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BUREAU OF AIR REGULATION

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APPLICATION FOR AIR CONSTRUCTION PERMIT FOR FLORIDA POWER & LIGHT COMPANY PORT EVERGLADES PLANT FT. LAUDERDALE, FLORIDA

Pokullo Branc Castell

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

Identification	n of Facility

identification of Facility					
1. Facility Owner/Company Name: Florida Power & Light Company					
2. Site Name: Port Everglades Plant					
3. Facility Identification Number: 01	10036	[] Unknown			
Facility Location: Street Address or Other Locator: 810	0 Eisenhower Blvd				
City: Ft. Lauderdale Co	unty: Broward	Zip Code: 33316			
5. Relocatable Facility?		Permitted Facility?			
[] Yes [X] No	[X] Yes	[] No			
Application Contact					
	Name and Title of Application Contact: Kevin Washington – Senior Environmental Specialist				
Organization/Firm: Florida Power &		al Services			
Street Address: 700 Universe Blvd.					
City: Juno Beach	State: Florida	Zip Code: 33408			
3. Application Contact Telephone Num	bers:				
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

T	his	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:
1	ŢΤ	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.
	_	ation permit number to be revised:_ on for revision:
A	ir (Construction Permit Application
T	his	Application for Air Permit is submitted to obtain: (Check one)
	X]	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	Responsible Official:		
2.	Owner/Authorized Representative or Responsible Official Mailing Address:				
	Organization/Firm: Port Everglades Plan	=	C		
	Street Address: 8100 Eisenhower Blvd.				
	City: Fort Lauderdale	State: Florida	Zip Code: 33316		
3.	Owner/Authorized Representative or Re	sponsible Offici	al Telephone Numbers:		
	Telephone: (954) 527-3601	Fax: (9	954) 527-3636		
4.	Owner/Authorized Representative or Re	sponsible Offici	al Statement:		
	I, the undersigned, am the owner or auth the responsible official (check here [X] application, whichever is applicable. It formed after reasonable inquiry, that the accurate and complete and that, to the b 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 understand that a permit, if granted by the authorization from the Department, and legal transfer of any permitted emissions. Signature	I, if so) of the Tichereby certify, be statements madest of my knowledges on reasonable with an anitained so an issions found in the Department, I will promptly so unit.	tle V source addressed in this ased on information and belief de in this application are true, edge, any estimates of emissions techniques for calculating flution control equipment described is to comply with all applicable the statutes of the State of Florida n and revisions thereof. I cannot be transferred without		

Professional Engineer Certification

1. Professional Engineer Name: Kennard F. Kosky

Registration Number: 14966

2. Professional Engineer Mailing Address:

Organization/Firm: Golder Associates, Inc. *

Street Address: 6241 NW 23rd Street, Suite 500

City: Gainesville

State: Florida

Zip Code: 32653

3. Professional Engineer Telephone Numbers:

Telephone: (352) 336-5200

Fax: (352) 336 - 6603

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

Effective: 2/11/99

^{*} Attach letter of authorization if not currently on file.

^{*} Certificate of Authorization 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 [], 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 [X], 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.

Signature

Date

(seal)/95

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^{*} Attach any exception to certification statement.

Scope of Application

Emissions	Description of Emission - U-14	Permit	Processing
Unit ID	Description of Emissions Unit	Type	Fee
	Fossil Steam Boiler Unit 1	AC1B	N/A
01			
	Fossil Steam Boiler Unit 2	ACIB	N/A
02			
	Fossil Steam Boiler Unit 3	ACIB	N/A
03			
	Fossil Steam Boiler Unit 4	AC1B	N/A
04	Toom Steam Boner Care	11012	1 1/1 1
		İ	
	· · · · · · · · · · · · · · · · · · ·		
	-		
	<u></u>		

Application Processing Fee

Check one: [] Attached - Amount: \$	[X] Not Applicable
--------------------------------------	--------------------

Construction/Modification Information

Description of Proposed Project or Alterations:
 Installation of Electrostatic Precipitators (ESPs) on fossil fueled steam boilers Units 1 through 4.

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.

Suspect a

- 2. Projected or Actual Date of Commencement of Construction: NOV 2004
- 3. Projected Date of Completion of Construction: DEC 2007

Application Comment

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

1.	Facility UTM Coor	dinates:				
	Zone: 17		East (km):	587.	Nort Nort	th (km): 2885250
2.	Facility Latitude/Lo	ngitude:			· ·	
	Latitude (DD/MM/	SS): 26-4-8			Longitude (DD/MM	1/SS): 80-7-31
3.	Governmental	4. Facility	Status	5.	Facility Major	6. Facility SIC(s):
	Facility Code: 0	Code:			Group SIC Code:	4911
		Α		49		
L						
	•		•		•	ur fossil steam boiler
ger	nerating units units,	and one bank	of 12 gas tu	ırbine	es.	

Facility Contact

1.	Name and Title of Facility Contact: Kat	hryn Pascale	
2.	Facility Contact Mailing Address: Organization/Firm: FPL Port Everglade	s 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.
List of Applicable Degulations

List of Applicable Regulations

See FDEP Title V Core List - Attached	

Title V Core List

Effective: 03/01/02

[Note: The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.]

Federal: (description)

40 CFR 61, Subpart M: NESHAP for Asbestos.

40 CFR 82: Protection of Stratospheric Ozone.

40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).

40 CFR 82, Subpart F: Recycling and Emissions Reduction.

State: (description)

CHAPTER 62-4, F.A.C.: PERMITS, effective 06-01-01

62-4.030, F.A.C.: General Prohibition.

62-4.040, F.A.C.: Exemptions.

