	2	οf	6	
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### E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Rate: Segment3 of7			
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 2 boiler burning No. 2 fuel oil			
2. Source Classification Code (SCC): 1-01-005-01		3. SCC Units: Thousand gallons burned	
4. Maximum Hourly Rate: 16.9	5. Maximum Annual Rate: 148147.1		6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.5	8. Maximum % Ash:		9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or onspecification used oil from FPL operations.			
Segment Description and Rate: Segment4_ of7_			
1. Segment Description (Process/Fuel Type) (limit to 500 characters):			
Propane burned in Unit 2			
2. Source Classification Code (SCC): 3. SCC Unit			s: Million cubic feet burned
1-01-006-01			
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:	6. Estimated Annual Activity
2.4	21024		Factor:
7. Maximum % Sulfur: 1	8. Maximum % Ash:		9. Million Btu per SCC Unit: 1000
10. Segment Comment (limit to 200 characters): This unit is currently permitted to burn a			
variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-			
specification used oil from FPL operations.			

<b>Emissions</b>	Unit	Information	Section	2	of	6	
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PPE UNIT 2

#### E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Ra	ite: Segment5	of7			
Segment Description (Proc On-Specification used oil	• • • •		racters):		
2. Source Classification Code 1-01-013-02	e (SCC):	3. SCC Units:	Thousand gallons burned		
4. Maximum Hourly Rate: 22.43	5. Maximum Ai 1,500	nnual Rate:	6. Estimated Annual Activity Factor:		
7. Maximum % Sulfur: 2.5	8. Maximum %	Ash:	9. Million Btu per SCC Unit: 136		
10. Segment Comment (limit to 200 characters): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or onspecification used oil from FPL operations. Maximum annual rate for EUs 001 through 004.					
Segment Description and Ra	ite: Segment6	5 of7			
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 2 boiler firing all possible combinations of natural gas, residual oil, on-specification used oil, #2 fuel oil, and propane					
2. Source Classification Cod 1-01	e (SCC):	3. SCC Units	s: Million cubic feet		
4. Maximum Hourly Rate:	5. Maximum A	nnual Rate:	6. Estimated Annual Activity Factor:		
7. Maximum % Sulfur: 2.5	8. Maximum %	Ash:	9. Million Btu per SCC Unit:		
10. Segment Comment (limit to 200 characters): The existing Title V permit allows Unit 2 to burn a mixture of the above fuels in a ration that will result in a max. SO2 emission rate of 2.75 lb/mmbtu.					

<b>Emissions</b>	Unit	Information	Section	2	of	6	
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PPE UNIT 2

### E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Rate: Segment7 of7						
Boiler chemical cleaning	1. Segment Description (Process/Fuel Type) (limit to 500 characters): Boiler chemical cleaning waste evaporated in Unit 2. This process may be undertaken while firing natural gas or residual fuel oil.					
2. Source Classification Code 1-01-013-01	e (SCC):	3. SCC Units:	Thousand gallons burned			
4. Maximum Hourly Rate: 3	5. Maximum <i>A</i> 500	Annual Rate:	6. Estimated Annual Activity Factor:			
7. Maximum % Sulfur:	8. Maximum 9	∕₀ Ash:	9. Million Btu per SCC Unit:			
· ·	10. Segment Comment (limit to 200 characters): Items 6, 7, 8, & 9 do not apply. This activity to be undertaken on a periodic basis in accordance with DARM guidance and EPA waste rules (40 CFR 279.72).					
Segment Description and Ra						
1. Segment Description (Process/Fuel Type) (limit to 500 characters):						
2. Source Classification Code	e (SCC):	3. SCC Units	s:			
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor:			
7. Maximum % Sulfur:						
10. Segment Comment (limit t	to 200 characters	):				

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PPE UNIT 2

### F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1. Pollutant Emitted	2. Primary Control	3. Secondary Control	4. Pollutant
000	Device Code	Device Code	Regulatory Code
SO2	. NA	NA .	EL
NOx	025	NA	EL
СО	NA	NA	. NS
PM	011	077	EL
	(Future)	(Existing)	
PM10	011	077	NS
	(Future)	(Existing)	
VOC	NA	NA NA	NS
H133	NA	NA	NS
H106	NA	NA	NS
H107	NA	NA	NS
SAM	NA	NA	NS
НАР	NA	NA	NS
		1	

${\bf Emissions~Unit~Information~Section} \ _$	2_ of6	PPE UNIT 2
Pollutant Detail Information Page	1 of 3	Sulfur Dioxide

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:				
3. Potential Emissions:	4. Synthetically				
6325 lb/hour 27703.5 tons/s	year Limited? [N]				
5. Range of Estimated Fugitive Emissions:	<u> </u>				
	to tons/year				
6. Emission Factor: 2.75	7. Emissions				
Reference: DEP Rule 62-296.405(1)(c)	)1.j. Method Code: 0				
8. Calculation of Emissions (limit to 600 characters): 2.75 lb/mmbtu*2300 mmbtu/hr = 6325 lb/hr  (6325 lb/hr * 8760 hr/yr) / 2000 lb/ton = 27703.5 tons/ yr					
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):				
Allowable Emissions1_ of1_					
Basis for Allowable Emissions Code:     Emissions limit required by rule	2. Future Effective Date of Allowable Emissions:				
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:				
2.75 lb/mmbtu	6325 lb/hour 27703.5 tons/year				
5. Method of Compliance (limit to 60 characters): Fuel sampling & analysis					
6. Allowable Emissions Comment (Desc. of O	perating Method) (limit to 200 characters):				
2.75 lb/mmbtu is the current regulatory limit on sulfur dioxide emissions [Rule 62-					
296.405(1)(c)1.j.].	<b>.</b> .				

Emissions Unit Information Section _	2	of_	6
Pollutant Detail Information Page	2	of	3

PPE UNIT 2 Nitrogen Oxide

#### G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

Pollutant Emitted: NOx	2. Total Percent Efficiency of Control:						
3. Potential Emissions:	4. Synthetically						
828 lb/hour 3626.64 tons/y	year Limited? [N]						
5. Range of Estimated Fugitive Emissions:	<del></del>						
[ ] 1 [ ] 2 [ ] 3	to to						
6. Emission Factor: 0.36 lb/mmbtu	7. Emissions						
Reference: DEP Rule 62-296.570(4)(b)	)1. Method Code: 0						
8. Calculation of Emissions (limit to 600 chara	cters):						
0.36 lb/mmbtu * 2300 mmbtu/hr = 828.0 lb/	hr						
(000 11 /1 - 1 - 07 (0 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1							
(828  lb/hr * 8760  hr/yr) / 2000  lb/ton = 3626	o.64 tons/ yr						
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters): Information						
provided is for oil firing. Facility uses a 30-day i	· · · · · · · · · · · · · · · · · · ·						
0.20 lb/mmbtu on natural gas fuel.							
Allowable Emissions Allowable Emissions	1 of2						
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable						
Emissions limit required by rule	Emissions:						
	-						
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:						
0.36 lb/mmbtu	828 lb/hour 3626.64 tons/year						
5. Method of Compliance (limit to 60 characters): Continuous Emissions Monitor							
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):							
0.36 lb/mmbtu is the current regulatory limit on NOx emissions [Rule 62-296.570(40(b)1.].							
30-day rolling average – Rule 62-296.570(4)(a)4.]. Equivalent allowable emissions are given							
for liquid fuel firing.							
I and the second							

<b>Emissions Unit Information Section</b>	2_	_ of _	6
Pollutant Detail Information Page	2	of	3

PPE UNIT 2 Nitrogen Oxide

#### G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

1. Pollutant Emitted: NOx	2. Total Percent Efficiency of Control:			
3. Potential Emissions:   lb/hour	4. Synthetically Limited? [ ]			
5. Range of Estimated Fugitive Emissions:	to tong/year			
[ ] 1 [ ] 2 [ ] 3 6. Emission Factor:	totons/year 7. Emissions			
Reference:	Method Code:			
8. Calculation of Emissions (limit to 600 chara	cters):			
	·			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):				
Allowable Emissions Allowable Emissions	2 of2			
Basis for Allowable Emissions Code:     Emissions limit required by rule	2. Future Effective Date of Allowable Emissions:			
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:			
0.2 lb/mmbtu	480 lb/hour 2102.4 tons/year			
5. Method of Compliance (limit to 60 characters): Continuous Emissions Monitor				
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 0.2 lb/mmbtu is the current regulatory limit on NOx emissions [Rule 62-296.570(40(b)1.]. 30-day rolling average – Rule 62-296.570(4)(a)4.]. Equivalent allowable emissions are given for natural gas fuel firing.				

<b>Emissions Unit Information Section</b>	2	of_	6	PPE UNIT 2
Pollutant Detail Information Page	3_	of	3	Particulate Matter - Total

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

1. Pollutant Emitted: PM - Total	2. Total Percent Efficie	ency of Control:			
3. Potential Emissions: 287.5 lb/hour 1259.25 tons	/year	4. Synthetically Limited? [N]			
5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3	to to	ns/year			
6. Emission Factor: 0.125 lb/mmbtu  Reference: DEP Rule 62-296.405(1)(b) and 62-210.700(3)  7. Emissions  Method Code: 0					
8. Calculation of Emissions (limit to 600 characters):  0.125 lb/mmbtu * 2300 mmbtu/hr = 287.5 lb/hr.  (287.5 lb/hr * 8760 hr/ yr) /2000 lb/ton = 1259.25 tons/yr					
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): The particulate matter emission limit for 3 hrs/24 hrs at 0.3 lb/mmbtu and 21 hrs/24 hrs at 0.1 lb/mmbtu is equivalent to an average of 0.125 lb/mmbtu.					
Allowable Emissions Allowable Emissions	_1of4				
Basis for Allowable Emissions Code:     Emissions limit required by law	2. Future Effective Da Emissions:	ate of Allowable			
3. Requested Allowable Emissions and Units: 0.1 lb/mmbtu	4. Equivalent Allowal 230 lb/hour	ole Emissions: 881.45 tons/year			
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.					
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 0.1 lb/mmbtu is the current regulatory limit on PM [Rule 62-296.405(1)(b)]. Equivalent emissions are given for liquid fuel firing.					

<b>Emissions Unit Information Section</b>	2_	_ of _	6	PPE UNIT 2
Pollutant Detail Information Page	3	of	3	Particulate Matter - Total

Emissions-Limited and Preconstruction Review Pollutants Only)

1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:		
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]		
5. Range of Estimated Fugitive Emissions:	to tons/year		
6. Emission Factor:	7. Emissions Method Code:		
Reference:	Wiethod Code.		
8. Calculation of Emissions (limit to 600 chara	ecters):		
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):		
Allowable Emissions Allowable Emissions	_2 of4		
Basis for Allowable Emissions Code:     Emission limit required by rule	2. Future Effective Date of Allowable Emissions:		
3. Requested Allowable Emissions and Units: 0.3 lb/mmbtu	<ul><li>4. Equivalent Allowable Emissions:</li><li>690 lb/hour 377.8 tons/year</li></ul>		
5. Method of Compliance (limit to 60 characte DEP Rule 62-296.405(1)(e)2.	rs):		
6. Allowable Emissions Comment (Desc. of O Data is for sootblowing conditions firing fuel oi allowable emissions are given for liquid fuel fir	l, worst case [Rule 62-210.700(3)]. Equivalent		

<b>Emissions Unit Information Section</b>	ı <b>2</b>	of	6	 PPE UNIT 2
Pollutant Detail Information Page	3	of	3_	Particulate Matter - Total

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:				
3. Potential Emissions:   lb/hour	4. Synthetically Limited? [ ]				
5. Range of Estimated Fugitive Emissions:	to tong/your				
[ ] 1 [ ] 2 [ ] 3 6. Emission Factor:	to to tons/year 7. Emissions				
Reference:	Method Code:				
8. Calculation of Emissions (limit to 600 chara-	cters):				
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):				
Allowable Emissions Allowable Emissions	_3 of4				
Basis for Allowable Emissions Code:     OTHER	2. Future Effective Date of Allowable Emissions: Oct. 31, 2005				
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:				
0.03 lb/mmbtu	69 lb/hour 302.2 tons/year				
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.					
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce steady-state PM emissions of its fossil fueled steam boilers in Broward County to 0.03 lb/mmbtu. Equivalent allowable emissions are given for liquid fuel firing.					

Emissions Unit Information Section _	2	of _	6	
Pollutant Detail Information Page	3	of _	3	

PPE UNIT 2 Particulate Matter - Total

#### G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:					
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]					
5. Range of Estimated Fugitive Emissions:						
[ ] 1 [ ] 2 [ ] 3	to tons/year					
6. Emission Factor:	7. Emissions					
Reference:	Method Code:					
8. Calculation of Emissions (limit to 600 chara	cters):					
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):					
9. Foliutanii Fotentiai/Fugitive Emissions Comi	ment (mint to 200 characters).					
	•					
Allowable Emissions 4 of 4						
Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable					
OTHER	Emissions: Oct. 31, 2005					
OTTER	Emissions. Oct. 31, 2003					
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:					
0.1 lb/mmbtu	230 lb/hour 125.9 tons/year					
5 16 11 1 6 0 11 11 11 11 11 11 11 11	<u> </u>					
5. Method of Compliance (limit to 60 character	rs):					
DEP Rule 62-296.405(1)(e)2.						
	•					
6. Allowable Emissions Comment (Desc. of O	perating Method) (limit to 200 characters):					
Based on its negotiations with the Department, applicant agrees to reduce PM emissions of its						
fossil fueled steam boilers in Broward County. Equivalent allowable emissions are given for						
liquid fuel firing and sootblowing.						

	Emissions	<b>Unit Information</b>	Section	2	of	6	
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### H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

VISIBLE Emissions Limitation: Visible Emissi	ons Limitation1 of5					
1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity:					
	[X] Rule [ ] Other					
3. Requested Allowable Opacity:						
Normal Conditions: 40 % Ex	ceptional Conditions: %					
Maximum Period of Excess Opacity Allow	ed: min/hour					
4. Method of Compliance: EPA Method 9						
5. Visible Emissions Comment (limit to 200 c						
(1)(e)1., F.A.C. Visible emissions limited to 40						
emissions. Compliance testing is performed and	nually using EPA Method 9.					
<u>Visible Emissions Limitation:</u> Visible Emissions Limitation2 of5						
1. Visible Emissions Subtype: VE60	2. Basis for Allowable Opacity:					
	[X] Rule [ ] Other					
3. Requested Allowable Opacity:						
Normal Conditions: 60 % Exceptional Conditions: 100 %						
Maximum Period of Excess Opacity Allowed: 24 min/hour						
4. Method of Compliance: EPA Method 9						
·						
5. Visible Emissions Comment (limit to 200 c	haracters): DEP Rule 62-210.700(3), F.A.C.					
limits sootblowing & load changing to 60% opacity for up to 3hrs/24 hrs, with <4, six-minute						
periods of up to 100% opacity if unit has an op-						

<b>Emissions</b>	Unit	Information	Section	2	οf	6	
211119210119	Unit	Inivi manun	Section	4	O1	U	

Visible Emissions Limitation: Visible Emiss	ions Limitation3 of5				
1. Visible Emissions Subtype: VE100	Basis for Allowable Opacity:     [X] Rule     [ ] Other				
3. Requested Allowable Opacity: Normal Conditions: % Ex Maximum Period of Excess Opacity Allow	sceptional Conditions: 100 % red: 60 min/hour				
4. Method of Compliance: EPA Method 9					
5. Visible Emissions Comment (limit to 200 characters): DEP Rule 62-210.700(1) and (2), F.A.C. allow up to 100% opacity, for an unlimited time during start-up, shutdown, and up to 2hrs/24hrs for malfunctions.					
Visible Emissions Limitation: Visible Emiss	ions Limitation4 of5				
1. Visible Emissions Subtype: VE20	Basis for Allowable Opacity:     Rule [X] Other				
3. Requested Allowable Opacity: Normal Conditions: 20 % Ex Maximum Period of Excess Opacity Allow	cceptional Conditions: %  yed: min/hour				
4. Method of Compliance: EPA Method 9					
5. Visible Emissions Comment (limit to 200 of Department, applicant agrees to reduce visible	,				

steam boilers in Broward County to 20%. This limit becomes effective Oct. 31, 2005.

Compliance testing is performed annually using EPA Method 9.