62-4.050, F.A.C.: Procedure to Obtain Permits; Application

62-4.060, F.A.C.: Consultation.

62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.

62-4.080, F.A.C.: Modification of Permit Conditions.

62-4.090, F.A.C.: Renewals.

62-4.100, F.A.C.: Suspension and Revocation.

62-4.110, F.A.C.: Financial Responsibility.

62-4.120, F.A.C.: Transfer of Permits.

62-4.130, F.A.C.: Plant Operation - Problems.

62-4.150, F.A.C.: Review

62-4.160, F.A.C.: Permit Conditions.

62-4.210, F.A.C.: Construction Permits.

62-4.220, F.A.C.: Operation Permit for New Sources.

CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL REQUIREMENTS,

effective 06-21-01

62-210.300, F.A.C.: Permits Required.

62-210.300(1), F.A.C.: Air Construction Permits.

62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.

62-210.300(5), F.A.C.: Notification of Startup.

62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.300(7), F.A.C.: Transfer of Air Permits.

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Title V Core List

- 62-210.350, F.A.C.: Public Notice and Comment.
- 62-210.350(1), F.A.C.: Public Notice of Proposed Agency Action.
- 62-210.350(2), F.A.C.: Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.

Effective: 03/01/02

- 62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.
- 62-210.360, F.A.C.: Administrative Permit Corrections.
- 62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.
- 62-210.400, F.A.C.: Emission Estimates.
- 62-210.650, F.A.C.: Circumvention.
- 62-210.700, F.A.C.: Excess Emissions
- 62-210.900, F.A.C.: Forms and Instructions.
- 62-210.900(1), F.A.C.: Application for Air Permit Title V Source, Form and Instructions.
- 62-210.900(5), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.
- 62-210.900(7), F.A.C.: Application for Transfer of Air Permit Title V and Non-Title V Source.

CHAPTER 62-212, F.A.C.: STATIONARY SOURCES- PRECONSTRUCTION REVIEW, effective 08-17-00

CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 04-16-01

- 62-213.205, F.A.C.: Annual Emissions Fee.
- 62-213.400, F.A.C.: Permits and Permit Revisions Required.
- 62-213.410, F.A.C.: Changes Without Permit Revision.
- 62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.
- 62-213.415, F.A.C.: Trading of Emissions Within a Source.
- 62-213.420, F.A.C.: Permit Applications.
- 62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.
- 62-213.440, F.A.C.: Permit Content.
- 62-213.450, F.A.C.: Permit Review by EPA and Affected States
- 62-213.460, F.A.C.: Permit Shield.
- 62-213.900, F.A.C.: Forms and Instructions.
- 62-213.900(1), F.A.C.: Major Air Pollution Source Annual Emissions Fee Form.
- 62-213.900(7), F.A.C.: Statement of Compliance Form

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Title V Core List

Effective: 03/01/02

CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-02-99

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter

CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS MONITORING, effective 03-02-99

62-297.310, F.A.C.: General Test Requirements.

62-297.330, F.A.C.: Applicable Test Procedures.

62-297.340, F.A.C.: Frequency of Compliance Tests.

62-297.345, F.A.C.: Stack Sampling Facilities Provided by the Owner of an Emissions Unit.

62-297.350, F.A.C.: Determination of Process Variables.

62-297.570, F.A.C.: Test Report.

62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

Miscellaneous:

CHAPTER 28-106, F.A.C.: Decisions Determining Substantial Interests

CHAPTER 62-110, F.A.C.: Exception to the Uniform Rules of Procedure, effective 07-01-98

CHAPTER 62-256, F.A.C.: Open Burning and Frost Protection Fires, effective 11-30-94

CHAPTER 62-257, F.A.C.: Asbestos Notification and Fee, effective 02-09-99

CHAPTER 62-281, F.A.C.: Motor Vehicle Air Conditioning Refrigerant Recovery and Recycling, effective 09-10-96

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B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions	5. Pollutant
Ellitted	Ciassii.	lb/hour	tons/year	Cap	Comment
				• "	
SO2	A				
NOx	A				
СО	A				
PM	A				
PM10	A				
VOC	A				
H133	A				
SAM	A				
H106	A				
H107	A				
НАР	A				<u> </u>

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1.	Area Map Showing Facility Location:	
	[] Attached, Document ID:	[X] Not Applicable [] Waiver Requested
2.	Facility Plot Plan:	
	[] Attached, Document ID:	[X] Not Applicable [] Waiver Requested
3.	Process Flow Diagram(s):	
	[X] Attached, Document ID: Part II	[] Not Applicable [] Waiver Requested
4.	Precautions to Prevent Emissions of Ur	nconfined Particulate Matter:
	[] Attached, Document ID:	[X] Not Applicable [] Waiver Requested
5.	Fugitive Emissions Identification:	
	[] Attached, Document ID:	[X] Not Applicable [] Waiver Requested
6.	Supplemental Information for Construc	tion Permit Application:
	[X] Attached, Document ID: Part II	[] Not Applicable
7.	Supplemental Requirements Comment:	
1		

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8.	List of Proposed Insignificant Activities: [] Attached, Document ID: [X] Not Applicable
ļ	[7] Attached, Document ID [A] Not Applicable
9.	List of Equipment/Activities Regulated under Title VI:
	[] Attached, Document ID:
	[] Equipment/Activities On site but Not Required to be Individually Listed
	[X] Not Applicable
10.	Alternative Methods of Operation:
	[] Attached, Document [X] 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:)
	[] Not Applicable
14.	Compliance Report and Plan:
	[] Attached, Document [X] Not Applicable
15.	Compliance Certification (Hard-copy Required):
	[] Attached, Document ID: _ [X] Not Applicable

Emissions	Unit Inf	ormation	Section	1	Λf	4	
E11119910119	OHIL THE	VI IIIAUVII	SCCHOH		UL	-	

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 a process or production unit, or activity, w which has at least one definable emission	hich produces one or more air pollutants and			
	n addresses, as a single emissions unit, a group of s which has at least one definable emission point itive emissions.			
[] This Emissions Unit Information Section process or production units and activities	an addresses, as a single emissions unit, one or more swhich produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit?	(Check one)			
[X] The emissions unit addressed in this Emiss emissions unit.	sions Unit Information Section is a regulated			
[] The emissions unit addressed in this Emi emissions unit.	issions Unit Information Section is an unregulated			
3. Description of Emissions Unit Addressed i Everglades Boiler Unit 1	in This Section (limit to 60 characters): Port			
4. Emissions Unit Identification Number: 0 ID:	01 [] No ID [] ID Unknown			
5. Emissions Unit 6. Initial Startup Status Code: A Date: 05/01/60	7. Emissions Unit Major 8. Acid Rain Unit? 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.				

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l'miccione	I Init I	Information	Section	1	Λf	4
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Emissions Unit Control Equipment

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

- A. Electrostatic Precipitator
- B. Low NOx Burners
- C. Staged Combustion

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

Emissions Unit Details

1. Package Unit:

Manufacturer: Combustion Engineering / Westinghouse

Model Number:

2. Generator Nameplate Rating: 225 MW

3. Incinerator Information:

Dwell Temperature: $^{\circ}F$

> Dwell Time: seconds

Incinerator Afterburner Temperature:

Craicolore	II India	Inform	nation	Section	1	o.£	4	
Emissions	Unit	Iniorn	nauon	Section	1	OI	- 4	

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

Emissions Unit Operating Capacity and Schedule

1.	Maximum Heat Input Rate:	2400	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	Schedule:	
		hours/day	days/week
		weeks/year	8760 hours/year
	1. Operating Capacity/Schedul	le Comment (limit to 200 char	acters):
fir	e maximum heat input given abo ng residual oil is 2300 mmbtu/hi alysis	<u> </u>	-

Emissions	Unit	Information	Section	1	Δf	4	
C11H221A112	Out	111141 111411411	Section	1	UI	4	

C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

List of Applicable Regulations

The proposed addition of ESPs will not change the applicable regulations for this emissions unit.				

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

Emission Point Description and Type

Identification of Point on Pl Flow Diagram? Unit 1 boile	2. Emission Po	oint Type Code: 1			
3. Descriptions of Emission Po 100 characters per point): N		g this Emissions I	Jnit for VE Tracking	(limit to	
	•				
4. ID Numbers or Descriptions			ssion Point in Comme	on:	
Emissions Unit 1, Port Evergla	des Unit 1 boiler	•			
5. Discharge Type Code: V	6. Stack Heig	ht:	7. Exit Diameter:		
, .	343 feet		14 feet		
			10.00		
8. Exit Temperature:	9. Actual Vol		10. Water Vapor:	CT	
289 °F	Rate: 8139	928.9 acfm		%	
11. Maximum Dry Standard Flo	w Rate:		nission Point Height:		
•	dscfm	feet			
13. Emission Point UTM Coord	dinatas.				
Zone: 17 E	ast (km): 587.4	Nort	h (km): 2885.2		
14. Emission Point Comment (I		•	-	9 above	
from initial Title V application.	Flow rates vary	depending on op-	erating conditions.		

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

Segment Description and Rate: Segment ___1__ of __7___

Segment Description (Prod Natural gas burned in Ui	• • •	(limit to 500 ch	aracters):
2. Source Classification Code 1-01-006-01	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, natu		

Segment Description and Rate: Segment ___2_ of __7___

No. 6 oil burned in Unit 1 boiler					
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.

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

Segment Description and Ra	Segment Description and Rate: Segment3_ of/					
1. Segment Description (Proc Unit 1 boiler burning No. 2 fu	\ ** ·	(limit to 500 ch	aracters):			
2. Source Classification Code (SCC): 1-01-005-01		3. SCC Units	: Thousand gallons burned			
4. Maximum Hourly Rate: 16.9	5. Maximum <i>i</i> 148147.1	Annual Rate:	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 variable combination of No. 6 specification used oil from FP)	residual oil, natu	•				

Segment Description and Rate: Segment ___4__ of __7__

Segment Description and Ka	segment Description and Rate. Segment4_ of/					
Segment Description (Propane burned in Unit	• •	(limit to 500 ch	aracters):			
2. Source Classification Cod	e (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 cu	rrently permitted to burn a			
variable combination of No. 6	residual oil, natu	iral gas, No. 2 f	uel oil, propane, or on-			
specification used oil from FP	L operations.					

Emissions	Unit	Information	Section	1	οf	4	
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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	,		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 Annual Rate: 1,500		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): 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. Maximum Annual Rate is for Emission Units 001 through 004					
Segment Description and Rate: Segment6_ of7					
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	e (SCC):	3. SCC Units:	Millions of cubic feet		

5. Maximum Annual Rate:

8. Maximum % Ash:

4. Maximum Hourly Rate:

7. Maximum % Sulfur: 2.5

Factor:

6. Estimated Annual Activity

9. Million Btu per SCC Unit:

Emissions	Unit	Information	Section	1	οf	4
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E. SEGMENT (PROCESS/FUEL) INFORMATION (All Emissions Units)