Emissions Unit Information Section2	of6 PPE Unit 2
Visible Emissions Limitation: Visible Emiss	ions Limitation5 of5
1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity:
	[ ] Rule [X] Other
3. Requested Allowable Opacity:	
Normal Conditions: 40 % Ex	cceptional Conditions: 100 %
Maximum Period of Excess Opacity Allow	ed: 24 min/hour
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 c	characters): Based on its negotiations with the
Department, applicant agrees to reduce visible	,
Broward County, and limits sootblowing & loa	d changing to 40% opacity for up to 3hrs/24
hrs, with 4, six-minute periods of up to 100% of	ppacity if unit has an operational COM. This

limit becomes effective Oct. 31, 2005

<b>Emissions</b>	Unit	Information	Section	2	of	6

### I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor_1_ of3_				
Parameter Code: EM	2. Pollutant(s): NOx			
3. CMS Requirement:	[X] Rule [ ] Other			
4. Monitor Information:				
Manufacturer: TEI				
Model Number: 42C	Serial Number: 42C-77130-385			
5. Installation Date: 02/14/03	6. Performance Specification Test Date: 03/05/03			
7. Continuous Monitor Comment (limit to 20	0 characters): Required by 40 CFR 75.			
I. CONTINUOUS MONITOR INFORMATION				
40 1 00 1 100 1 100 1 100 1				
(Only Regulated Emissions Unit	s Subject to Continuous Monitoring)			
(Only Regulated Emissions Unit  Continuous Monitoring System: Continuou	•			
	•			
Continuous Monitoring System: Continuou	s Monitor2 of3			
Continuous Monitoring System: Continuou  1. Parameter Code: EM	2. Pollutant(s): CO ₂			
Continuous Monitoring System: Continuou  1. Parameter Code: EM  3. CMS Requirement:	2. Pollutant(s): CO ₂			
Continuous Monitoring System: Continuou  1. Parameter Code: EM  3. CMS Requirement:  4. Monitor Information:	2. Pollutant(s): CO ₂			
Continuous Monitoring System: Continuou  1. Parameter Code: EM  3. CMS Requirement:  4. Monitor Information: Manufacturer: Milton Roy	S Monitor2 of3  2. Pollutant(s): CO ₂ [X] Rule			
Continuous Monitoring System: Continuou  1. Parameter Code: EM  3. CMS Requirement:  4. Monitor Information:     Manufacturer: Milton Roy     Model Number: 3300  5. Installation Date: 07/09/94	S Monitor2 of3  2. Pollutant(s): CO ₂ [X] Rule			
Continuous Monitoring System: Continuou  1. Parameter Code: EM  3. CMS Requirement:  4. Monitor Information:     Manufacturer: Milton Roy     Model Number: 3300	S Monitor2 of3  2. Pollutant(s): CO ₂ [X] Rule			
Continuous Monitoring System: Continuou  1. Parameter Code: EM  3. CMS Requirement:  4. Monitor Information:     Manufacturer: Milton Roy     Model Number: 3300  5. Installation Date: 07/09/94	S Monitor2 of3  2. Pollutant(s): CO ₂ [X] Rule			
Continuous Monitoring System: Continuou  1. Parameter Code: EM  3. CMS Requirement:  4. Monitor Information:     Manufacturer: Milton Roy     Model Number: 3300  5. Installation Date: 07/09/94	S Monitor2 of3  2. Pollutant(s): CO ₂ [X] Rule			
Continuous Monitoring System: Continuou  1. Parameter Code: EM  3. CMS Requirement:  4. Monitor Information:     Manufacturer: Milton Roy     Model Number: 3300  5. Installation Date: 07/09/94	S Monitor2 of3  2. Pollutant(s): CO ₂ [X] Rule			
Continuous Monitoring System: Continuou  1. Parameter Code: EM  3. CMS Requirement:  4. Monitor Information:     Manufacturer: Milton Roy     Model Number: 3300  5. Installation Date: 07/09/94	S Monitor2 of3  2. Pollutant(s): CO ₂ [X] Rule			
Continuous Monitoring System: Continuou  1. Parameter Code: EM  3. CMS Requirement:  4. Monitor Information:     Manufacturer: Milton Roy     Model Number: 3300  5. Installation Date: 07/09/94	S Monitor2 of3  2. Pollutant(s): CO ₂ [X] Rule			

Emissions Unit Information Section	2	of	6
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### I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __3__ of ___3__

1.	Parameter Code: VE	2. Pollutant(s): Opacity
3.	CMS Requirement:	[X] Rule [ ] Other
4.	Monitor Information:	
	Manufacturer: Phoenix Instruments, Inc.	
	Model Number: OPAC 20/20	Serial Number: OPAC - 1080
5.	Installation Date: 12/04/00	6. Performance Specification Test Date:
		12/18/00
7.	Continuous Monitor Comment (limit to 200	characters): Required by 40 CFR 75.

Emissions	<b>Unit Information</b>	Section	2	of	6	
	CHIC IMIOI III MUIOI	Section	_	OI.	v	

### J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION (Regulated Emissions Units Only)

#### **Supplemental Requirements**

1.	Process Flow Diagram
	[X] Attached, Document ID: PPEU1bmp_ [ ] Not Applicable [ ] Waiver Requested
2.	Fuel Analysis or Specification
	[X] Attached, Document ID: PPEU1_2.doc [ ] Not Applicable [ ] Waiver Requested
3.	Detailed Description of Control Equipment
	[X] Attached, Document ID: PPEU1_3.doc [ ] Not Applicable [ ] Waiver Requested
4.	Description of Stack Sampling Facilities
	[X] Attached, Document ID: PPEU1_4.bmp [ ] Not Applicable [ ] Waiver Requested
5.	Compliance Test Report
	[ ] Attached, Document ID:
	[X] Previously submitted, Date:
	[ ] Not Applicable
6.	Procedures for Startup and Shutdown
	[X] Attached, Document ID: PPEU1_6.doc [ ] Not Applicable [ ] Waiver Requested
7.	Operation and Maintenance Plan
	[ ] Attached, Document ID: [X] Not Applicable [ ] Waiver Requested
8.	Supplemental Information for Construction Permit Application
	[ ] Attached, Document ID: [X] Not Applicable
9.	Other Information Required by Rule or Statute
	[ ] Attached, Document ID: [X] Not Applicable
10	. Supplemental Requirements Comment:
1	•

Emissions	Unit Ir	formation	Section	2	of	6	
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#### Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[X] Attached, Document ID: PPEU1_10.doc [ ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID: [N/A] Not Applicable
13. Identification of Additional Applicable Requirements
[X] Attached, Document ID: PPEU1_12.doc [ ] Not Applicable
14. Compliance Assurance Monitoring Plan
[X] Attached, Document ID: PPEU1 14.doc [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required)
[X] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: PPEU1_15.doc
[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: N/A
[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:N/A/
[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:N/A
Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:N/A
Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:N/A
Not Applicable

	<b>Emissions</b>	<b>Unit Information Section</b>	1 3	of	6
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#### III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

#### A. GENERAL EMISSIONS UNIT INFORMATION (All Emissions Units)

#### **Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one)				
[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).				
[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.				
[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.				
2. Regulated or Unregulated Emissions Unit? (Check one)				
[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.				
[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.				
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Port Everglades Boiler Unit 3				
4. Emissions Unit Identification Number: 003 [ ] No ID [ ] ID Unknown				
5. Emissions Unit Status Code: A Date: 06/01/64 7. Emissions Unit Major Status Code: 49 [Y]				
9. Emissions Unit Comment: (Limit to 500 Characters) The generator nameplate rating given reflects information provided to the Florida Public Service Commission (PSC) in the 10-Year Site Plan. Actual generator output may exceed the stated value, and may vary seasonally, or with changes in unit efficiency, and with fluctuations in system load demand.				

<b>Emissions Unit Information Section</b>	3	of	6
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#### **Emissions Unit Control Equipment**

1.	Control Equipment/Method Descri	ption (I	Limit to 200	characters pe	r device or m	ethod):
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A. Low NOx Burners

B. Multiple Cyclones w/ Fly Ash Reinjection

C. Staged Combustion

D. Electrostatic Precipitators (Proposed ca. 2005 & 2006)

2. Control Device or Method Code(s): A = 024, B = 077, C = 025, D = 011

#### **Emissions Unit Details**

1. Package Unit:

Manufacturer: Foster Wheeler / General Electric

Model

Number:

2. Generator Nameplate Rating:

402 MW

3. Incinerator Information:

Dwell Temperature:

٥F

Dwell Time:

seconds

Incinerator Afterburner Temperature:

٥F

Emissions	Unit In	formation	Section	3	οf	6	
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### B. EMISSIONS UNIT CAPACITY INFORMATION (Regulated Emissions Units Only)

#### **Emissions Unit Operating Capacity and Schedule**

1.	Maximum Heat Input Rate:		4180 mmBtu/hr
2.	Maximum Incineration Rate:	lb/hr	tons/day
3.	Maximum Process or Throughp	out Rate:	
4.	Maximum Production Rate:		
5.	Requested Maximum Operating	g Schedule:	
		hours/day	days/week
		weeks/year	8760 hours/year
8.	Operating Capacity/Schedule C	Comment (limit to 200 ch	naracters):
	e maximum heat input given abo idual oil 4000 mmbtu/hr.	ove reflects natural gas fi	iring. Maximum heat input for

<b>Emissions Unit Information Section</b>	3	of	6	
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### C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

#### **List of Applicable Regulations**

FDEP Title V Core List, Attachment PPEU1-C	

Emissions Unit Information Section	3	of	6	
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### D. EMISSION POINT (STACK/VENT) INFORMATION (Regulated Emissions Units Only)

#### **Emission Point Description and Type**

1. Identification of Point on Pl Flow Diagram? EU 3	ot Plan or	2. Emission Po	oint Type Code: 1	
3. Descriptions of Emission Po 100 characters per point): E	mission Unit 3 –	- Port Everglades	Unit 3 Boiler	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:				
5. Discharge Type Code: V	6. Stack Height 343 feet	ht:	7. Exit Diameter: 18.1 feet	
8. Exit Temperature: 287 °F	9. Actual Volumetric Flow Rate: 1263180.6		10. Water Vapor:	%
11. Maximum Dry Standard Flo	ow Rate: dscfm	12. Nonstack Emission Point Height: feet		
13. Emission Point UTM Coord	linates:			
Zone: 17 E	ast (km): 587.4	Nort	h (km): 2885.2	
14. Emission Point Comment (I from initial Title V application.		•	-	#9 above
			_ <del></del>	

Emissions	Unit	Information	Section	3	οf	6	
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### E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Ra	te: Segment	_1 of7	
Segment Description (Proc Natural gas burned in Ur	• • •	(limit to 500 cha	aracters):
2. Source Classification Code 1-01-006-01	e (SCC):	3. SCC Units:	: Million cubic feet burned
4. Maximum Hourly Rate: 3.98	5. Maximum A 34,873	Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.0031	8. Maximum 9	∕₀ Ash:	9. Million Btu per SCC Unit: 1050
10. Segment Comment (limit to variable combination of No. 6 specification used oil from FP.	residual oil, natu		<del>v</del> =
Segment Description and Ra	ite: Segment	_2of7	
1. Segment Description (Prod Number 6 fuel oil burned in U	• • •	(limit to 500 ch	aracters):
Number of fuer off burned in O	IIII 3 BOIICI		
2. Source Classification Code 1-01-004-01	e (SCC):	3. SCC Units	s: Thousand gallons burned
4. Maximum Hourly Rate: 26.3	5. Maximum Annual Rate: 230,526		6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 2.5	8. Maximum % Ash:		9. Million Btu per SCC Unit: 152
10. Segment Comment (limit to variable combination of No. 6 specification used oil from FP	residual oil, natu		

<b>Emissions</b>	Unit	Information	Section	3	of	6	
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### E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Ra	ite: Segment	3 of7	_	
1. Segment Description (Prod No. 2 fuel oil	cess/Fuel Type) (	limit to 500 ch	aracters): Unit 3 boiler burn	ing
2. Source Classification Cod	a (SCC):	2 SCC Units	: Thousand gallons burned	
1-01-005-01	e (SCC).	5. See ome	. Thousand ganons burned	
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Ac	tivity
29.41	257,647		Factor:	
7. Maximum % Sulfur: 0.5	8. Maximum %	% Ash:	9. Million Btu per SCC 136	Unit:
10. Segment Comment (limit	,		* *	
variable combination of No. 6		ral gas, No. 2 f	uel oil, propane, or on-	
specification used oil from FP	L operations.			
Segment Description and Ra	ite: Segment	4 of7		
1. Segment Description (Pro	cess/Fuel Type)	(limit to 500 cl	aracters):	
Propane burned in Unit 3				
2. Source Classification Cod	e (SCC):	3 SCC Unit	s: Million cubic feet burned	
1-01-006-01	<b>C</b> (BCC).	J. 500 0 III	o. Minion cuoto 1001 cultion	•
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Act	tivity
4.18	36,617		Factor:	
7. Maximum % Sulfur: 1	8. Maximum % Ash:		9. Million Btu per SCC	Unit:
10. Segment Comment (limit	to 200 abarraters	. This wait is a	1000	
variable combination of No. 6	,		* *	
specification used oil from FP			, FE,	

Emissions Unit Information Section	3	of	6	PPE Unit 3
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### E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Ra	ite: Segment	5 of7				
Segment Description (Proc On-Specification used oil	• • •	•	aracters):			
2. Source Classification Code	e (SCC):	3. SCC Units:	: Thousand gallons burned			
1-01-013-02						
4. Maximum Hourly Rate: 29.41	5. Maximum <i>A</i> 1,500	Annual Rate:	6. Estimated Annual Activity Factor:			
7. Maximum % Sulfur: 2.5	8. Maximum %	√₀ Ash:	9. Million Btu per SCC Unit: 136			
variable combination of No. 6 specification used oil from FP 004.		•	·			
Segment Description and Ra	nte: Segment	6of7				
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 3 boiler firing all possible combinations of natural gas, residual oil, on-specification used oil, #2 fuel oil, and propane						
2. Source Classification Cod 1-01	e (SCC):	3. SCC Units	s: Million cubic feet			
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor:			
7. Maximum % Sulfur: 2.5	8. Maximum 9	∕₀ Ash:	9. Million Btu per SCC Unit:			
10. Segment Comment (limit burn a mixture of the above fu 2.75 lb/mmbtu.		_	Title V permit allows Unit 3 to a max. SO2 emission rate of			

DEP Form No. 62-210.900(1) – Form Effective: 2/11/99

	<b>Emissions</b>	<b>Unit Information Section</b>	3	of	6	
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### E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Ra	ite: Segment	_7 of7			
Segment Description (Proc Boiler chemical cleaning while firing natural gas or resi	waste evaporated	•	aracters): s process may be undertaken		
2. Source Classification Code 1-01-013-01	e (SCC):	3. SCC Units	: Thousand gallons burned		
4. Maximum Hourly Rate: 3	5. Maximum <i>i</i> 500	Annual Rate:	6. Estimated Annual Activity Factor:		
7. Maximum % Sulfur:	8. Maximum 9	% Ash:	9. Million Btu per SCC Unit:		
			& 9 do not apply. This activity I guidance and EPA waste rules		
Segment Description and Ra	ite: Segment	of			
1. Segment Description (Prod	cess/Fuel Type)	(limit to 500 ch	aracters):		
2. Source Classification Code	e (SCC):	3. SCC Unit	s:		
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:	6. Estimated Annual Activity Factor:		
7. Maximum % Sulfur:	8. Maximum % Ash:  9. Million Btu per SCC Un				
10. Segment Comment (limit	to 200 characters	):			

Emissions	Unit	Information	Section	3	οf	6	
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### F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1. Pollutant Emitted	2. Primary Control	3. Secondary Control	4. Pollutant
	Device Code	Device Code	Regulatory Code
SO2	NA	NA	EL
NOx	025	NA	EL
CO	NA	NA	NS
PM	011 (Future)	077 (Existing)	EL
PM10	011 (Future)	077 (Existing)	NS
VOC	NA	NA NA	NS
H133	NA	NA	NS
H106	NA	NA	NS
H107	NA	NA	NS
SAM	NA	NA	NS
HAP	NA	NA	NS

<b>Emissions Unit Information Section</b>	13_ of6	PPE Unit 3
Pollutant Detail Information Page	1 of 3	Sulfur Dioxide

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:				
3. Potential Emissions: 11000 lb/hour 48180 tons/y	4. Synthetically Limited? [N]				
5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3	totons/year				
6. Emission Factor: 2.75  Reference: DEP Rule 62-296.405(1)(c	7. Emissions Method Code: 0				
8. Calculation of Emissions (limit to 600 chara 2.75 lb/mmbtu*4000 mmbtu/hr = 11000 lb/hr (1100 lb/hr * 8760 hr/yr) / 2000 lb/ton = 4818					
9. Pollutant Potential/Fugitive Emissions Com					
Allowable Emissions Allowable Emissions					
Basis for Allowable Emissions Code:     Emissions limit required by rule	2. Future Effective Date of Allowable Emissions:				
3. Requested Allowable Emissions and Units: 2.75 lb/mmbtu	4. Equivalent Allowable Emissions: 11000 lb/hour 48180 tons/year				
5. Method of Compliance (limit to 60 characters): Fuel sampling & analysis					
6. Allowable Emissions Comment (Desc. of O 2.75 lb/mmbtu is the current regulatory limit on 296.405(1)(c)1.j.]. Equivalent allowable emissions	sulfur dioxide emissions [Rule 62-				