Segment Description and Ra	Segment Description and Rate: Segment7 of7					
Segment Description (Proc Boiler chemical cleaning undertaken while firing natural	g waste evaporate	ed in Unit 1 boild				
2. Source Classification Code 1-01-013-01	e (SCC):	3. SCC Units	: Thousand gallons			
4. Maximum Hourly Rate: 3	5. Maximum 500	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 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 Rate: Segment of						
Segment Description (Proc Source Classification Code		3. SCC Units:				
2. Source Classification Cour	. (SCC).	J. See ones.				
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 t	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
PM	011	NA	EL
PM ₁₀	011	NA ·	EL
,			

Emissions Unit Information Section _	1_	_ of	_4	
Pollutant Detail Information Page	1	of	2	

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 Efficient	ncy of Control:			
3. Potential Emissions:		4. Synthetically			
230 lb/hour 390.4 tons/year		Limited? [N]			
5. Range of Estimated Fugitive Emissions:	to ton	ıs/vear			
6. Emission Factor: 0.0388 lb/mmbtu		7. Emissions			
Reference: FPL, 2003		Method Code: 0			
8. Calculation of Emissions (limit to 600 characters): / 0.1 lb/mmbtu*(2300 mmbtu/hr = 230 lb/hr (sootblowing) 0.03 lb/mmbtu*(2300 mmbtu/hr = 69 lb/hr (steady-state) Average 0.0388 lb/mmbtu * 2300 mmbtu/hr = 89.125 lb/hr average (89.125 lb/hr* 8760 hr/yr) / 2000 lb/ton = 390.4 tons/ yr					
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): The particulate matter emission limit for 3 hrs at 0.1 lb/mmbtu and 21 hrs at 0.03 lb/mmbtu per 24 hours is equivalent to an average of 0.0388 lb/mmbtu.					
Allowable Emissions	_1 of2				
Basis for Allowable Emissions Code: OTHER	2. Future Effective-Dat Emissions: May 31,				
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable	le 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 Op	perating Method) (limit to	200 characters):			
Based on its negotiations with the Department, a	pplicant agrees to reduce	steady-state PM			
emissions of its fossil fueled steam boilers in Breallowable emissions are given for liquid fuel firm	•	nmbtu. Equivalent			
· · · · · · · · · · · · · · · · · · ·					

Emissions Unit Information Section $_$	1_	_ of _	4
Pollutant Detail Information Page	2	of	2

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

PPE Unit 1

Pollutant Detail Information							
1. Pollutant Emitted:	2. Total Percent Efficiency of Control:						
3. Potential Emissions:	4. Synthetically						
lb/hour tons/year	Limited? [N]						
5. Range of Estimated Fugitive Emissions:							
[] 1 [] 2 [] 3	to to						
6. Emission Factor:	7. Emissions						
Reference:	Method Code:						
8. Calculation of Emissions (limit to 600 characters):							
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):						
Allowable Emissions	_2 of2						
Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowablé Emissions: May 31, 2006						
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:						
0.1 lb/mmbtu	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 Operation Based on its negotiations with the Department, a fossil fueled steam boilers in Broward County. I liquid fuel firing and sootblowing.	applicant agrees to reduce PM emissions of its						

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

Visible Emissions Limitation:	Visible Emissions Limitation	1	_ of _	3	_

1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity:				
	[] Rule [X] Other				
3. Requested Allowable Opacity:					
Normal Conditions: 20 % 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	characters): Based on its negotiations with the				
Department, applicant agrees to reduce the 6-m					
fueled steam boilers in Broward County to 20%	b. This limit becomes effective May 31, 2006.				
Compliance testing is performed annually using	g EPA Method 9.				
<u>Visible Emissions Limitation:</u> Visible Emiss	ions Limitation2 of3				
1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity:				
71	[] Rule [X] Other				
3. Requested Allowable Opacity:					
- · · · · · · · · · · · · · · · · · · ·	ceptional Conditions: 100 %				
Maximum Period of Excess Opacity Allow	K				
·// `					
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 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% of					
limit becomes effective May 31, 2006	T				

	Emissions	Unit Informatio	on Section	1	of	4
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H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissi	ons Limitation3 of3						
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.	,						
I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring) Continuous Monitoring System: Continuous Monitor1 of1							
• •	· ·						
• •	· ·						
Continuous Monitoring System: Continuous	Monitor1 of1_						
Continuous Monitoring System: Continuous 1. Parameter Code: EM	Monitor1 of1 2. Pollutant(s): Visible Emissions (opacity)						
Continuous Monitoring System: Continuous 1. Parameter Code: EM 3. CMS Requirement: 4. Monitor Information: Manufacturer: Phoenix Instruments, Inc.	Monitor1 of1 2. Pollutant(s): Visible Emissions (opacity) [X] Rule [] Other						

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

Supplemental Requirements

1.	Process Flow Diagram
	[X] Attached, Document ID: Part II [] Not Applicable [] Waiver Requested
2.	Fuel Analysis or Specification
	[] Attached, Document ID: [X] Not Applicable [] Waiver Requested
3.	Detailed Description of Control Equipment
	[X] Attached, Document ID: Part II [] Not Applicable [] Waiver Requested
4.	Description of Stack Sampling Facilities
	[] Attached, Document ID: [X] Not Applicable [] Waiver Requested
5.	Compliance Test Report
	[] Attached, Document ID:
ĺ	[] Previously submitted, Date:
	[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 Permit Application
	[X] Attached, Document ID: See Part II [] Not Applicable
9.	Other Information Required by Rule or Statute
	[] Attached, Document ID: [X] Not Applicable
10	. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

Alternative Methods of Operation [] Attached, Document ID: [X] Not Applicable
12 Altered M. Leaf Owned (Freining Textiles)
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

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)

<u>E</u> 1	nissions Unit Desc	eription and Status				
1.	Type of Emission	s Unit Addressed in Thi	s Section: (Check one)			
[X	process or prod		addresses, as a single emission which produces one or more a con point (stack or vent).			
[process or prod		on addresses, as a single emis es which has at least one defi gitive emissions.			
[on addresses, as a single emises which produce fugitive em			
2.	Regulated or Unro	egulated Emissions Unit	? (Check one)			
[X	The emissions un emissions unit.	it addressed in this Emis	ssions 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 2					
	T ' T T ' T	1 1151 11 11	7			
4.	ID:	lentification Number: (002	[] No ID [] ID Unknown		
5.	Emissions Unit Status Code: A	6. Initial Startup Date: 04/01/61	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? [Y]		
rei Si	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.					

Emissions	Unit	Information	Section	2	οf	4	
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Emissions Unit Control Equipment

- 2. Control Equipment/Method Description (Limit to 200 characters per device or method):
 - D. Electrostatic Precipitator
 - E. Low NOx Burners
 - F. Staged Combustion

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

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:

Emissions	Unit Int	formation	Section	2	of	4	
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B. EMISSIONS UNIT CAPACITY INFORMATION (Regulated Emissions Units Only)

Emissions Unit Operating Capacity and Schedule 1. Maximum Heat Input Rate: 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	ng Schedule:								
	hours/day	days/week							
	weeks/year	8760 hours/year							
The maximum heat input given ab firing residual oil is 2300 mmbtu/l analysis.									

Emissions	Unit	Informatio	n Section	2	of	4	
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C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

List of Applicable Regulations

The proposed addition of ESPs will not change the applicable requirements for this emission unit.					

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

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? Unit 2 boiler 2. Emission Point Type Code: 1							
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): NA							
			,				
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: Emissions Unit 2, Port Everglades Unit 2 boiler							
5. Discharge Type Code: V	6. Stack Height 343 feet	nt:	7. Exit Diameter: 14 feet				
8. Exit Temperature: 289 °F	9. Actual Volumente Rate: 8139		10. Water Vapor:	%			
11. Maximum Dry Standard Flow Rate: dscfm 12. Nonstack Emission Point Height: 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			

1. Segment Description (Proce	ess/Fuel Type)	(limit to 500 abo		
Segment Description (Process/Fuel Type) (limit to 500 characters): Natural gas burned in Unit 2 boiler				
2. Source Classification Code 1-01-006-01	(SCC):	3. SCC Units:	Millions of cubic feet	
4. Maximum Hourly Rate:	5. Maximum 2 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 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	Descri	tion a	and	Rate:	Segment	2	of	7	
Cocinent	TO COCKE	,	4114		OCEILIOIL	_	VI.	•	

Segment Description (Process/Fuel Type) (limit to 500 characters): No. 6 oil burned in Unit 2 boiler					
Source Classification Code (SCC): 3. SCC Units: Thousand gallons burned 1-01-004-01					
4. Maximum Hourly Rate: 15.24	5. Maximum Annual Rate: 6. Estimated Annual Activity Factor:				
7. Maximum % Sulfur: 2.5	. 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, nat	•	- L		

Segment Description and Rate: Segment ___3_ of __7__

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

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 2 boiler burning No. 2 fuel oil 2. Source Classification Code (SCC): 3. SCC Units: Thousand gallons burned 1-01-005-01 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 2 boiler 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.

Emiccione	Ilmit	Information	Section	3	o.f	4	
Lmissions	Unit	Information	Section	Z	10	4	

Segment Description and Ra	ite: Segment	_5_ of7			
Segment Description (Proc On-specification used oi			aracters):		
			·		
		,			
2. Source Classification Code 1-01-013-02	, ,		: 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		
	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. Maximum Annual Rate is for Emission Units 001 through 004				
Segment Description and Ra					
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 2 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	÷ (SCC):	3. SCC Units:	Millions of cubic feet		
4. Maximum Hourly Rate:	5. Maximum	Annual 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 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.					

Segment Description and Rate: Segment7 of7						
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Boiler chemical cleaning waste evaporated in Unit 2 boiler. This process may be						
undertaken while firing natural gas or residual oil.						
2. Source Classification Cod 1-01-013-01	e (SCC):	3. SCC Units:	Thousand gallons			
4. Maximum Hourly Rate: 3	5. Maximum 500	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 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 Rate: Segment of						
Segment Description (Proc	1. Segment Description (Process/Fuel Type) (limit to 500 characters):					
·						
Source Classification Code (SCC): SCC Units:						
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):

F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1. Pollutant Emitted	2. Primary Control	3. Secondary Control	4. Pollutant
1. Foliulant Emitted	Device Code	Device Code	Regulatory Code
PM		NÂ	EL
PIVI	011	NA	EL
PM ₁₀	011	NA	EL
1			

Emissions Unit Information Section	2_	_ of _	4	PPE Unit 2
Pollutant Detail Information Page	1	of	2	

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: 230 lb/hour4. Synthetically Limited? [N						
5. Range of Estimated Fugitive Emissions: [totons/year					
6. Emission Factor: 0.0388 lb/mmbtu Reference: FPL, 2003	7. Emissions Method Code: 0					
8. Calculation of Emissions (limit to 600 characters): 0.1 lb/mmbtu* 2300 mmbtu/hr = 230 lb/hr (sootblowing) 0.03 lb/mmbtu* 2300 mmbtu/hr = 69 lb/hr (steady-state) Average:0:0388 lb/mmbtu * 2300 mmbtu/hr = 89.125 lb/hr average (89.125 lb/hr* 8760 hr/yr) / 2000 lb/ton = 390.4 tons/ yr						
	9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): The particulate matter emission limit for 3 hrs at 0.1 lb/mmbtu and 21 hrs at 0.03 lb/mmbtu per 24 hours is equivalent to an average of 0.0388 lb/mmbtu.					
Allowable Emissions	_1 of2					
Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: Oct. 31, 2005					
73. Requested Allowable Emissions and Units: 0.03 lb/mmbtu	4. Equivalent Allowable Emissions: 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	4
Pollutant Detail Information Page	2	of	2