<b>Emissions Unit Information Section</b>	3	_ of _	6	PPE	Unit 3
Pollutant Detail Information Page	2	of	3	Nitrogen	Oxide

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

1. Pollutant Emitted: NOx	2. Total Percent Efficiency of Control:				
3. Potential Emissions:	4. Synthetically				
2120 lb/hour 9285.6 tons/					
5. Range of Estimated Fugitive Emissions:					
[ ] 1 [ ] 2 [ ] 3	totons/year				
6. Emission Factor: 0.53 lb/mmbtu	7. Emissions				
Reference: DEP Rule 62-296.570(4)(b	)2. Method Code: 0				
8. Calculation of Emissions (limit to 600 characters): 0.5 lb/mmbtu * 4000 mmbtu/hr = 2120 lb/hr  (2120 lb/hr * 8760 hr/yr) / 2000 lb/ton = 9285.6 tons/ yr					
9. Pollutant Potential/Fugitive Emissions Com-	`				
provided is for oil firing. Facility uses a 30-day rolling average for NOx compliance. Limit = 0.40 lb/mmbtu on natural gas fuel.					
Allowable Emissions Allowable Emissions	_1of2				
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable				
Emissions limit required by rule	Emissions:				
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:				
0.53 lb/mmbtu	2120 lb/hour 9285.6 tons/year				
5. Method of Compliance (limit to 60 character	rs): Continuous Emissions Monitor				
6. Allowable Emissions Comment (Desc. of O	, ,				
0.53 lb/mmbtu is the current regulatory limit on 30-day rolling average – Rule 62-296.570(4)(a)4	<u>-</u>				
for liquid fuel firing.	T.J. Equivalent anowable chlissions are given				

<b>Emissions Unit Information Section</b>	3 of6	PPE Unit 3
Pollutant Detail Information Page	2 of3	Nitrogen Oxide

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

A OCCUPATION I METERS OF THE SOLUTION IN THE S					
1. Pollutant Emitted: NOx	2. Total Percent Efficiency of Control:				
3. Potential Emissions:	4. Synthetically				
lb/hour tons/year	Limited? [ ]				
5. Range of Estimated Fugitive Emissions:					
	to tons/year				
6. Emission Factor:	7. Emissions				
Reference:	Method Code:				
8. Calculation of Emissions (limit to 600 charac	cters):				
·					
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):					
Allowable Emissions Allowable Emissions	_2_ of2				
Basis for Allowable Emissions Code:     Emissions limit required by rule	2. Future Effective Date of Allowable Emissions:				
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:				
0.4 lb/mmbtu	1610 lb/hour 7051.8 tons/year				
5. Method of Compliance (limit to 60 characters): Continuous Emissions Monitor					
ar area or comprime (mino to or character)	o). Commucuo Emissione Azemvez				
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 0.4 lb/mmbtu is the current regulatory limit on NOx emissions [Rule 62-296.570(40(b)2.]. 30-day rolling average – Rule 62-296.570(4)(a)4.]. Equivalent allowable emissions are given for natural gas fuel firing.					

<b>Emissions Unit Information Section</b>	3_	_ of _	6	PPE Unit 3
Pollutant Detail Information Page	3_	_ of _	3	Particulate Matter - Total

#### **Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions			
1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:		
3. Potential Emissions:	4. Synthetically		
500 lb/hour 2,190 tons/ye	ar Limited? [N]		
5. Range of Estimated Fugitive Emissions:			
[ ] 1 [ ] 2 [ ] 3	to tons/year		
6. Emission Factor: 0.125 lb/MMBtu 7. Emissions			
Reference: DEP Rule 62.296.405 (1)(	(b) and 62.210.700(3) Method Code: 0		
8. Calculation of Emissions (limit to 600 chara	acters):		
0.125 lb/MMBtu * 4,000 MMBtu/hr = 500	lb/hr		
(500  lb/hr * 8,760  hr/yr)/2000  lb/ton = 2,190	0 tons/yr		
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):		
The particulate matter emission limit for 3 h	or/24hr at 0.3 lh/MMRtu and 21 hr/24hr at		
0.1 lb/MMBtu is equivalent to an average o			
Allowable Emissions1 of4			
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable		
Emissions limit required by law	Emissions:		
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:		
0.1 lb/mmbtu	400 lb/hour 1752 tons/year		
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 0.1 lb/mmbtu is the current regulatory limit on PM [Rule 62-296.405(1)(b)]. Equivalent emissions are given for liquid fuel firing.			

<b>Emissions Unit Information Section</b>	3 of6	PPE Unit 3
Pollutant Detail Information Page _	3 of3	Particulate Matter - Total

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

rotential/rugitive Emissions				
1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:			
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]			
5. Range of Estimated Fugitive Emissions:	<del></del>			
[ ] 1 [ ] 2 [ ] 3	totons/year			
6. Emission Factor:	7. Emissions			
Reference:	Method Code:			
8. Calculation of Emissions (limit to 600 charac	cters):			
9. Pollutant Potential/Fugitive Emissions Com	nent (limit to 200 characters):			
Potential/Fugitive Emissions				
Allowable Emissions	_2of4			
1. Basis for Allowable Emissions Code: Emission limit required by rule	2. Future Effective Date of Allowable Emissions:			
Emission man required by full				
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:			
0.3 lb/mmbtu	1200 lb/hour 657 tons/year			
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.				
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):				
Data is for sootblowing conditions firing fuel oil, worst case [Rule 62-210.700(3)]. Equivalent				
allowable emissions are given for liquid fuel firing.				

<b>Emissions Unit Information Section</b>	n3_ of6	PPE Unit 3
Pollutant Detail Information Page	3 of3	Particulate Matter - Total

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:		
3. Potential Emissions:	4. Synthetically		
lb/hour tons/year	Limited? [ ]		
5. Range of Estimated Fugitive Emissions:			
	to tons/year		
6. Emission Factor:	7. Emissions		
D. C.	Method Code:		
Reference:			
8. Calculation of Emissions (limit to 600 chara	cters):		
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):		
agin v Emissions com	mont (mint to 200 onatactors).		
Allowable Emissions Allowable Emissions	3 of 4		
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable		
OTHER			
OTHER	Emissions: Oct. 31, 2007		
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:		
0.03 lb/mmbtu			
	120 lb/hour 525.6 tons/year		
5. Method of Compliance (limit to 60 characters):			
DEP Rule 62-296.405(1)(e)2.			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):			
Based on its negotiations with the Department, applicant agrees to reduce steady-state PM			
emissions of its fossil fueled steam boilers in Broward County to 0.03 lb/mmbtu. Equivalent			
allowable emissions are given for liquid fuel firing.			

<b>Emissions Unit Information Section</b>	n3_ of6	PPE Unit 3
Pollutant Detail Information Page	3_ of3	Particulate Matter - Total

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

rotential/rugitive Emissions				
1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:			
3. Potential Emissions:   lb/hour	4. Synthetically Limited? [ ]			
5. Range of Estimated Fugitive Emissions:	to tons/year			
6. Emission Factor:  Reference:	7. Emissions Method Code:			
Reference.				
8. Calculation of Emissions (limit to 600 characters):				
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):				
Allowable Emissions Allowable Emissions	_4of4			
Basis for Allowable Emissions Code:     OTHER	2. Future Effective Date of Allowable Emissions: Oct. 31, 2007			
Requested Allowable Emissions and Units:     0.1 lb/mmbtu	Equivalent Allowable Emissions:     400 lb/hour 219 tons/year			
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.				
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce PM emissions of its fossil fueled steam boilers in Broward County. Equivalent allowable emissions are given for liquid fuel firing and sootblowing.				

2missions	Unit	Information	Section	3	οf	6	
21111221AH2	OHIL	THIOI MALION	Section	3	UI	U	

### H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissi	ons Limitation1 of5		
1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity:		
	[X] Rule [ ] Other		
3. Requested Allowable Opacity:			
Normal Conditions: 40 % Ex	ceptional Conditions: %		
Maximum Period of Excess Opacity Allow	ed: min/hour		
4. Method of Compliance: EPA Method 9			
	,		
5. Visible Emissions Comment (limit to 200 c	haracters): DEP Rule 62-296.405(1)(a) and		
(1)(e)1., F.A.C. Visible emissions limited to 40			
emissions. Compliance testing is performed and			
Visible Emissions Limitation: Visible Emissi	ons Limitation2 of5		
1. Visible Emissions Subtype: VE60	2. Basis for Allowable Opacity:		
	[X] Rule [ ] Other		
3. Requested Allowable Opacity:			
Normal Conditions: 60 % Exceptional Conditions: 100 %			
Maximum Period of Excess Opacity Allow	ed: 24 min/hour		
4. Method of Compliance: EPA Method 9	•		
5. Visible Emissions Comment (limit to 200 c	haracters): DEP Rule 62-210 700(3) F A C		
limits sootblowing & load changing to 60% opa			
periods of up to 100% opacity if unit has an ope	The state of the s		

Emissions Unit Information Section3	of6 PPE Unit 3			
Visible Emissions Limitation: Visible Emission	ons Limitation3 of5			
1. Visible Emissions Subtype: VE100	Basis for Allowable Opacity:  [X] Rule  [ ] Other			
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour				
4. Method of Compliance: EPA Method 9				
5. Visible Emissions Comment (limit to 200 cl F.A.C. allow up to 100% opacity, for an unlimit 2hrs/24hrs for malfunctions.				
Visible Emissions Limitation: Visible Emissi	ons Limitation4 of5			
1. Visible Emissions Subtype: VE20	<ul><li>2. Basis for Allowable Opacity:</li><li>[ ] Rule [X] Other</li></ul>			
3. Requested Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour				
4. Method of Compliance: EPA Method 9	· · · · · · · · · · · · · · · · · · ·			
5. Visible Emissions Comment (limit to 200 c Department, applicant agrees to reduce visible esteam boilers in Broward County to 20%. This	emissions 6-minute average of its fossil fueled			

Compliance testing is performed annually using EPA Method 9.

Emissions Unit Information Section 3 of 6
Zimbolono Chit Intol mation Section

<u>Visible Emissions Limitation:</u> Visible Emissions Limitation ___5 __ of ___5

1.	Visible Emissions Subtype: VE40	2.	Basis for Allow	able Opacity:			
			[ ] Rule	[X] Other			
3.	Requested Allowable Opacity:						
	Normal Conditions: 40 % Ex	cept	ional Conditions	: 100 %			
	Maximum Period of Excess Opacity Allowe	ed:	24 min/hou	r			
4.	Method of Compliance: EPA Method 9						
_							
5.	Visible Emissions Comment (limit to 200 c	hara	cters): Based on	its negotiations with the			
De	Department, applicant agrees to reduce visible emissions of its fossil fueled steam boilers in						
Broward County, and limits sootblowing & load changing to 40% opacity for up to 3hrs/24							
hrs	hrs, with 4, six-minute periods of up to 100% opacity if unit has an operational COM. This						
	nit becomes effective Oct. 31, 2007.	•	•	•			
	,						

Emissions	<b>Unit In</b>	formation	Section	3	of	6	

# I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring)

<u>Continuous Monitoring System:</u> Continuous Monitor1 of3					
1. Parameter Code: EM	2. Pollutant(s): NOx				
3. CMS Requirement:	[X] Rule [ ] Other				
4. Monitor Information:	-				
Manufacturer: TEI					
Model Number: 42C	Serial Number: 42C-77126-385				
5. Installation Date: 01/22/03	6. Performance Specification Test Date: 01/29/03				
7. Continuous Monitor Comment (limit to 200	characters): Required by 40 CFR 75.				
	NITOR INFORMATION Subject to Continuous Monitoring) Monitor _ 2 of 3				
Parameter Code: EM	2. Pollutant(s): CO ₂				
3. CMS Requirement:	[X] Rule [ ] Other				
4. Monitor Information:  Manufacturer: Milton Roy					
Model Number: 3300					
	Serial Number: N3L2495T				
5. Installation Date: 07/08/94	Serial Number: N3L2495T  6. Performance Specification Test Date: 08/26/94				

Emissions	<b>Unit Information Section</b>	3	of	6	

# I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring)

**Continuous Monitoring System:** Continuous Monitor __3__ of ___3__

1.	Parameter Code: VE	2. Pollutant(s): Opacity
3.	CMS Requirement:	[X] Rule [ ] Other
4.	Monitor Information:	
	Manufacturer: Phoenix Instruments, Inc.	
	Model Number: OPAC 20/20	Serial Number: OPAC - 1081
5.	Installation Date: 11/19/00	6. Performance Specification Test Date:
		12/03/00
7.	Continuous Monitor Comment (limit to 200	characters): Required by 40 CFR 75.

Emissions	Unit Info	rmation	Section	3	of	6	
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# J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION (Regulated Emissions Units Only)

## **Supplemental Requirements**

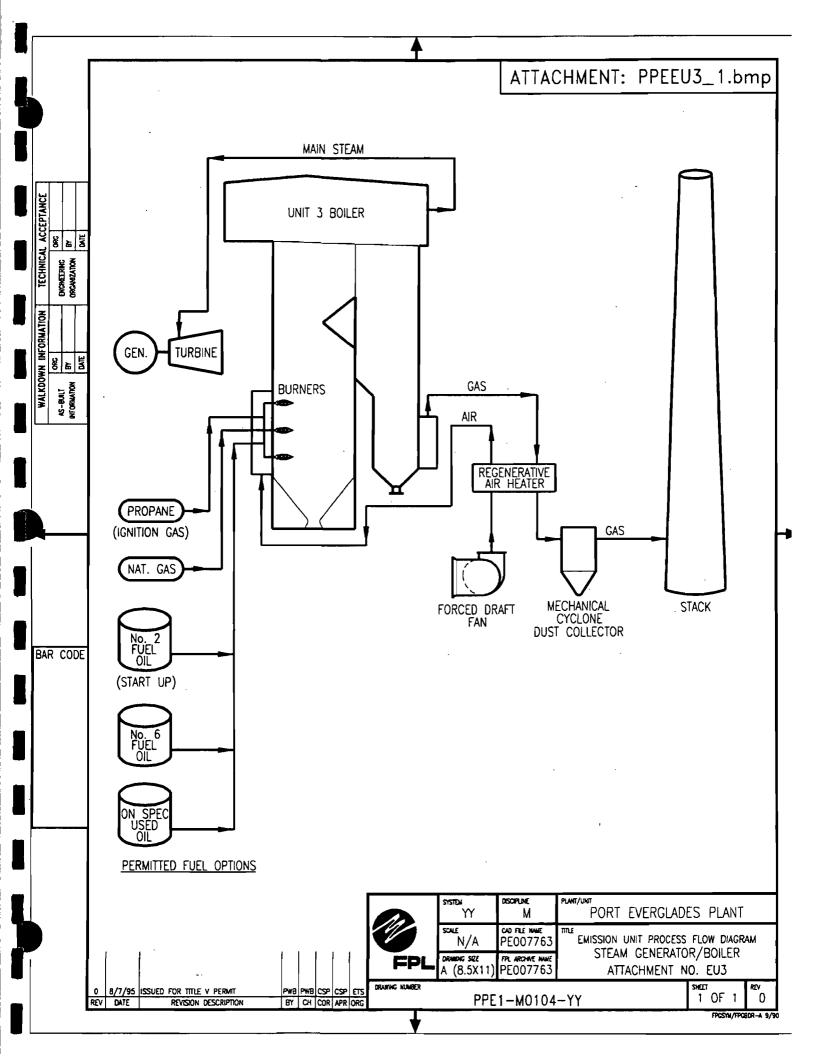
_		
	1.	Process Flow Diagram
		[X] Attached, Document ID: PPEU3bmp_ [ ] Not Applicable [ ] Waiver Requested
	2.	Fuel Analysis or Specification
		[X] Attached, Document ID: PPEU3_2.doc [ ] Not Applicable [ ] Waiver Requested
	3.	Detailed Description of Control Equipment
		[X] Attached, Document ID: PPEU3_3.doc & PPEFSESPdoc [ ] Not Applicable
Γ	4.	Description of Stack Sampling Facilities
		[X] Attached, Document ID: PPEU3_4.bmp [ ] Not Applicable [ ] Waiver Requested
	5.	Compliance Test Report
		[ ] Attached, Document ID:
		[X] Previously submitted, Date:
		[ ] Not Applicable
	6.	Procedures for Startup and Shutdown
		[X] Attached, Document ID: PPEU3_6.doc [ ] Not Applicable [ ] Waiver Requested
	7.	Operation and Maintenance Plan
		[ ] Attached, Document ID: [X] Not Applicable [ ] Waiver Requested
Γ	8.	Supplemental Information for Construction Permit Application
		[ ] Attached, Document ID: [X] Not Applicable
	9.	Other Information Required by Rule or Statute
		[ ] Attached, Document ID: [X] Not Applicable
	10	. Supplemental Requirements Comment:
1		