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

Emissions-Limited and Preconstruction Review Pollutants Only)

Pollutant Detail Information

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions:	4. Synthetically
lb/hour tons/year	Limited? []
5. Range of Estimated Fugitive Emissions:	
	totons/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):
	(1.1.1.1 to 200 01.1.1.10.10).
Allowable Emissions	_2 of2
Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable
OTHER	Emissions: Oct. 31, 2005
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions:
0.1 lb/mmbtu	230 lb/hour 125.9 tons/year
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, a	
fossil fueled steam boilers in Broward County.	
liquid fuel firing and sootblowing.	

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

Visible Emissions Limitation: Visible Emissi	ons Limitation1 of3			
1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity:			
	[] Rule [X] Other			
3. Requested Allowable Opacity:				
Normal Conditions: 20 % 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 c	harvatara). Dacad on its magatisticans with the			
Department, applicant agrees to reduce the 6-m	•			
fueled steam boilers in Broward County to 20%. This limit becomes effective Oct. 31, 2005. Compliance testing is performed annually using EPA Method 9.				
Compitative testing is performed annually using	EL A Method 9.			
Visible Emissions Limitation: Visible Emissi	ons Limitation 2 of 3			
1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity:			
	[] Rule [X] Other			
3. Requested Allowable Opacity:				
	ceptional Conditions: 100 %			
Maximum Period of Excess Opacity Allowe	ed: 24 min/hour			
4. Method of Compliance: EPA Method 9				
5 Visible Emissions Comment (limit to 200 cl	haracters): Based on its negotiations with the			
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% or				
limit becomes effective Oct. 31, 2005	paore in anne massari operacional COM. Tills			
111111 000011100 011001110 001. 51, 2005				

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

Visible Emissions Limitation: Visible Emissi	ons Limitation3 of3				
1. Visible Emissions Subtype: VE100	2. Basis for Allowable Opacity:				
	[X] Rule [] Other				
3. Requested Allowable Opacity:					
	ceptional 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 c					
F.A.C. allow up to 100% opacity, for an unlimited time during start-up, shutdown, and up to					
2hrs/24hrs for malfunctions.					
	NITOR INFORMATION				
(Unly Regulated Emissions Units	Subject to Continuous Monitoring)				
Continuous Monitoring System: Continuous	Monitor1 of1				
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					
7. Continuous Monitor Comment (mint to 200	characters). Required by 40 CFR 73.				
	•				

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Emissions	Unit Information	Section	2	of	4	
		CCCIOII	_	•	•	

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 Equipm	nent
	[] Attached, Document ID:	[X] Not Applicable [] Waiver Requested
4.	Description of Stack Sampling Facilities	
	[X] Attached, Document ID: PPEU2_4	.bmp [] Not Applicable [] Waiver Requested
5.	Compliance Test Report	
	[] Attached, Document ID:	_
	[] Previously submitted, Date:	
	[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 Construct	tion Permit Application
	[X] Attached, Document ID: See Part I	I [] Not Applicable
9.	Other Information Required by Rule or	
	[] Attached, Document ID:	[X] Not Applicable
10	Supplemental Requirements Comment:	

Emissions	Hnit I	nformation	Section	2	Ωf	4	
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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: 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

Emissions	Unit	Information	Section	3	of	4

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 one Description and Status				
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 Startup Status Code: A Date: 06/01/64 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.				

Emissions	Unit	Inform	ation	Section	3	οf	4
	Om	THITOTH	MILLOIN	Decrion		V.	

Emissions Unit Control Equipment

- 1. Control Equipment/Method Description (Limit to 200 characters per device or method):
 - A. Electrostatic Precipitator
 - B. Low NOx Burners
 - C. Staged Combustion

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

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:

 $^{\circ}\mathrm{F}$

Emissions	Unit	Information	Section	3	of	4	

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 Through	put Rate:	
4.	Maximum Production Rate:		
5.	Requested Maximum Operation	ng Schedule:	
		hours/day	days/week
		weeks/year	8760 hours/year
2.	Operating Capacity/Schedule (Comment (limit to 200 charact	ers):
	e maximum heat input given ab sidual oil 4000 mmbtu/hr.	ove reflects natural gas firing.	Maximum heat input for

Emissions	Unit	Information	Section	3	of	4	
		# K11	OCCUON		V.	-	

C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

List of Applicable Regulations

The proposed addition of ESPs will not change the applicable regulations for this emission unit.				
	·			

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

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

Emission Point Description and Type

I. Identification of Point on Plot Plan or Flow Diagram? EU 3		2. Emission Po	oint Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Emission 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		7. Exit Diameter: 18.1 feet	
8. Exit Temperature: 287 °F	9. Actual Volumetric Flow Rate: 1263180.6 acfm		10. Water Vapor:	%
11. Maximum Dry Standard Flo	· · · · · · · · · · · · · · · · · · ·	nission Point Height: fe	et	
13. Emission Point UTM Coord	linates:			
Zone: 17 E	Nortl	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 measured vary depending on operating condiditons.				

Segment Description and Ra	ite: Segment	_1 of7		
Segment Description (Pro- Natural gas burned in United States 1)	• •	(limit to 500 ch	aracters):	
2. Source Classification Cod 1-01-006-01	e (SCC):	3. SCC Units	s: Million cubic feet burned	
4. Maximum Hourly Rate: 3.98	5. Maximum <i>a</i> 34,873	Annual Rate:	6. Estimated Annual Activity Factor:	
7. Maximum % Sulfur: 0.0031	8. Maximum	% Ash:	9. Million Btu per SCC Unit: 1050	
Segment Description and Rate: Segment2 of7 1. Segment Description (Process/Fuel Type) (limit to 500 characters):				
Number 6 fuel oil burned in Unit 3 Boiler				
2. Source Classification Cod- 1-01-004-01	e (SCC):	3. SCC Unit	ts: Thousand gallons burned	
4. Maximum Hourly Rate: 26.3	5. Maximum <i>i</i> 230,526	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 variable combination of No. 6 specification used oil from FP	residual oil, natu	•	- 1	

Segment Description and Rate: Segment

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

3 of

1.	Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 3 boiler burning

No. 2 fuel oil			
	(8.6.6)	La GGGTT	
2. Source Classification Code	e (SCC):	3. SCC Units:	Thousand gallons burned
1-01-005-01	T	l	
4. Maximum Hourly Rate:	5. Maximum	Annual Rate:	6. Estimated Annual Activity
29.41	257,647		Factor:
7. Maximum % Sulfur: 0.5	8. Maximum	% Ash:	9. Million Btu per SCC Unit:
			136
10. Segment Comment (limit to	to 200 characters	s): This unit is cu	rrently permitted to burn a
variable combination of No. 6			
specification used oil from FP		0 /	, 1 1
'	· ·		

Segment Description and Rate: Segment ___4__ of ___7__

- 1. Segment Description (Process/Fuel Type) (limit to 500 characters): Propane burned in Unit 3
- 2. Source Classification Code (SCC): 3. SCC Units: Million cubic feet burned 1-01-006-01
- 4. Maximum Hourly Rate: 5. Maximum Annual Rate: 6. Estimated Annual Activity 4.18 36,617 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 onspecification used oil from FPL operations

Segment Description and Rate: Segment5_ of7					
Segment Description (Process/Fuel Type) (limit to 500 characters): On-Specification used oil burned in Unit 3 boiler					
2. Source Classification Cod 1-01-013-02	e (SCC):	3. SCC Units	: Thousand gallons burned		
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 9	% Ash:	9. Million Btu per SCC Unit: 136		
l e e e e e e e e e e e e e e e e e e e	variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on- specification used oil from FPL operations. Maximum Annual Rate is for Emission Units 001 through 004.				
Segment Description and Ra	ite: Segment	_6 of7			
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					
Source Classification Code (SCC): 3. SCC Units: Million cubic feet and thousand gallons					
4. Maximum Hourly Rate:	Maximum Hourly Rate: 5. Maximum Annual Rate: 6. Estimated Annual Activity Factor:				
7. Maximum % Sulfur: 2.5	8. Maximum 9	% Ash:	9. Million Btu per SCC Unit:		
10. Segment Comment (limit to 200 characters): The existing Title V permit allows Unit 3 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.					

Segment Description and Rate: Segment ___7__ of __7__
 Segment Description (Process/Fuel Type) (limit to 500 characters):
 Boiler chemical cleaning waste evaporated in Unit 3. This process may be undertaken while firing natural gas or residual fuel oil.
 Source Classification Code (SCC): 3. SCC Units: Thousand gallons burned

1-01-013-01

4. Maximum Hourly Rate: 5. Maximum Annual
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 Rate: Segment _____ of ____

- 1. Segment Description (Process/Fuel Type) (limit to 500 characters):
- 2. Source Classification Code (SCC): 3. SCC Units:
- 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):

Effective: 2/11/99

F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1. Pollutant Emitted	2. Primary Control	3. Secondary Control	4. Pollutant
	Device Code	Device Code	Regulatory Code
PM	011	NA	EL
PM ₁₀	011	NA	EL
	·		
			

Emissions Unit Information Section	3_	of	4
Pollutant Detail Information Page	1_	of	2_

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 Efficient	ency of Control:		
3. Potential Emissions:		4. Synthetically		
400 lb/hour 679.8 tons/year		Limited? [N]		
5. Range of Estimated Fugitive Emissions:	<u> </u>	Emitor. [11]		
[] 1 [] 2 [] 3	to to	ns/year		
6. Emission Factor: 0.1 lb/mmbtu		7. Emissions		
Reference: FPL, 2003		Method Code: 0		
8. Calculation of Emissions (limit to 600 characters): 0.1 lb/mmbtu * 4000 mmbtu/hr = 400 lb/hr. (sootblowing) 0.03 lb/mmbtu * 4000 mmbtu/hr = 120 lb/hr. (steady-state) 0:0388 lb/mmbtu * 4000 mmbtu/hr = 155.2 lb/hr. average (155.2 lb/hr * 8760 hr/ yr) /2000 lb/ton = 679.8 tons/yr				
9. Pollutant Potential/Fugitive Emissions Comm	ment (limit to 200 charac	ters). The particulate		
matter emission limit for 3 hrs at 0.1 lb/mmbtu a				
equivalent to an average of 0.0388 lb/mmbtu.	aid 21 mo at 0.03 10/mm	ota poi 24 nodis is		
i square and are stage of otopics to manieta.				
Allowable Emissions1 of2				
1. Basis for Allowable Emissions Code:	2. Future Effective Da	te of Allowable		
OTHER	Emissions: Oct. 31,	2007		
		,		
3. Requested Allowable Emissions and Units:	4. Equivalent Allowal	ole Emissions:		
0.03 lb/mmbtu	120 lb/hour 5	25.6 tons/year		
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.				
6. Allowable Emissions Comment (Desc. of Op	perating Method) (limit to	200 characters):		
Based on its negotiations with the Department, a				
emissions of its fossil fueled steam boilers in Broward County to 0.03 lb/mmbtu. Equivalent				
allowable emissions are given for liquid fuel firm	-			
<i>g</i>	6			