Emissions	Unit !	Information	Section	3	of	6	

## Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[X] Attached, Document ID: PPEU3_ 10.doc [ ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID: [N/A] Not Applicable
[ ] Tanachea, Boarment IB [TWIT] Trot repriessor
13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID: [X] Not Applicable
14. Compliance Assurance Monitoring Plan
[X] Attached, Document ID: PPEU1_14.doc [] Not Applicable
15 Acid Doin Dord Application (Hand cour Dominal)
15. Acid Rain Part Application (Hard-copy Required)
[X] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: PPEU1_15
[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID:N/A
New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID:N/A/
[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID:N/A
Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:N/A _
[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:N/A
[ ] Not Applicable

ATTACHMENT PPEU3_.BMP_
PROCESS FLOW DIAGRAM



ATTACHMENT PPEU3_2.DOC
FUEL ANALYSIS OR SPECIFICATIONS

### Fuel Analysis Natural Gas Analysis (typical)²

Parameter	Typical value	<u>Max value</u>
Specific gravity(@ 60° F)	0.887	none
Heat content (Btu/cu ft)	950 - 1124	none
% sulfur (grains/CCF)	0.43 ¹	1 grain / ccf
% nitrogen (by volume)	0.8	none
% ash	negligible	none

*Note: The values listed are "typical" values based upon information supplied to FPL by Florida Gas Transmission (FGT). However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

- (1) Data from laboratory analysis
- (2) The values are "typical" based upon the following:
  - Information gathered by FPL through laboratory analysis, and
  - FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

# Fuel Analysis No.6 Oil Analysis (typical)⁴

<u>Parameter</u>	Typical value	Specifications	
API gravity (@ 60° F)	6 - 12	none	
Heat content(MBtu/bbl)	6,310 - 6420	6,340 ¹	
% Sulfur	1.0	2.5 max ³	
% Nitrogen	$0.2 - 0.5^2$	none	
% Ash	$0.06 - 0.09^2$	0.10 max ¹	

- (1) Data taken from FPL fuel specifications.
- (2) Data taken from laboratory analysis.
- (3) Maximum permitted from current air operation permit.
- (4) The values are "typical" based upon the following:
  - Information gathered by FPL through laboratory analysis, and
  - FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

# Fuel Analysis No. 2 Distillate oil (typical)³

Parameter	Typical value	Specifications
API gravity (@ 60 F)	$35.0^2$	30 - 40 ¹
Heat content (MBtu/bbl)	5,700 - 5,800 ²	none
% sulfur	0.3 - 0.5 ¹	0.5 maximum ¹
% nitrogen	no specification	none
% ash	<0.01 ²	0.01 ¹

- (1) Data taken from FPL fuel specifications.
- (2) Data taken from laboratory analysis.
- (3) The values are "typical" based upon the following:
  - Information gathered by FPL through laboratory analysis, and
  - FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

## Fuel Analysis Propane (typical)¹

Emission unit #1 may occasionally light off (start up) on propane fuel, then switch to another fuel, such as No.6 residual oil. The propane fuel is supplied by a commercial vendor and is stored in small tanks located at the bottom of the boiler area. The chemical formula for propane is  $C_3H_8$ .

Parameter	Typical value	Specifications	
Specific gravity (@ 60 F)	0.51 ¹	none	
Heat content (MBtu/bbl)	600 - 1,000	none	
% sulfur	0.0031	none	
% nitrogen	no specification	none	
% ash	no specification	none	

- (1) The values are "typical" based upon the following:
  - Information gathered by FPL through laboratory analysis, and
  - FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

## Fuel Analysis On Specification Used Oil

The boiler may occasionally burn used oil during normal operation. All used oil fired in the unit meets the specifications mandated by 40 CFR 279.11. Used oil fired by this boiler is typically derived from plant maintenance activities, and may include used lube oils, transformer oils, etc. that meet the analytical specifications. Criteria for used oil follows:

<u>Parameter</u>	Typical value	Specifications	-
API gravity (@ 60 F)	30.0 ¹	none	
Heat content (MBtu/bbl)	6,000 ¹	none	
% sulfur	0.3 ¹	none	
% nitrogen	negligible	none	
% ash	0.011	0.01	

- (1) The values are "typical" based upon the following:
  - Information gathered by FPL through laboratory analysis, and
  - FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

ATTACHMENT PPEU3_3.DOC

DETAILED DESCRIPTION OF CONTROL EQUIPMENT

### **Detailed Description of Control Equipment**

**A. Cyclone Separator** – This steam generator (boiler) is supplied with two 104B-GHS #19-684 UOP tubular mechanical dust collectors with side inlet and universal outlet. Each dust collector consists of 695 tubes and four dust collection hoppers. The dust collector has the following efficiency at 2.55 inches of water at peak load:

Particle Range (micron)	Mean Diameter (micron)	Estimated efficiency (percent)
0-5	2.5	30.3
5-10	7.5	66.2
10-20	15	88.6
20-45	32.5	99.1
45+	45	99.5

**B. Low NOx Burners** – Due to RACT requirements in the southern Florida airshed, the Port Everglades facility installed "Low NOx Burners" which have as their primary purpose the reduction of NOx produced during combustion. The installed burners have reduced NOx production by 23% on natural gas fuel, and by 28% on residual oil fuel (in lb/mmBtu, comparing baseline emission rates with permitted NOx RACT emission rates.

**C. Electrostatic Precipitators (ESPs)** – ESPs identified in this Title V application are described in more detail in a separate construction permit application. The ESPs (or equivalent) will replace the cyclone separators.

ATTACHMENT PPEU3_4.BMP_
DESCRIPTION OF STACK SAMPLING FACILITIES

#### FLORIDA POWER & LIGHT CO. STACK SAMPLING FACILITIES PORT EVERGLADES

#### FOSSIL FUEL STEAM GENERATORS UNITS 3 & 4

### STACK SPECIFICATIONS

SAMPLING DIAMETER: 261.4 in.
SAMPLING AREA: 344.6 eq. ft.
SAMPLING PORT DEPTH: 71.9 in.
No. OF PORTS: 4
No. OF POINTS PER TRAVERSE: 6
TOTAL No. OF POINTS: 24
SAMPLING TIME PER POINT: 2.6 min.
TOTAL SAMPLING TIME: 60.0 min.

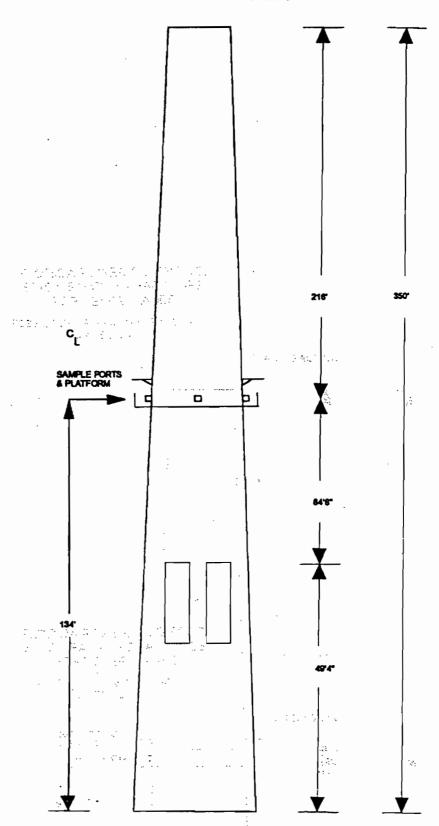
NOTE: DRAWING IS NOT TO SCALE

#### PARTICULATE SAMPLING PROBE DIAGRAM

11.5°
12.5°
101.5°
18.3°
134.7°

161.4*

#### STACK DIAGRAM



Access to the sampling ports is provided by a ladder. Channel iron with a trolley system is above each port for probe support. AC power is available on the platform and at the base of thestack.

ATTACHMENT PPEU3_6.DOC

PROCEDURES FOR STARTUP AND SHUTDOWN

### Startup & Shutdown Procedures - Minimizing Excess Emissions

Startup of the fossil-fuel boiler begins when fuel (either natural gas or oil) is introduced into one or more burners within the boiler and lighted (commencement of combustion). Startup is complete and steady-state operation begins when the combustion process has stabilized and the megawatt load on the unit is stable.

Shutdown of the fossil-fuel boilers begins when unit megawatt load is decreased to below 10% of maximum and continues until the final burner gun is removed from service and the final Induced-draft or Forced-draft fan is removed from service.

Excess emissions may be detected during all modes of boiler operation by any one of several continuous emissions monitors. Continuous emission monitors are currently in place for NO_x, SO₂ and opacity. An audible and visual alarm are activated whenever permitted values for any of the above parameters are approached.

Countermeasures which may be taken in the event of excess emissions include, but are not limited to:

- proper excess air adjustments
- recognizing and removal of faulty burners
- fuel oil temperature adjustments
- proper and timely operation of boiler cleaning devices
- removal of the unit from system-dispatch mode
- reduction of unit megawatt load
- stopping and restarting of boiler cleaning devices
- lowering load rate
- pressure rate changes

Best Operational Practices to prevent excess emissions, and knowledge of the appropriate countermeasures to take if an excess emissions condition exists, are taught during routine operator training.

ATTACHMENT PPEU3_10.DOC

ALTERNATIVE METHODS OF OPERATION

#### **Alternative Methods of Operation**

#### Operation at Various Capacities and Heat Input Rates

The Port Everglades Units 3 and 4 boilers currently may each be operated up to 8760 hours per year at heat input rates from zero to 3,850 MMBtu per hour on No.#6 oil, and from zero to 4,025 MMBtu per hour on natural gas. FPL has included a heat input value of 4,000 mmBtu per hour for this emission unit for firing distillate oil, and 4,180 mmBtu per hour for firing natural gas. There are 6 identical boiler units in the FPL system with the same design. The 4,000 / 4,180 mmBtu values are representative of each of the 6 units. When a blend of fuel oil and natural gas are burned, the heat input is prorated based upon the percent heat input of each fuel.

#### Different Fuel Types

The units may be fired with a variable combination of No. 6 residual fuel oil, natural gas, or No. 2 fuel oil. The unit may occasionally utilize propane fuel to light off (start up) the boiler, then switch to another fuel, such as No.6 residual oil. The units may also burn on-specification used oil meeting EPA specifications under 40 CFR 279.11. The quantity of on-specification used oil shall not exceed 1,500,000 gallons per year for Units 1 through 4.

#### Current emissions limitations are as follows:

Pollutant Emission Limit

Particulate matter-steady state 0.1 lb/MMBtu
Particulate matter-soot blowing 0.3 lb/MMBtu

Sulfur dioxide 2.75 lb/MMBtu

Nitrogen oxides 0.4 lb/mmBtu (natural gas, 30-day rolling average)

0.53 lb/mmBtu (residual oil, 30-day rolling average)

#### Oil and Gas Co-firing

These emission units may co-fire natural gas with residual oil. When combusting both fuels simultaneously; the percentage of natural gas will be adjusted to ensure that the applicable SO2 emission limit and visible emission limits are complied with.

#### Soot blowing

The units may blow soot for up to 24 hours per day, so long as excess emissions are limited to 60% opacity for 3 hours in 24 hours with no more than four 6-minute periods of up to 100% opacity.

#### **Utilization of Additives**

Additives such as Magnesium hydroxide Mg(OH)₂ are added to the boiler periodically at various loads. When magnesium hydroxide is used, it is injected into the boiler via the I.K. soot blower lances and through manual hand lances on a batch basis, rather than continuously. The dosage rate is based on the quantity of fuel burned and the amount of ash in the fuel. FPL reserves the right to use other additives if they are suitable.

#### Off-Stoichiometric Combustion

This technique involves operating selected burners at fuel-rich mixture ratios. The proportion of fuel burned at peak temperatures in the presence of excess air is reduced and results in reduced NOx emissions. At Port Everglades, the method for performing off-stoichiometric combustion is to terminate the fuel flow to selected burners and utilize these burners as excess air ports. The other burners are then operated at a fuel-rich mixture ratio. This is also known as a bias-firing scheme.

### **Alternative Methods of Operation**

**Evaporation of Spent Boiler Chemical Cleaning Chemicals** 

On a periodic basis, as part of routine maintenance, the inside of the steam generator tubes (boiler tubes) at Port Everglades Unit 3 and 4 are cleaned using a series of chemical solutions that remove deposited scale which adversely affects the efficiency and reliability of the generating units.

After the second stage treatment, three or more rinses are performed, in order to wash the cleaning solution from the inside of the boiler tubes. The solutions and rinsewaters are collected in large mobile tanks ("frac tanks") pursuant to guidance issued by the Department. Upon completion of the cleaning process and prior to disposal of the spent cleaning solution and rinses, representative sampling of the liquids collected in the "frac tanks" is conducted as per 40 CFR 261, Appendix I, to determine the hazardous waste status of the accumulated wastewater, using Toxicity Characteristic Leaching Procedure (TCLP) analysis.

If the wastewater is determined to be hazardous, it will be managed as such in accordance with 40 CFR 262.34, 40 CFR 265 Subpart I, and 40 CFR 268 with respect to generators accumulating and treating waste in containers and tanks. An appropriate waste analysis plan will be developed to determine and document the pre- and post-treatment characteristics of the wastewater. Hazardous waste may also be transported to an approved offsite hazardous waste facility for the appropriate disposal.

If the spent cleaning solution and rises are determined to be non-hazardous, they are then disposal by evaporation in the units boiler. Introduction into the boiler will occur at a rate that will not cause an exceedence of the opacity limit of the unit in which evaporation is occurring (in this case, 40 percent opacity).

simulation section . Of o	Emissions	Unit	Information	Section	4	of	6	
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### III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

# A. GENERAL EMISSIONS UNIT INFORMATION (All Emissions Units)

### **Emissions Unit Description and Status**

1.	Type of Emission	s Unit Addressed in This	s Section: (Check one)		
[X	[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).				
[	[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.				
[	-		n addresses, as a single emises which produce fugitive em		
2.	Regulated or Unr	egulated Emissions Unit	? (Check one)		
[X	[]The emissions un emissions unit.	it addressed in this Emis	sions Unit Information Secti	on is a regulated	
[	[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.				
	3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Port Everglades Boiler Unit 4				
4.	Emissions Unit Id	lentification Number: (	004	[ ] No ID [ ] ID Unknown	
5.	Emissions Unit Status Code: A	6. Initial Startup Date: 04/01/65	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? [Y]	
rei Si	flects information p te Plan. Actual gen	provided to the Florida Preservator output may exceed	Characters) The generator natural ublic Service Commission (For the stated value, and may vote in system load demand.	PSC) in the 10-Year	

DEP Form No. 62-210.900(1) – Form Effective: 2/11/99

Emissions	Unit	<b>Information</b>	Section	4	of	6

### **Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

A. Low NOx Burners

B. Multiple Cyclones w/ Fly Ash Reinjection

C. Staged Combustion

D. Electrostatic Precipitators (Proposed ca. 2005 & 2006)

2. Control Device or Method Code(s): A = 024, B = 011, C = 077, D = 011

## **Emissions Unit Details**

 Package Unit: Manufacturer: Foster Wheeler / General Electric

Model

Number:

2. Generator Nameplate Rating:

402 MW

3. Incinerator Information:

Dwell Temperature:

٥F

Dwell Time:

seconds

Incinerator Afterburner Temperature:

٥F

Emissions	<b>Unit Information</b>	Section	4	Ωf	6	
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# B. EMISSIONS UNIT CAPACITY INFORMATION (Regulated Emissions Units Only)

## **Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	4	180 mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughp	out Rate:	
4. Maximum Production Rate:	-	
5. Requested Maximum Operating	g Schedule:	
	hours/day	days/week
	weeks/year	8760 hours/year
9. Operating Capacity/Schedule C	Comment (limit to 200 char	racters):
The maximum heat input given aboresidual oil 4000 mmbtu/hr.	ove reflects natural gas firi	ng. Maximum heat input for

Emissions	<b>Unit Information</b>	Section	4	οf	6	
CH112210H2	Cuit Inioi mation	Section	4	UI	U	

# C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

## **List of Applicable Regulations**

FDEP Title V Core List, Attachment PPEU1-C		
	_	-

<b>Emissions Unit Information Section</b>	4	of	6	
-------------------------------------------	---	----	---	--

# D. EMISSION POINT (STACK/VENT) INFORMATION (Regulated Emissions Units Only)

## **Emission Point Description and Type**

1. Identification of Point on Pl Flow Diagram? EU 4	ot Plan or	2. Emission Point Type Code: 1		
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Emission Unit 4 – Port Everglades Unit 4 Boiler				
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:				
5. Discharge Type Code: V	6. Stack Heig 343 feet	ht:	7. Exit Diameter: 18.1 feet	
8. Exit Temperature: 287 °F	9. Actual Volumetric Flow Rate: 1263180.6 acfm		%	
11. Maximum Dry Standard Flow Rate: dscfm  12. Nonstack Emission Point Height: feet				
13. Emission Point UTM Coord		-		
	ast (km): 587.4		h (km): 2885.2	
14. Emission Point Comment (limit to 200 characters): Information provided in item #9 above from the initial Title V application. Flow rates vary depending on operating conditions.				

<b>Emissions</b>	<b>Unit In</b>	formation	Section	4	of	6	

Segment Description (Proc Natural gas burned in Ur	•• , ,	limit to 500 ch	aracters):	
			•	
2. Source Classification Code	· (SCC)·	3 SCC Units	: Million cubic feet burned	
1-01-006-01	(300).	3. See onits	. Willion cubic feet burned	
4. Maximum Hourly Rate:	5. Maximum A	nnual Rate:	6. Estimated Annual Activity	
3.98	34,873		Factor:	
7. Maximum % Sulfur: 0.0031	8. Maximum %	6 Ash:	9. Million Btu per SCC Unit: 1050	
10. Segment Comment (limit t	to 200 characters)	: This unit is co	urrently permitted to burn a	
variable combination of No. 6	· · · · · · · · · · · · · · · · · · ·	ral gas, No. 2 f	uel oil, propane, or on-	
specification used oil from FP	L operations.			
·				
Segment Description and Rate: Segment2_ of7_				
1. Segment Description (Prod	• • •	(limit to 500 ch	naracters):	
Number 6 fuel oil burned in Unit 4 Boiler				
2. Source Classification Code (SCC): 3. S			<del></del>	
1-01-004-01	e (SCC):	3. SCC Unit	s: Thousand gallons burned	
1-01-004-01 4. Maximum Hourly Rate:	5. Maximum A		6. Estimated Annual Activity	
1-01-004-01 4. Maximum Hourly Rate: 26.3	5. Maximum A 230,526	Annual Rate:	6. Estimated Annual Activity Factor:	
1-01-004-01 4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity	
1-01-004-01 4. Maximum Hourly Rate: 26.3 7. Maximum % Sulfur: 2.5 10. Segment Comment (limit)	5. Maximum A 230,526 8. Maximum % to 200 characters)	Annual Rate:  6 Ash:  : This unit is co	6. Estimated Annual Activity Factor:  9. Million Btu per SCC Unit: 152 urrently permitted to burn a	
<ul> <li>1-01-004-01</li> <li>4. Maximum Hourly Rate:</li> <li>26.3</li> <li>7. Maximum % Sulfur: 2.5</li> <li>10. Segment Comment (limit to variable combination of No. 6</li> </ul>	5. Maximum A 230,526 8. Maximum % to 200 characters) residual oil, natu	Annual Rate:  6 Ash:  : This unit is co	6. Estimated Annual Activity Factor:  9. Million Btu per SCC Unit: 152 urrently permitted to burn a	
1-01-004-01 4. Maximum Hourly Rate: 26.3 7. Maximum % Sulfur: 2.5 10. Segment Comment (limit)	5. Maximum A 230,526 8. Maximum % to 200 characters) residual oil, natu	Annual Rate:  6 Ash:  : This unit is co	6. Estimated Annual Activity Factor:  9. Million Btu per SCC Unit: 152 urrently permitted to burn a	
<ul> <li>1-01-004-01</li> <li>4. Maximum Hourly Rate:</li> <li>26.3</li> <li>7. Maximum % Sulfur: 2.5</li> <li>10. Segment Comment (limit to variable combination of No. 6</li> </ul>	5. Maximum A 230,526 8. Maximum % to 200 characters) residual oil, natu	Annual Rate:  6 Ash:  : This unit is co	6. Estimated Annual Activity Factor:  9. Million Btu per SCC Unit: 152 urrently permitted to burn a	
<ul> <li>1-01-004-01</li> <li>4. Maximum Hourly Rate:</li> <li>26.3</li> <li>7. Maximum % Sulfur: 2.5</li> <li>10. Segment Comment (limit to variable combination of No. 6</li> </ul>	5. Maximum A 230,526 8. Maximum % to 200 characters) residual oil, natu	Annual Rate:  6 Ash:  : This unit is co	6. Estimated Annual Activity Factor:  9. Million Btu per SCC Unit: 152 urrently permitted to burn a	

Emissions	Unit I	nformation	Section	4	of	6	

Segment Description and Rate: Segment3 of7				
1. Segment Description (Prod No. 2 fuel oil	cess/Fuel Type) (	limit to 500 ch	aracters): Unit 4 boiler burning	
140. 2 fact off				
2. Source Classification Cod	e (SCC):	3. SCC Units	: Thousand gallons burned	
1-01-005-01	5 16 :	1.70	LC Trib (114 mm) Addition	
4. Maximum Hourly Rate: 29.41	5. Maximum A 257,647	Annual Kate:	6. Estimated Annual Activity Factor:	
7. Maximum % Sulfur: 0.5	8. Maximum 9	% Ash:	9. Million Btu per SCC Unit: 136	
10. Segment Comment (limit to 200 characters): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or onspecification used oil from FPL operations.				
Segment Description and Ra	ite: Segment	4 of7		
1. Segment Description (Propression Propression Unit 4	cess/Fuel Type)	(limit to 500 ch	aracters):	
Tropune during in onit i		•		
2. Source Classification Cod 1-01-006-01	e (SCC):	3. SCC Unit	s: Million cubic feet burned	
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity	
4.18	36,617		Factor:	
7. Maximum % Sulfur: 1	8. Maximum 9	% Ash:	9. Million Btu per SCC Unit: 1000	
10. Segment Comment (limit		•	* *	
	variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-			
specification used oil from FP	L operations.			

Emissions	<b>Unit Inform</b>	nation S	Section	4	of	6	

Segment Description and Rate: Segment5_ of7				
<ol> <li>Segment Description (Process/Fuel Type) (limit to 500 characters):         On-Specification used oil burned in Unit 4 boiler</li> </ol>				
2. Source Classification Code 1-01-013-02	<ol> <li>Source Classification Code (SCC):</li> <li>SCC Units: Thousand gallons burned</li> </ol>			
4. Maximum Hourly Rate: 29.41	5. Maximum <i>A</i> 1,500	Annual Rate:	6. Estimated Annual Activity Factor:	
7. Maximum % Sulfur: 2.5	8. Maximum %	% Ash:	<ul><li>9. Million Btu per SCC Unit:</li><li>136</li></ul>	
10. Segment Comment (limit to 200 characters): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or onspecification used oil from FPL operations. Maximum Annual Rate is for EUs 001 through 004.				
Segment Description and Rate: Segment6 of7				
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 4 boiler firing all possible combinations of natural gas, residual oil, on-specification used oil, #2 fuel oil, and propane				
2. Source Classification Code 1-01	e (SCC):	3. SCC Unit	s: Million cubic feet	
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor:	
7. Maximum % Sulfur: 2.5	8. Maximum 9	∕₀ Ash:	9. Million Btu per SCC Unit:	
10. Segment Comment (limit to 200 characters): The existing Title V permit allows Unit 4 to burn a mixture of the above fuels in a ration that will result in a max. SO2 emission rate of 2.75 lb/mmbtu.				

	<b>Emissions</b>	Unit	<b>Information Section</b>	4	of	6	
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Segment Description and Ra	ite: Segment	_7 of7	
Segment Description (Proc Boiler chemical cleaning			aracters): s process may be undertaken
while firing natural gas or residual	dual fuel oil.		
			·
2. Source Classification Code (SCC): 3. SCC Units: Thousand gallons burned 1-01-013-01			
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:	6. Estimated Annual Activity
3	500		Factor:
7. Maximum % Sulfur:	8. Maximum ^c	% Ash:	9. Million Btu per SCC Unit:
10. Sagment Commant (limit)	 	). Itams 6 7 0	& 9 do not apply. This activity
,		•	A guidance and EPA waste rules
(40 CFR 279.72).	ousis in uccorda		ar gardanee and 2211 Waste Fares
Segment Description and Ra	ite: Segment	of	
1. Segment Description (Prod	cess/Fuel Type)	(limit to 500 cl	naracters):
2 Source Classification Cod	~ (CCC).	3. SCC Unit	
2. Source Classification Code	e (SCC):	3. SCC Uni	.s.
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:	6. Estimated Annual Activity
			Factor:
7. Maximum % Sulfur:	8. Maximum	% Ash:	9. Million Btu per SCC Unit:
10. Comment Comment (limite	. 200 -1 4	<b>\</b> .	
10. Segment Comment (limit)	to 200 characters	):	

# F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

		·	
1. Pollutant Emitted	2. Primary Control	3. Secondary Control	4. Pollutant
	Device Code	Device Code	Regulatory Code
SO2	NA	NA	EL
NOx	025	NA	EL
СО	NA	NA	NS
PM	011 (Future)	077 (Existing)	EL
PM10	011	077	NS
VOC	(Future) NA	(Existing) NA	NS
H133	NA	NA	NS
H106	NA	NA	NS
H107	NA	NA NA	NS
SAM	NA	NA	NS
НАР	NA	· NA	NS
			,
·			
			-
· · · · · · · · · · · · · · · · · · ·			
		1	

<b>Emissions Unit Information Section</b>	4 of6	PPE Unit 4
Pollutant Detail Information Page	1_ of3	Sulfur Dioxide

## G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

1. Pollutant Emitted: SO2	2. Total Percent Efficiency of Control:				
3. Potential Emissions:	4. Synthetically				
11000 lb/hour 48180 tons/y					
5. Range of Estimated Fugitive Emissions:					
	to tons/year				
6. Emission Factor: 2.75	7. Emissions				
	Method Code: 0				
Reference: DEP Rule 62-296.405(1)(c)1.j.					
8. Calculation of Emissions (limit to 600 chara	cters):				
2.75 lb/mmbtu*4000 mmbtu/hr = 11000 lb/hr					
(1100  lb/hr * 8760  hr/yr) / 2000  lb/ton = 4818	0 tons/ yr				
	•				
9. Pollutant Potential/Fugitive Emissions Com-	ment (limit to 200 characters):				
	,				
	·				
Allowable Emissions Allowable Emissions	1 of 1				
Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable				
Emissions limit required by rule	Emissions:				
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:				
2.75 lb/mmbtu					
2.73 lo/initiotu	11000 lb/hour 48180 tons/year				
5. Method of Compliance (limit to 60 characters): Fuel sampling & analysis					
•	. , , , , , , , , , , , , , , , , , , ,				
6 Allowable Emissions Comment (Dans a 60	wanting Mathed (limit to 200 characters).				
6. Allowable Emissions Comment (Desc. of O					
2.75 lb/mmbtu is the current regulatory limit on	· -				
296.405(1)(c)1.j.]. Equivalent allowable emission	ons are given for inquid fuer fifting.				

<b>Emissions Unit Information Section</b>	4_	of_	6	PPE Unit 4
Pollutant Detail Information Page	2	of	3	Nitrogen Oxide

## G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

1.	Pollutant Emitted: NOx	2. Total Percent Efficie	ency of Control:		
3.	Potential Emissions: 2120 lb/hour 9285.6 tons/year		4. Synthetically Limited? [N]		
5.	Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3	to to	ns/year		
6.	Emission Factor: 0.53 lb/mmbtu  Reference: DEP Rule 62-296.570(4)(b	)2.	7. Emissions Method Code: 0		
8. Calculation of Emissions (limit to 600 characters): 0.5 lb/mmbtu * 4000 mmbtu/hr = 2120 lb/hr					
(2120 lb/hr * 8760 hr/yr) / 2000 lb/ton = 9285.6 tons/ yr					
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): Information provided is for oil firing. Facility uses a 30-day rolling average for NOx compliance. Limit = 0.40 lb/mmbtu on natural gas fuel.					
Allowable Emissions1_ of2					
l	Basis for Allowable Emissions Code: nissions limit required by rule	2. Future Effective Da Emissions:	ate of Allowable		
	Requested Allowable Emissions and Units: 53 lb/mmbtu	4. Equivalent Allowal 2120 lb/hour	ole Emissions: 9285.6 tons/year		
5. Method of Compliance (limit to 60 characters): Continuous Emissions Monitor					
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 0.53 lb/mmbtu is the current regulatory limit on NOx emissions [Rule 62-296.570(40(b)2.]. 30-day rolling average – Rule 62-296.570(4)(a)4.]. Equivalent allowable emissions are given for liquid fuel firing.					

<b>Emissions Unit Information Section</b>	4	of	6
Pollutant Detail Information Page	2	of	3

PPE Unit 4 Nitrogen Oxide

# G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

3. Potential Emissions:   lb/hour   tons/year     4. Synthetically			
5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3 to			
[ ] 1 [ ] 2 [ ] 3 to tons/year  6. Emission Factor: Reference:  8. Calculation of Emissions (limit to 600 characters):  9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			
6. Emission Factor: Reference:  7. Emissions Method Code:  8. Calculation of Emissions (limit to 600 characters):  9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			
Reference:  8. Calculation of Emissions (limit to 600 characters):  9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			
8. Calculation of Emissions (limit to 600 characters):  9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			
Allowable Emissions 2 of 2			
Allowable Emissions 2 of 2			
Allowable Emissions 2 of 2			
Allowable Emissions 2 of 2			
Allowable Emissions Allowable Emissions 2 of 2			
1. Basis for Allowable Emissions Code:  2. Future Effective Date of Allowable			
Emissions limit required by rule Emissions:			
3. Requested Allowable Emissions and Units: 4. Equivalent Allowable Emissions:			
0.4 lb/mmbtu 1610 lb/hour 7051.8 tons/year			
5. Method of Compliance (limit to 60 characters): Continuous Emissions Monitor			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): 0.4			
lb/mmbtu is the current regulatory limit on NOx emissions [Rule 62-296.570(40(b)2.]. 30-day rolling average – Rule 62-296.570(4)(a)4.]. Equivalent allowable emissions are given for			
natural gas fuel firing.			

<b>Emissions Unit Information Section</b>	4_	_ of _	6	PPE Unit 4
Pollutant Detail Information Page	3	of	3	Particulate Matter – Total

### G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:				
3. Potential Emissions:	4. Synthetically				
500 lb/hour 2190 tons/year	Limited? [N]				
5. Range of Estimated Fugitive Emissions:					
	totons/year				
6. Emission Factor: 0.125 lb/mmbtu  Reference: DEP Rule 62-296.405(1)(b) and 62-210.700(3)  7. Emissions  Method Code: 0					
8. Calculation of Emissions (limit to 600 chara	cters):				
0.125 lb/mmbtu * 4000 mmbtu/hr = 500 lb/hr. (500 lb/hr * 8760 hr/ yr) /2000 lb/ton = 2190 tons/yr					
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): The particulate matter emission limit for 3 hrs/24 hrs at 0.3 lb/mmbtu and 21 hrs/24 hrs at 0.1 lb/mmbtu is equivalent to an average of 0.125 lb/mmbtu.					
Allowable Emissions1 of4					
Basis for Allowable Emissions Code:     Emissions limit required by law	2. Future Effective Date of Allowable Emissions:				
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:				
0.1 lb/mmbtu	400 lb/hour 1752 tons/year				
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.					
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):					
0.1 lb/mmbtu is the current regulatory limit on PM [Rule 62-296.405(1)(b)]. Equivalent					
emissions are given for liquid fuel firing.					

<b>Emissions Unit Information Section</b>	44	_of_	6	PPE Unit 4
Pollutant Detail Information Page	3_	of	3	Particulate Matter – Tota

### G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

<b>Potentia</b>	ıl/Fugit	<u>ive Emi</u> :	<u>ssions</u>

1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:
3. Potential Emissions:	4. Synthetically
lb/hour tons/year	Limited? [ ]
5. Range of Estimated Fugitive Emissions:	
	to tons/year
6. Emission Factor:	7. Emissions
Reference:	Method Code:
	<u></u>
8. Calculation of Emissions (limit to 600 chara	ecters):
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):
7. Tonutant Totentian agritive Linissions Com	ment (mint to 200 characters).
Potential/Fugitive Emissions	
Allowable Emissions	_2 of4
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable
Emission limit required by rule	Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:
0.3 lb/mmbtu	1200 lb/hour 657 tons/year
5. Method of Compliance (limit to 60 characte	rs):
DEP Rule 62-296.405(1)(e)2.	
6. Allowable Emissions Comment (Desc. of O	perating Method) (limit to 200 characters):
Data is for sootblowing conditions firing fuel oi	
allowable emissions are given for liquid fuel firm	
	-

<b>Emissions Unit Information Section</b>	4_	_ of _	6	PPE Unit
Pollutant Detail Information Page	3_	of _	3	Particulate Matter – Tota

## G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

Emissions-Limited and Preconstruction Review Pollutants Only)

### **Potential/Fugitive Emissions**

1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:
3. Potential Emissions:	4. Synthetically
lb/hour tons/year	Limited? [ ]
5. Range of Estimated Fugitive Emissions:	•
[ ] 1 [ ] 2 [ ] 3	to tons/year
6. Emission Factor:	7. Emissions
Reference:	Method Code:
8. Calculation of Emissions (limit to 600 chara	acters):
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):
Allowable Emissions Allowable Emissions	_3 of4
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable
OTHER	Emissions: May 31, 2007
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:
0.03 lb/mmbtu	120 lb/hour 525.6 tons/year
5. Method of Compliance (limit to 60 characte DEP Rule 62-296.405(1)(e)2.	rs):
6. Allowable Emissions Comment (Desc. of O	• • •
Based on its negotiations with the Department,	•
emissions of its fossil fueled steam boilers in Br	-
allowable emissions are given for liquid fuel fir	ing.

<b>Emissions Unit Information Section</b>	4_ of6	PPE Unit 4
Pollutant Detail Information Page	3 of3	Particulate Matter - Total

## G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

### **Potential/Fugitive Emissions**

Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:			
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]			
5. Range of Estimated Fugitive Emissions:	to tons/year			
6. Emission Factor: Reference:	7. Emissions Method Code:			
8. Calculation of Emissions (limit to 600 charac	eters):			
9. Pollutant Potential/Fugitive Emissions Comr	ment (limit to 200 characters):			
Allowable Emissions Allowable Emissions	4 of4			
Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: May 31, 2007			
3. Requested Allowable Emissions and Units: 0.1 lb/mmbtu	4. Equivalent Allowable Emissions: 400 lb/hour 219 tons/year			
5. Method of Compliance (limit to 60 character DEP Rule 62-296.405(1)(e)2.	rs):			
6. Allowable Emissions Comment (Desc. of Op Based on its negotiations with the Department, a fossil fueled steam boilers in Broward County. I liquid fuel firing and sootblowing.	pplicant agrees to reduce PM emissions of its			

<b>Emissions</b>	Unit	<b>Information</b>	Section	4	of	6	

## H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

VISIBLE Emissions Limitation: Visible Emissi	ons Limitation1 of5
1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity:
	[X] Rule [ ] Other
3. Requested Allowable Opacity:	
Normal Conditions: 40 % Ex	ceptional Conditions: %
Maximum Period of Excess Opacity Allowe	ed: min/hour
4. Method of Compliance: EPA Method 9	
5 Visible Emissions Comment (limit to 200 a	homostoms), DED Bulg 62, 206, 405(1)(a) and
5. Visible Emissions Comment (limit to 200 c	
(1)(e)1., F.A.C. Visible emissions limited to 40	- · ·
emissions. Compliance testing is performed ann	iually using EPA Method 9.
Visible Emissions Limitation: Visible Emissi	ons Limitation2 of5
1. Visible Emissions Subtype: VE60	2. Basis for Allowable Opacity:
	[X] Rule [ ] Other
3. Requested Allowable Opacity:	
Normal Conditions: 60 % Ex	ceptional Conditions: 100 %
Maximum Period of Excess Opacity Allow	ed: 24 min/hour
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 c	
limits sootblowing & load changing to 60% opa	* -
neriods of up to 100% opacity if unit has an ope	erational CEM

Emissions Unit Information Section4_ of6 PPE	Unit
Visible Emissions Limitation: Visible Emissions Limitation3 of5	
1. Visible Emissions Subtype: VE100  2. Basis for Allowable Opacity:  [X] Rule  [ ] Other	
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): DEP Rule 62-210.700(1) and (2 F.A.C. allow up to 100% opacity, for an unlimited time during start-up, shutdown, and up 2hrs/24hrs for malfunctions.	
<u>Visible Emissions Limitation:</u> Visible Emissions Limitation4 of5	
1. Visible Emissions Subtype: VE20  2. Basis for Allowable Opacity:  [ ] Rule  [ X] Other	
3. Requested Allowable Opacity: Normal Conditions: 20 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): Based on its negotiations with t Department, applicant agrees to reduce visible emissions 6-minute average of its fossil fue steam boilers in Broward County to 20%. This limit becomes effective May 31, 2007. Compliance testing is performed annually using EPA Method 9.	

Emissions Unit Information Section4_	_ of6 PPE U	Jnit 4
Visible Emissions Limitation: Visible Emiss	ions Limitation5 of5	
1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity:	
	[ ] Rule [X] Other	
3. Requested Allowable Opacity:		
Normal Conditions: 40 %	cceptional Conditions: 100 %	
Maximum Period of Excess Opacity Allow	ved: 24 min/hour	
4. Method of Compliance: EPA Method 9		
5. Visible Emissions Comment (limit to 200 of Department, applicant agrees to reduce visible	·	
Broward County, and limits sootblowing & loa		
hrs, with 4, six-minute periods of up to 100% of		

limit becomes effective May 31, 2007.

Emissions	Unit Informa	ation Section	4	of	6	
	OHIU THIOLING	ation Section	-	UL	v	

## I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring)

1. Parameter Code: EM						
1. Parameter Code: EM	2. Pollutant(s): NOx					
3. CMS Requirement:	[X] Rule [ ] Other					
4. Monitor Information:						
Manufacturer: TECO						
	erial Number: 42-45529-274K					
5. Installation Date: 07/08/94	6. Performance Specification Test Date: 08/26/94					
7. Continuous Monitor Comment (limit to 200 characters): Required by 40 CFR 75.						
I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring)  Continuous Monitoring System: Continuous Monitor 2 of 3						
Continuous Monitoring System: Continuous	s Monitor2 of3					
1. Parameter Code: EM	Monitor2 of3 2. Pollutant(s): CO ₂					
<ol> <li>Parameter Code: EM</li> <li>CMS Requirement:</li> <li>Monitor Information:</li> </ol>	2. Pollutant(s): CO ₂					
<ol> <li>Parameter Code: EM</li> <li>CMS Requirement:</li> <li>Monitor Information:         <ul> <li>Manufacturer: Milton Roy</li> </ul> </li> </ol>	2. Pollutant(s): CO ₂ [X] Rule [ ] Other					
<ol> <li>Parameter Code: EM</li> <li>CMS Requirement:</li> <li>Monitor Information:         <ul> <li>Manufacturer: Milton Roy</li> <li>Model Number: 3300</li> </ul> </li> </ol>	2. Pollutant(s): CO ₂ [X] Rule [ ] Other  Serial Number: N3L2495T					
<ol> <li>Parameter Code: EM</li> <li>CMS Requirement:</li> <li>Monitor Information:         <ul> <li>Manufacturer: Milton Roy</li> </ul> </li> </ol>	2. Pollutant(s): CO ₂ [X] Rule [ ] Other					
<ol> <li>Parameter Code: EM</li> <li>CMS Requirement:</li> <li>Monitor Information:         <ul> <li>Manufacturer: Milton Roy</li> <li>Model Number: 3300</li> </ul> </li> </ol>	2. Pollutant(s): CO ₂ [X] Rule [ ] Other  Serial Number: N3L2495T  6. Performance Specification Test Date: 08/26/94					

<b>Emissions</b>	Unit 1	nformation	Section	4	of	6	

## I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor __3__ of ___3_

1.	Parameter Code: VE	2. Pollutant(s): Opacity
3.	CMS Requirement:	[X] Rule [ ] Other
4.	Monitor Information:	
	Manufacturer: Phoenix Instruments, Inc.	
	Model Number: OPAC 20/20	Serial Number: OPAC - 1082
5.	Installation Date: 12/19/00	6. Performance Specification Test Date:
		01/12/00
7.	Continuous Monitor Comment (limit to 200	characters): Required by 40 CFR 75.

Emissions	<b>Unit Information Section</b>	4	οf	6	
Lilliagions	Cuit Intol mation Section	7	υı	v	

### J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION (Regulated Emissions Units Only)

### **Supplemental Requirements**

1.	Process Flow Diagram
	[X] Attached, Document ID: PPEU3bmp_ [ ] Not Applicable [ ] Waiver Requested
2.	Fuel Analysis or Specification
	[X] Attached, Document ID: PPEU3_2.doc [ ] Not Applicable [ ] Waiver Requested
3.	Detailed Description of Control Equipment
	[X] Attached, Document ID: PPEU3_3.doc [ ] Not Applicable [ ] Waiver Requested
4.	Description of Stack Sampling Facilities
	[X] Attached, Document ID: PPEU3_4.bmp [ ] Not Applicable [ ] Waiver Requested
5.	Compliance Test Report
	[ ] Attached, Document ID:
	[X] Previously submitted, Date:
	[ ] Not Applicable
6.	Procedures for Startup and Shutdown
	[X] Attached, Document ID: PPEU3_6.doc [ ] Not Applicable [ ] Waiver Requested
7.	Operation and Maintenance Plan
	[ ] Attached, Document ID: [X] Not Applicable [ ] Waiver Requested
8.	Supplemental Information for Construction Permit Application
	[ ] Attached, Document ID: [X] Not Applicable
9.	Other Information Required by Rule or Statute
	[ ] Attached, Document ID: [X] Not Applicable
10	. Supplemental Requirements Comment:

<b>Emissions Unit Information Section</b>	4	of	6	
Emissions Chie intol mation occiton	-	U.	U	

### Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[X] Attached, Document ID: PPEU3_10.doc [ ] Not Applicable
112 Alt ( M. 1 CO ( T T T T )
12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID: [N/A] Not Applicable
13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID: [ X ] Not Applicable
14. Compliance Assurance Monitoring Plan
[X] Attached, Document ID: PPEU1_14.doc [ ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required)
[X] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))
Attached, Document ID: PPEU1_15
Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)
Attached, Document ID: N/A
New Unit Exemption (Form No. 62-210.900(1)(a)2.)
Attached, Document ID: _N/A/
Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)
Attached, Document ID: N/A_
[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)
Attached, Document ID:N/A
[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)
Attached, Document ID:N/A
[ ] Not Applicable

Emissions <b>U</b>	J <mark>nit I</mark>	nformation	Section	5	of	6
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### III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

### A. GENERAL EMISSIONS UNIT INFORMATION (All Emissions Units)

### **Emissions Unit Description and Status**

-					
1. Type of Emission	s Unit Addressed in This	s Section: (Check one)			
process or prod		addresses, as a single emission which produces one or more an apoint (stack or vent).	_		
process or prod		addresses, as a single emissions which has at least one definitive emissions.			
1 - <del>"</del>		n addresses, as a single emis s which produce fugitive em			
2. Regulated or Unr	egulated Emissions Unit	? (Check one)			
[X] The emissions un emissions unit.	it addressed in this Emis	sions Unit Information Secti	on is a regulated		
[ ] The emissions emissions unit.	unit addressed in this Em	issions Unit Information Sec	ction is an unregulated		
· · · · · · · · · · · · · · · · · · ·	nissions Unit Addressed bines Units 1 through 12	in This Section (limit to 60 c	characters: Lauderdale		
4. Emissions Unit Id	dentification Number: (	005	[ ] No ID [ ] ID Unknown		
5. Emissions Unit Status Code: A	6. Initial Startup Date: 08/01/70	8. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? [N]		
9. Emissions Unit Comment: (Limit to 500 Characters) The generator nameplate rating for the gas turbines is reflective of one gas turbine (out of 12) at a 40 degree F condition. As with most gas turbines, ambient temperature is inversely related to heat input capability and is inversely related to megawatt					
output for these machines.  Commercial Start-up dates for each GT:					
GT 1 05/01/71	GT 7 06/21	/71			
GT 2 05/06/71	GT 8 06/30				
GT 3 05/13/71	GT 9 07/14				
GT 4 05/21/71	GT 10 07/23				
GT 5 06/04/71	GT 11 08/17	•			
GT 6 06/11/71	GT 12 08/28	3/71			

Emissions Unit Information Section5_	of6	PPE GT1 through GT12
<b>Emissions Unit Control Equipment</b>		
2. Control Equipment/Method Description (I	Limit to 200 charac	eters per device or method):
		,
2. Control Device or Method Code(s):		-
2. Control Device of Method Code(s).		
<b>Emissions Unit Details</b>		
1. Package Unit:		
Manufacturer: Pratt & Whitney		Model Number: GG4A
2. Generator Nameplate Rating:	42 MW	
3. Incinerator Information:		
Dwell Temperature:		°F
Dwell Time:	•	seconds

Incinerator Afterburner Temperature:

٥F

Emissions	Unit	Information	Section	5	of	6	
	OHIL	Intol mation	Section	J	UI	v	

## B. EMISSIONS UNIT CAPACITY INFORMATION (Regulated Emissions Units Only)

### **Emissions Unit Operating Capacity and Schedule**

1.	Maximum Heat Input Rate:	8424	mmBtu/hr
2.	Maximum Incineration Rate:	lb/hr	tons/day
3.	Maximum Process or Through	put Rate:	
4.	Maximum Production Rate:		
5.	Requested Maximum Operation	g Schedule:	
		hours/day	days/week
		weeks/year	8760 hours/year
10.	Operating Capacity/Schedule (	Comment (limit to 200 characte	ers):
Th	is EU has a combined max. hea	t input rate of 8424 mmbtu/hr.	

Emissions	Unit	Information	Section	5	of	6	
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## C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

### **List of Applicable Regulations**

FDEP Title V Core List, Attachment PPEU5_C	
	•

### D. EMISSION POINT (STACK/VENT) INFORMATION (Regulated Emissions Units Only)

### **Emission Point Description and Type**

<ol> <li>Identification of Point on Pl Flow Diagram?</li> </ol>	2. Emission Po	oint Type Code: 1				
GT 1, GT 2, GT 3, GT4, GT 5,						
GT 8, GT 9, GT 10, GT 11, GT						
3. Descriptions of Emission Po	•	•	_			
100 characters per point): T		it is comprised o	f 12 identical simple	-cycle gas		
turbine units regulated colle	ectively.					
4. ID Numbers or Descriptions	s of Emission Ur	nits with this Emi	ssion Point in Comm	non:		
The 12 simple-cycle gas turbine						
5. Discharge Type Code: V	6. Stack Heig	ht:	7. Exit Diameter:			
	45 feet		15.6 feet			
8. Exit Temperature:	9. Actual Vol	umetric Flow	10. Water Vapor:			
860 °F	Rate: 1069		10. Water Vapor.	%		
		acfm				
-			Nonstack Emission Point Height: feet			
	dscfm			leet		
13. Emission Point UTM Coord	linates:					
Zone: 17 E	ast (km): 580.2	41 Nort	h (km): 2883.068			
14. Emission Point Comment (I		•	-	ates are		
for simple cycle GT 1. GTs 1-1	2 are regulated c	collectively as a b	ank of 12.			
		•				

<b>Emissions Unit Information Section</b>	5	of	6	
-------------------------------------------	---	----	---	--

## E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Ra	te: Segment	1 of2				
3. Segment Description (Proc EU 5 Gas turbine bank (	• • •	•	aracters):			
2. Source Classification Code 2-01-001-01	e (SCC):	3. SCC Units	: Thousand gallons burned			
4. Maximum Hourly Rate: 61.94	5. Maximum A 54260.5	Annual Rate:	6. Estimated Annual Activity Factor:			
7. Maximum % Sulfur: 0.5	8. Maximum 9	% Ash: 0.05	9. Million Btu per SCC Unit: 136			
10. Segment Comment (limit to 200 characters): Max. Annual Rate information provided in #5 above, is based on heat input is equal to a 10% capacity factor.						
Segment Description and Ra	te: Segment	_2 of2	·			
Segment Description (Process/Fuel Type ) (limit to 500 characters):  EU 5 Gas turbine bank (1-12) burning natural gas						
2. Source Classification Code 2-01-002-01	e (SCC):	3. SCC Unit	s: Million cubic feet burned			
4. Maximum Hourly Rate: 8.023	5. Maximum Annual Rate: 6. Estimated Annual Activity 7028.02 Factor:					
7. Maximum % Sulfur: 0.000031			9. Million Btu per SCC Unit: 1050			
10. Segment Comment (limit to 200 characters): Max. Annual Rate information provided in #5 above, is based on heat input is equal to a 10% capacity factor. The GTs may also use 150 lb methane bottles to assist liquid fuel start-ups. Natural gas information above is provided for methane as well, since natural gas is mostly methane.						

Emissions	Unit	Information	Section	5	οf	6	
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## F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1. Pollutant Emitted	2. Primary Control	3. Secondary Control	4. Pollutant
	Device Code	Device Code	Regulatory Code
SO2	NA	NA	NS
NOx	NA	NA	EL
СО	NA	NA	NS
PM	NA NA	NA	NS
PM10	NA	NA	NS
SAM	NA	NA	NS
VOC	NA	NA	EL
HAP	NA	NA	NS
			,

Emissions Unit Information Section	5_ of6	PPE GT1 through GT12
Pollutant Detail Information Page	1 of2	Nitrogen Oxide

## G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

<u>Potentia</u>	<u>l/Fugitive</u>	<b>Emissions</b>

1. Pollutant Emitted: NOx	2. Total Percent Efficiency of Control:				
3. Potential Emissions: 7572 lb/hour 3316.5 tons/ye	4. Synthetically Limited? [Y]				
5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3	totons/year				
6. Emission Factor: 0.9 lb/mmbtu  Reference: DEP Rule 62-296.570(4)(b	7. Emissions Method Code: 0				
8. Calculation of Emissions (limit to 600 characters): 0.9 lb/mmbtu*702 mmbtu/hr = 631.8 lb/hr (631 lb/hr/GT*12 GTs) = 7572 lb/hr (7572 lb/hr * 876 hr/yr) / 2000 lb/ton = 3316.5 tons/ yr					
9. Pollutant Potential/Fugitive Emissions Compared at 40 degrees F for a maximum of 876 GT can operate up to 8760 hr/yr.	•				
Allowable Emissions Allowable Emissions	_1of2				
Basis for Allowable Emissions Code: NOx RACT	2. Future Effective Date of Allowable Emissions:				
3. Requested Allowable Emissions and Units: 0.9 lb/mmbtu	4. Equivalent Allowable Emissions: 631 lb/hour 2763.78 tons/year				
5. Method of Compliance (limit to 60 characters): Stack test once every 5 years using EPA Method 20 or modified EPA Method 20 – 1GT per bank of 12					
6. Allowable Emissions Comment (Desc. of Openius Emission limits are from rule 62-296.570(4)(b)5 gas turbine operating on liquid fuel.					

<b>Emissions Unit Information Section</b>	5_ of	_6	PPE GT1 through GT12
Pollutant Detail Information Page	1_ of	_2	Nitrogen Oxido

# G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units Emissions-Limited and Preconstruction Review Pollutants Only)

### **Potential/Fugitive Emissions**

1. Pollutant Emitted: NOx	2. Total Percent Efficiency of Control:			
3. Potential Emissions:    lb/hour	4. Synthetically Limited? []			
5. Range of Estimated Fugitive Emissions:	to tons/year			
6. Emission Factor:  Reference:	7. Emissions Method Code:			
8. Calculation of Emissions (limit to 600 chara	cters):			
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):			
Allowable Emissions	2 of2			
Basis for Allowable Emissions Code: NOx RACT	2. Future Effective Date of Allowable Emissions:			
3. Requested Allowable Emissions and Units: 0.5 lb/mmbtu	4. Equivalent Allowable Emissions: 351 lb/hour 1537.38 tons/year			
5. Method of Compliance (limit to 60 characte Method 20 or modified EPA Method 20 – 1GT	• • • • • • • • • • • • • • • • • • • •			
6. Allowable Emissions Comment (Desc. of O Emission limits are from rule 62-296.570(4)(b)5 gas turbine operating on natural gas fuel.				

<b>Emissions Unit Information Section</b>	5_ of6	PPE GT1 through GT12
Pollutant Detail Information Page	2 of2	Volatile Organic Compounds

## G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

### **Potential/Fugitive Emissions**

1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:			
3. Potential Emissions: 28.64 lb/hour 12.54 tons/yes 5. Range of Estimated Fugitive Emissions:	4. Synthetically Limited? [Y]			
[]1 []2 []3	totons/year			
6. Emission Factor: 0.0034 lb/mmbtu  Reference:	7. Emissions Method Code: 0			
8. Calculation of Emissions (limit to 600 characters): 0.0034 lb/mmbtu*8424 mmbtu/hr = 28.6416 lb/hr for one bank of 12 GTs  (28.6416 lb/hr * 876 hr/yr) / 2000 lb/ton = 12.54 tons/ yr				
9. Pollutant Potential/Fugitive Emissions Comparing Control Co				
Allowable Emissions Allowable Emissions	1 of2			
Basis for Allowable Emissions Code:     Requested by permittee for other reasons	2. Future Effective Date of Allowable Emissions:			
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:			
0.0013 lb/mmbtu	1.053 lb/hour 4.612 tons/year			
5. Method of Compliance (limit to 60 characters): Stack test once every 5 years using EPA Method 20 or modified EPA Method 20 – 1GT per bank of 12				
6. Allowable Emissions Comment (Desc. of Operations given above are for each gas turbine of				

<b>Emissions Unit Information Section</b>	15_ of6	PPE GT1 through GT12
<b>Pollutant Detail Information Page</b>	2 of2	Volatile Organic Compounds

### G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION (Regulated Emissions Units -

**Emissions-Limited and Preconstruction Review Pollutants Only)** 

Potential/Fugitive Emissions	•
1. Pollutant Emitted: VOC	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions:  [ ] 1 [ ] 2 [ ] 3	totons/year
6. Emission Factor:  Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 chara	oters):
9. Pollutant Potential/Fugitive Emissions Comm	ment (limit to 200 characters):
Allowable Emissions Allowable Emissions	2 of2
Basis for Allowable Emissions Code:     Requested by permittee for other reasons	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:
0.0034 lb/mmbtu	2.39 lb/hour 10.45 tons/year
5. Method of Compliance (limit to 60 character Method 20 or modified EPA Method 20 – 1GT	
6. Allowable Emissions Comment (Desc. of Op Emissions given above are for each gas turbine of	

Emissions Unit Information Section	5_	of	6	PPE GT1 through GT	12
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## H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissi	ons Limitation1 of1		
1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity:		
	[X] Rule [ ] Other		
3. Requested Allowable Opacity:			
Normal Conditions: 20 % Ex	sceptional Conditions: 100 %		
Maximum Period of Excess Opacity Allowe	ed: 60 min/hour		
4. Method of Compliance: Pursuant to Rule 62-297.340(1)(h), F.A.C., at least one visible emissions compliance test shall be conducted on all			
5. Visible Emissions Comment (limit to 200 c Opacity Allowed is 2 hours in 24 hours as state	,		

Emiccione	<b>Unit Information</b>	Section	_	οf	6	
CHIISSIOUS	Unit Information	Section	5	OI .	0	

## I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor 0 of 0

			<del></del>
1.	Parameter Code:	2.	Pollutant(s):
3.	CMS Requirement:	[	Rule [ ] Other
4.	Monitor Information:		
	Manufacturer:		
	Model Number:		Serial Number:
5.	Installation Date:	6.	Performance Specification Test Date:
7.	Continuous Monitor Comment (limit to 200	cha	racters): This emission unit is not required
to i	install continuous monitors because it is exer	npte	ed per 40 CFR 72.6(b)(1).

<b>Emissions</b>	<b>Unit Information</b>	Section	5	of	6	
	e mit imietium	CCCCIOII	•	~1	•	

### J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION (Regulated Emissions Units Only)

### **Supplemental Requirements**

1.	Process Flow Diagram
	[X] Attached, Document ID: PFLU5_1.bmp_ [ ] Not Applicable [ ] Waiver Requested
2.	Fuel Analysis or Specification
	[X] Attached, Document ID: PFLU5_2.doc [ ] Not Applicable [ ] Waiver Requested
3.	Detailed Description of Control Equipment
	[ ] Attached, Document ID: [X] Not Applicable [ ] Waiver Requested
4.	Description of Stack Sampling Facilities
	[X] Attached, Document ID: PFLU5_4.bmp [ ] Not Applicable [ ] Waiver Requested
5.	Compliance Test Report
	[ ] Attached, Document ID:
	[ X] Previously submitted, Date:
	[ ] Not Applicable
6.	Procedures for Startup and Shutdown
	[X] Attached, Document ID: PFLU5_6.doc [ ] Not Applicable [ ] Waiver Requested
7.	Operation and Maintenance Plan
	[ ] Attached, Document ID: [X] Not Applicable [ ] Waiver Requested
8.	Supplemental Information for Construction Permit Application
	[ ] Attached, Document ID: [X] Not Applicable
9.	Other Information Required by Rule or Statute
	[ ] Attached, Document ID: [X] Not Applicable
10	. Supplemental Requirements Comment:

Emissions	Unit	Information	Section	5	οf	6	
C11112210112	UIII	LIHOTHIAUOH	Section	3	OI -	O	

### Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
[X] Attached, Document ID: PFLU5_10.doc [ ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID: [X] Not Applicable
13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID: [X] Not Applicable
14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID: [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required)
[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:
[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: N/A
[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:N/A/
[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:N/A
[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:N/A _
[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:N/A
[X] Not Applicable

ATTACHMENT PPEU5_C
EMISSION UNIT INFORMATION

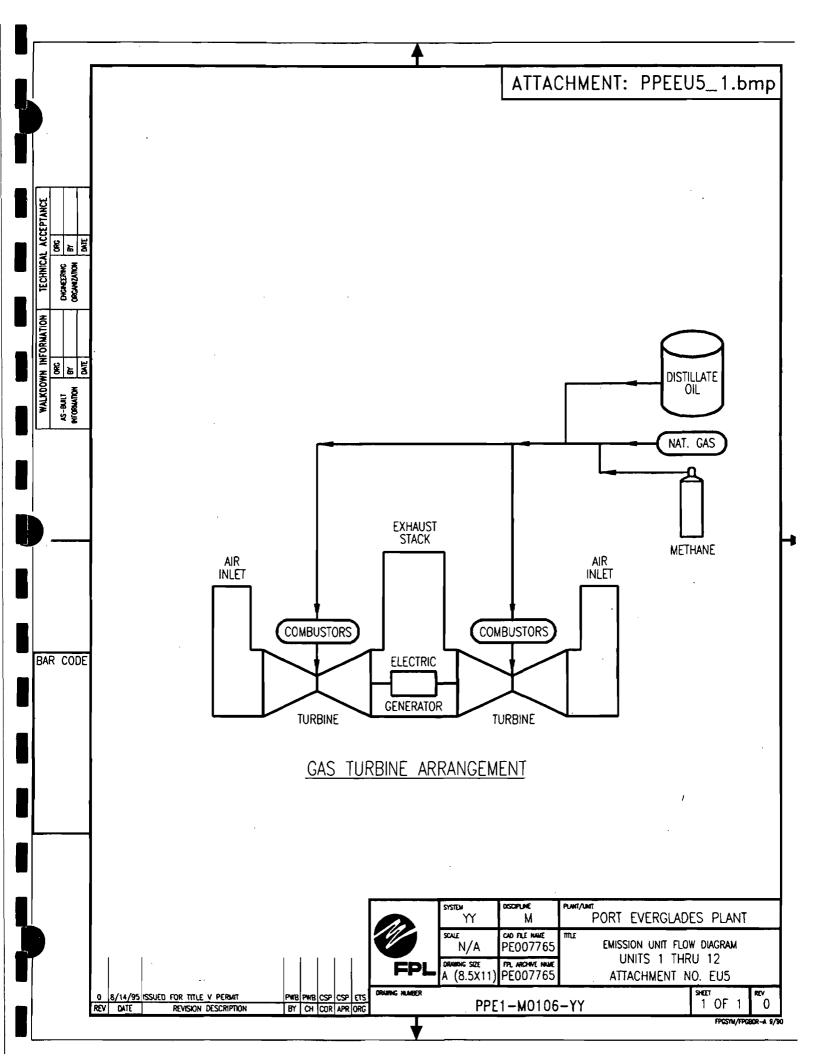
Emission Unit Information Section	of	
List of Applicable Regulations	(Required for Category	Lapplications and Category II

<u>List of Applicable Regulations</u> (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

### Emissions Unit ID 5

F.A.C. 62-210.700 (1)	F.A.C. 62-296.570(2)	F.A.C. 62-297.310(2)(a)	F.A.C. 62-297.310(7)(a)4.a.
F.A.C. 62-210.700 (4)	F.A.C. 62-296.570(3)	F.A.C. 62-297.310(4)(a)2.	F.A.C. 62-297.310(7)(a)8.
F.A.C. 62-210.700 (5)	F.A.C. 62-296.570(4)(a)	F.A.C. 62-297.310(5)	F.A.C. 62-297.310(7)(a)9.
F.A.C. 62-210.700 (6)	F.A.C. 62-296.570(4)(b)5.	F.A.C. 62-297.310(7)(a)1.	F.A.C. 62-297.310(8)
F.A.C. 62-296.320(4)(b)	F.A.C. 62-296.570(4)(c)	F.A.C. 62-297.310(7)(a)3.	F.A.C. 62 - 297.310

ATTACHMENT PPEU5_1.BMP_
PROCESS FLOW DIAGRAM



ATTACHMENT PPEU5_2.DOC
FUEL ANALYSIS OR SPECIFICATIONS

### Attachment PPEU5_2.doc

## Fuel Analysis Natural Gas Analysis (typical)²

Parameter	Typical value	Max value
Specific gravity(@ 60° F)	0.887	none
Heat content (Btu/cu ft)	950 - 1124	none
% sulfur (grains/CCF)	0.43 ¹	1 grain / ccf
% nitrogen (by volume)	0.8	none
% ash	negligible	none

*Note: The values listed are "typical" values based upon information supplied to FPL by Florida Gas Transmission (FGT). However, analytical results from grab samples of fuel taken at any given point in time may vary from those listed.

- (1) Data from laboratory analysis
- (2) The values are "typical" based upon the following:
  - Information gathered by FPL through laboratory analysis, and
  - FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

### Attachment PPEU5_2.doc

## Fuel Analysis No. 2 Distillate oil (typical)³

Parameter	Typical value	<b>Specifications</b>
API gravity (@ 60 F)	$35.0^2$	30 - 40 ¹
Heat content (MBtu/bbl)	5,700 - 5,800 ²	none
% sulfur	0.3 - 0.5 ¹	0.5 maximum ¹
% nitrogen	no specification	none
% ash	<0.01 ²	0.01 ¹

### Footnotes:

- (1) Data taken from FPL fuel specifications.
- (2) Data taken from laboratory analysis.
- (3) The values are "typical" based upon the following:
  - Information gathered by FPL through laboratory analysis, and
  - FPL's fuel purchasing specifications. It should be noted that the analytical results obtained from grab samples taken at any given time may vary from those listed.

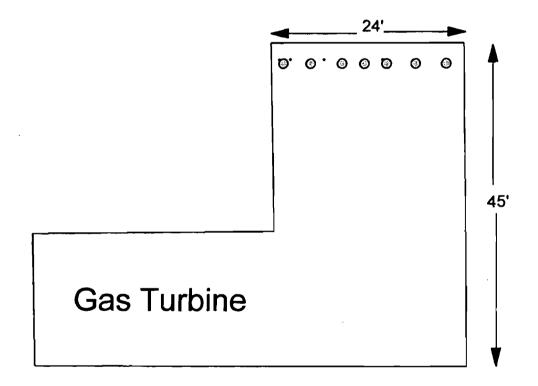
ATTACHMENT PPEU5_4.BMP_
DESCRIPTION OF STACK SAMPLING FACILITIES

### FLORIDA POWER & LIGHT CO, STACK SAMPLING FACILITIES SIMPLE-CYCLE GAS TURBINES

Natural Gas & Distillate Oil Stationary Gas Turbines

**Stack Specifications** 

Sampling Dimensions: 16' x 24' Sampling Area: 384 sq ft. sampling port depth: 6.0 inches No. of ports: 7, 4" diameter



Note that Unit 6 is the only stack with sampling ports.

Access to sampling ports is provided by temporary scaffolding erected prior to testing. There are no external probe supports. Internal support is provided by angle iron installed inside the stack. AC power is available at the stack base.

ATTACHMENT PPEU5_6.DOC
PROCEDURES FOR STARTUP AND SHUTDOWN

### Attachment PPEU5 6.doc

Procedures for Startup and Shutdown - Simple-Cycle Gas Turbines

The aircraft gas turbines do not currently employ any hardware for monitoring or control of emissions due to the fact that they are "peaking" units which have a combined annual capacity factor limitation of 10%. Therefore, the only method for determining excess emissions at present is visual (EPA Method 9 Opacity Readings).

All FPL operators undergo extensive training prior to operating FPL generating equipment. This training includes an overview of plant emission limits and best operational practices undertaken in the event excess emissions are encountered.

If excess emissions (e.g. opacity) are exhibited during startup of a gas turbine unit, corrective actions may include fuel switching, changing from automatic to manual operational control or shutting down the unit to investigate the cause of the opacity problem.

ATTACHMENT PPEU5_10.DOC

ALTERNATIVE MEHTHODS OF OPERATION

#### Attachment PPEU5_10.doc

#### **Alternative Methods of Operation**

Each of the 12 gas turbines will be operated independently from any other and on either natural gas fuel or light distillate oil. FPL may operate from one to twelve gas turbine units at any time, and in any combination. The gas turbines will typically operate at the base load setting.

Each gas turbine may operate from zero to 702 mmBtu per hour, which is equivalent to 8,424 mmBtu/hour for the bank of twelve.

Emissions	<b>Unit Information Section</b>	6	of	6	
	Chit initialiation occurr	v	V.	v	

#### III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

#### A. GENERAL EMISSIONS UNIT INFORMATION (All Emissions Units)

#### **Emissions Unit Description and Status**

Emissions ente Description una status					
1. Type of Emissions Unit Addressed in Thi	s Section: (Check one)				
process or production unit, or activity, v	[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).				
[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.					
[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.					
2. Regulated or Unregulated Emissions Unit	? (Check one)				
[ ] The emissions unit addressed in this En emissions unit.	nissions Unit Information Sec	ction is a regulated			
[X] The emissions unit addressed in this Emisemissions unit.	ssions Unit Information Secti	on is an unregulated			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Unregulated Emission Units					
4. Emissions Unit Identification Number:		[ ] No ID			
ID: 017, 018	[	] ID Unknown			
5. Emissions Unit Status Code: A Date:	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? [N]			
9. Emissions Unit Comment: (Limit to 500 Characters): This emission unit covers all above ground fuel oil storage tanks at the Port Everglades Plant site. Note: EU 019, listed in the current Title V permit as a propane fueled generator, no longer is located at the facility.					

mit to 200 characters pe	
• •	
	•
	_
Model Number:	_
MW	
_	
	°F
	seconds °F

Emissions Unit Information Section ____6__ of ___6__

**Unregulated Emission Units** 

<b>Emissions Unit Information Section</b>	6	of	6	Unregulated En	nission Units
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# B. EMISSIONS UNIT CAPACITY INFORMATION (Regulated Emissions Units Only)

### **Emissions Unit Operating Capacity and Schedule**

		mmBtu/hr
lb/hr		tons/day
ghput Rate:		
ing Schedule:		
hours/day		days/week
weeks/year	8760	hours/year
	ghput Rate:  ing Schedule:  hours/day  weeks/year e Comment (limit to 200 char	ghput Rate:  ing Schedule:  hours/day

Emissions	<b>Unit Information</b>	on Section	6	οf	6	
	Chit inioi mati	on Section	U	UI	v	

# C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

### **List of Applicable Regulations**

FDEP Title V Core List, Attachment PPEU6_C		
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Emissions	Unit Info	rmation	Section	6	οf	6	
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# D. EMISSION POINT (STACK/VENT) INFORMATION (Regulated Emissions Units Only)

### **Emission Point Description and Type**

1.	Identification of Point on Pl Flow Diagram?	ot Plan or	2. Emission Po	oint Type Code: 3		
	<ol> <li>Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Above ground fuel oil storage tanks, miscellaneous internal combustion engines, and portable equipment.</li> <li>ID Numbers or Descriptions of Emission Units with this Emission Point in Common: See</li> </ol>					
Att	4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: See Attachment PPE_FW					
5.	Discharge Type Code:	6. Stack Heigh	ht: feet	7. Exit Diameter:	feet	
8.	Exit Temperature: °F	9. Actual Vol Rate:	umetric Flow acfm	10. Water Vapor:	%	
11.	Maximum Dry Standard Flo	ow Rate: dscfm	12. Nonstack Er	mission Point Height: f	eet	
13.	Emission Point UTM Coord	linates:		-		
	Zone: E	ast (km):	Nort	h (km):		
sm of	Emission Point Comment (lall vents (several inches) fou VOCs take place. Internal cosociated with exhaust gases.	nd at the top of	each tank where b	oreathing and working	losses	

Emissions Unit Information Section ____6_ of ___6_

**Unregulated Emission Units** 

Segment Description and Ra	ite: Segment1	of12	_		
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Above-ground tank #1M – Working and breathing loss					
2. Source Classification Code 4-03-010-21	e (SCC):	3. SCC Units: Thousand gallons transferred or handled			
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor: 713761048		
7. Maximum % Sulfur: 2.5	8. Maximum %	% Ash:	9. Million Btu per SCC Unit: 152		
10. Segment Comment (limit to Breathing loss = 0.79 lbs)	,		plication)		
Working loss = 60.97 lbs	VOC / yr ( per ir	nitial Title V ap	plication)		
Total estimated losses = 0	0.03 TPY, using 6	estimated activi	ty factor given above.		
Segment Description and Ra	ite: Segment	2 of12			
1. Segment Description (Prod Above-ground tank #808 – We	• • •	`	naracters):		
2. Source Classification Code 4-03-010-21	e (SCC):	3. SCC Unit or handled	s: Thousand gallons transferred		
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor: 714002473		
7. Maximum % Sulfur: 2.5	8. Maximum %		9. Million Btu per SCC Unit: 152		
10. Segment Comment (limit to Breathing loss = 53.56 lbs V	,		ication)		
Working loss = 193.47 lb	os VOC / yr ( per	initial Title V a	pplication)		
Total estimated losses = 0	0.12 TPY, using 6	estimated activi	ty factor given above		

Segment Description and Ra	ite: Segment	_3 of12	_	
1. Segment Description (Prod #2M - Working and breathing		(limit to 500 ch	aracters): ): Above-ground tank	
2. Source Classification Code (SCC): 3. SCC Units: Thousand gallons transfe				
4-03-010-21		or handled		
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor: 713761048	
7. Maximum % Sulfur: 2.5	8. Maximum %	% Ash:	9. Million Btu per SCC Unit	
10. Segment Comment (limit Breathing loss = 0.79 lbs		•		
		•		
Working loss = 60.97 lbs	VOC / yr ( per ii	nitial Title V ap	oplication)	
Total estimated losses =	0.03 TPY, using 6	estimated activi	ity factor given above	
Segment Description and Ra	ite: Segment	_4 of12	_	
		(limit to 500 ch	naracters): ): Above-ground tank	
#3M – Working and breathing	; loss			
2. Source Classification Code 4-03-010-21	e (SCC):	3. SCC Unit or handled	ts: Thousand gallons transferred	
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor: 713767216	
7. Maximum % Sulfur: 2.5	8. Maximum 9	√₀ Ash:	9. Million Btu per SCC Unit: 152	
10. Segment Comment (limit Breathing loss = 2.66 lbs VOC	,	•	tion)	
2.00 100 7 00	or yr (per illitiar	Title v applicat	tion)	
Working loss = 65.9 lbs	VOC / yr ( per ini	tial Title V app	olication)	
Total estimated losses =	0.03 TPY, using	estimated activi	ity factor given above	

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Emissions	Unit I	Information	Section	6	of	6	

<b>Segment Description and Ra</b>	te: Segment	5 of12	-					
1. Segment Description (Process/Fuel Type) (limit to 500 characters): ): Above-ground tank #4M – Working and breathing loss								
2. Source Classification Code 4-03-010-21	e (SCC):	3. SCC Units or handled	Thousand gallons transferred					
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor: 713767216					
7. Maximum % Sulfur: 2.5	8. Maximum %	6 Ash:	9. Million Btu per SCC Unit: 152					
10. Segment Comment (limit to Breathing loss = 2.66 lb	•		oplication)					
Working loss = 65.9 lbs V	VOC / yr ( per ini	tial Title V app	lication)					
Total estimated losses = 0	0.03 TPY, using 6	estimated activi	ty factor given above					
Segment Description and Ra	ite: Segment6	of12	-					
1. Segment Description (Prod #807 – Working and breathing	• • •	(limit to 500 ch	aracters): Above-ground tank					
2. Source Classification Code	e (SCC):	3. SCC Unit	s: Thousand gallons transferred					
4-03-010-21		or handled						
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor: 714002473					
7. Maximum % Sulfur: 2.5	8. Maximum 9	% Ash:	9. Million Btu per SCC Unit: 152					
10. Segment Comment (limit to Breathing loss = 53.56 lbs	•		plication)					
Working loss = 193.47 lb	os VOC / yr ( per	initial Title V a	pplication)					
Total estimated losses = 0	0.12 TPY, using e	estimated activi	ty factor given above					

Emissions Unit Information Section ____6_ of ___6_

**Unregulated Emission Units** 

Segment Description and Ra	te: Segment	_7 of12	_					
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Above-ground tank #800 – Working and breathing loss								
2. Source Classification Code 4-03-010-21	e (SCC):	3. SCC Units: Thousand gallons transferred or handled						
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:	6. Estimated Annual Activity Factor: 714026875					
7. Maximum % Sulfur: 2.5	8. Maximum (	% Ash:	<ul><li>9. Million Btu per SCC Unit:</li><li>152</li></ul>					
10. Segment Comment (limit to Breathing loss = 26.73 lbs		•	plication)					
Working loss = 127.44 lb	os VOC / yr ( per	initial Title V a	pplication)					
Total estimated losses = 0	0.08 TPY, using	estimated activi	ty factor given above					
Segment Description and Ra	ite: Segment	_8 of12	_					
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Above-ground tank #801 – Working and breathing loss								
2. Source Classification Code 4-03-010-21	e (SCC):	3. SCC Unit or handled	s: Thousand gallons transferred					
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:	6. Estimated Annual Activity Factor: 713934632					
7. Maximum % Sulfur: 2.5	8. Maximum	% Ash:	9. Million Btu per SCC Unit: 152					
10. Segment Comment (limit to Breathing loss = 37.25 lb		,	pplication)					
Working loss = 154.82 lb	os VOC / yr ( per	initial Title V a	pplication)					
Total estimated losses = 0	0.1 TPY, using e	stimated activity	/ factor given above					

<b>Emissions</b>	<b>Unit Information Section</b>	6	of	6	
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Segment Description and Ra	ite. Segment	90112_	-					
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Above-ground tank #802 – Working and breathing loss								
	(3.3.3)							
2. Source Classification Code (SCC): 4-03-010-21  3. SCC Units: Thousand gallons transferred or handled								
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor: 713289704					
7. Maximum % Sulfur: 2.5	8. Maximum 9	∕₀ Ash:	9. Million Btu per SCC Unit: 152					
10. Segment Comment (limit to Breathing loss = 37.25 lbs)			lication)					
Working loss = 154.77 lb	os VOC / yr ( per	initial Title V a	pplication)					
Total estimated losses = 0	0.1 TPY, using es	stimated activity	factor given above					
Segment Description and Ra	ite: Segment1	0of12_	_					
1. Segment Description (Prod #804 – Working and breathing		(limit to 500 ch	aracters): Above-ground tank					
2. Source Classification Code 4-03-010-21	e (SCC):	3. SCC Units or handled	s: Thousand gallons transferred					
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor: 713720471					
7. Maximum % Sulfur: 2.5	8. Maximum 9	∕₀ Ash:	9. Million Btu per SCC Unit: 152					
10. Segment Comment (limit Breathing loss = 6.33			/ application)					
Working loss = 74.81 lbs	SVOC / yr ( per i	nitial Title V ap	plication)					
Total estimated losses = 0	0.04 TPY, using	estimated activit	ty factor given above					

Segment Description and Ra	ite: Segment	_11 of12	<u> </u>				
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Above-ground tank #805 – Working and breathing loss							
2. Source Classification Code (SCC):  4-03-010-21  3. SCC Units: Thousand gallons transferred or handled							
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor: 713720471				
7. Maximum % Sulfur: 2.5	8. Maximum %	% Ash:	<ul><li>9. Million Btu per SCC Unit:</li><li>152</li></ul>				
10. Segment Comment (limit to Breathing loss = 6.33 lbs	,		plication)				
Working loss = 74.81 lbs	VOC / yr ( per ir	nitial Title V ap	plication)				
Total estimated losses = 0	0.04 TPY, using 6	estimated activi	ty factor given above				
Segment Description and Ra	ite: Segment	12 of12	_				
1. Segment Description (Prod #806 – Working and breathing	• • •	(limit to 500 ch	aracters): Above-ground tank				
2. Source Classification Code 4-03-010-21	e (SCC):	3. SCC Unit or handled	s: Thousand gallons transferred				
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor: 713720471				
7. Maximum % Sulfur: 2.5	8. Maximum %	% Ash:	9. Million Btu per SCC Unit: 152				
10. Segment Comment (limit) Breathing loss = 6.33 lbs			plication)				
Working loss = 74.81 lbs	SVOC / yr ( per ii	nitial Title V ap	plication)				
Total estimated losses =	0.04 TPY, using o	estimated activi	ty factor given above				

<b>Emissions Unit Information Section</b>	6	of	6	<b>Unregulated Emission Units</b>
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### H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissi	ons Limitation1 of1
1. Visible Emissions Subtype:	2. Basis for Allowable Opacity:
Visible Emissions General Standard	[X] Rule [ ] Other
3. Requested Allowable Opacity:	100.04
	ceptional Conditions 100 %
Maximum Period of Excess Opacity Allowe	ed: 60 min/hour
4. Method of Compliance: EPA Method 9	
4. Wethod of Comphanice.	,
5. Visible Emissions Comment (limit to 200 c	
Opacity Allowed is 2 hours in 24 hours as stated	d in Rule 62-210.700(1) F.A.C.
L CONTINUOUS MO	NITOR INFORMATION
	Subject to Continuous Monitoring)
Continuous Monitoring System: Continuous	· ·
1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information:	-
Manufacturer:	
Model Number:	Serial Number:
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200	) characters): This emission unit is not required
to install continuous monitors.	,

DEP Form No. 62-210.900(1) - Form Effective: 2/11/99

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# J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION (Regulated Emissions Units Only)

### **Supplemental Requirements**

1.	Process Flow Diagram						
	[ ] Attached, Document ID:[]	X]	Not	Applicable	[	]	Waiver Requested
2.	Fuel Analysis or Specification						
	[ ] Attached, Document ID:[	X]	Not	Applicable	[	}	Waiver Requested
3.	Detailed Description of Control Equipmen	ıt					
	[ ] Attached, Document ID:[	X]	Not	Applicable	[	]	Waiver Requested
4.	Description of Stack Sampling Facilities						<del></del>
	[ ] Attached, Document ID:[	X]	Not	Applicable	[	]	Waiver Requested
5.	Compliance Test Report						
	[ ] Attached, Document ID:						
	[ ] Previously submitted, Date:			<u>.                                    </u>			
	[X] Not Applicable						
6.	Procedures for Startup and Shutdown						
	[ ] Attached, Document ID:[	X]	Not	Applicable	[	]	Waiver Requested
7.	Operation and Maintenance Plan						
	[ ] Attached, Document ID:[	X]	Not	Applicable	[	]	Waiver Requested
8.	Supplemental Information for Construction	n Po	ermi	t Application	1		
	[ ] Attached, Document ID:[						
9.	Other Information Required by Rule or Sta	atut	e				
	[ ] Attached, Document ID:[			Applicable			
10	. Supplemental Requirements Comment:						

Emissions Unit Information Section	6	of	6	Unregulated Emission Units
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### Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation ,
[ ] Attached, Document ID: [X] Not Applicable
12. Alternative Modes of Operation (Emissions Trading)
[ ] Attached, Document ID: [X] Not Applicable
13. Identification of Additional Applicable Requirements
[ ] Attached, Document ID: [X] Not Applicable
14. Compliance Assurance Monitoring Plan
[ ] Attached, Document ID: [X] Not Applicable
15. Acid Rain Part Application (Hard-copy Required)
[ ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID:
[ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID:
[ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID:
[ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID:
[ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID:
[ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID:
[X] Not Applicable

Emission Unit Information Section	of	
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<u>List of Applicable Regulations</u> (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

### Emissions Unit ID 6

F.A.C. 62-210.400(2) F.A.C. 62-210.700(1)	F.A.C. 62-210.700(4) F.A.C. 62-210.700(5)	F.A.C. 62-210.700(6) F.A.C. 62-213.400	F.A.C. 62-296.310(2)(a) F.A.C. 62 - 210.650 F.A.C. 62 - 213.410 F.A.C. 62 - 213.460
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