Emissions Unit Information Section	3	of	4	
Pollutant Detail Information Page	2	of	2	

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

Emissions-Limited and Preconstruction Review Pollutants Only)

Pollutant Detail Information

1. Pollutant Emitted:	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:	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 2 of 2				
1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable			
OTHER	Emissions: Oct. 31, 2007			
3. Requested Allowable Emissions and Units: 0.1 lb/mmbtu	4. Equivalent Allowable Emissions:			
U.1 lo/mmbtu	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 O	perating Method) (limit to 200 characters):			
Based on its negotiations with the Department,	• •			
fossil fueled steam boilers in Broward County. Equivalent allowable emissions are given for				
liquid fuel firing and sootblowing.				

Emissions	Unit	Informati	ion .	Section	3	Λf	4	
EMPOSITIO	Onne	milloi mat		occuon	•	VI.	~~	

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

Visible Emissions Limitation: Visible Emissi	ons Limitation1 of3					
1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity:					
	[] Rule [X] Other					
3. Requested Allowable Opacity:						
Normal Conditions: 20 % Exc	ceptional Conditions: %					
Maximum Period of Excess Opacity Allowe	Maximum Period of Excess Opacity Allowed: min/hour					
4. Method of Compliance: EPA Method 9						
5 Visible Emissions Comment (limit to 200 s	homostoms). Dogod on its magatistical with the					
5. Visible Emissions Comment (limit to 200 cl	·					
Department, applicant agrees to reduce the 6-mi fueled steam boilers in Broward County to 20%						
Compliance testing is performed annually using	·					
Compitance testing is performed annually using	, EFA Method 9.					
Visible Emissions Limitation: Visible Emission	ons Limitation2 of3					
1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity:					
	[] Rule [X] Other					
3. Requested Allowable Opacity:						
Normal Conditions: 40 % Exc	ceptional Conditions: 100 %					
Maximum Period of Excess Opacity Allowe	ed: 24 min/hour					
4. Method of Compliance: EPA Method 9						
5. Visible Emissions Comment (limit to 200 cl						
Department, applicant agrees to reduce visible e						
Broward County, and limits sootblowing & load						
hrs, with 4, six-minute periods of up to 100% of	pacity if unit has an operational COM. This					
limit becomes effective Oct. 31, 2007.						

Emissions	Unit	Information	Section	3	οf	4
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H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissi	ions Limitation3 of3					
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 c F.A.C. allow up to 100% opacity, for an unlimi 2hrs/24hrs for malfunctions.						
I. CONTINUOUS MONITOR INFORMATION (Only Regulated Emissions Units Subject to Continuous Monitoring) Continuous Monitoring System: Continuous Monitor1 of1_						
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.					

PPE	U	nit	3
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Emissions	Unit	Inforn	aation	Section	3	οf	4	
CHINESTINE	OHIL	THIVI	IAUVII	Section	•	V.		

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 Equipm	nent
	[x] Attached, Document ID: Part II	[] Not Applicable [] Waiver Requested
4.	Description of Stack Sampling Facilitie	S
	[] Attached, Document ID:	[X] Not Applicable [] Waiver Requested
5.	Compliance Test Report	
	[] Attached, Document ID:	_
	[] Previously submitted, Date:	
	[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 Construc	tion Permit Application
	[X] Attached, Document ID: Part II	[] Not Applicable
9.	Other Information Required by Rule or	
	[] Attached, Document ID:	[X] Not Applicable
10	. Supplemental Requirements Comment:	
]		

Emissions	I Imit Imform	mation Coation	2	o.c	4	
Lmissions	Unit Infori	mation Section		OI	4	

Additional Supplemental Requirements for Title V Air Operation Permit Applications

II AL C MALL CO.
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
() control of the co
14. Compliance Assurance Monitoring Plan
[] Attached, Document ID: [X] Not Applicable
[1] Mulanea, Bocament IB [M] Not Applicate
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
Attached, Document IDIVA
[] 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

Emissions	Unit Information	Section	4	οf	4	
	Onit miletination	I Dection	7	O.	7	

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 of 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 4				
4. Emissions Unit Identification Number: 004 [] No ID				
ID: [] ID Unknown				
5. Emissions Unit Startup Status Code: A Date: 04/01/65 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.				

Emissions	Unit	Information	Section	4	οf	4	
	CHILL	IIIIVI MAHVII	Section -		VI.	-	

Emissions Unit Control Equipment

- 1. Control Equipment/Method Description (Limit to 200 characters per device or method):
 - A. Electrostatic Precipitator
 - B. Low NOx Burners
 - C. Staged Combustion

2. Control Device or Method Code(s): $A = \overline{011}$, B = 024, C = 025,

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:

°F

Emissions	Unit	Information	Section	4	Λf	4	
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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
3.	Operating Capacity/Schedule C	Comment (limit to 200 ch	aracters):
	e maximum heat input given abo idual oil 4000 mmbtu/hr.	ove reflects natural gas fi	ring. Maximum heat input for

C. EMISSIONS UNIT REGULATIONS (Regulated Emissions Units Only)

List of Applicable Regulations

The proposed addition of ESPs will not change the applicable regulations for this emission unit.				
·				

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

Emission Point Description and Type

Identification of Point on P Flow Diagram? EU 4	2. Emission Po	oint 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 Description	S OF ETHISSION OF	nus will this Emi	ISSION POINT IN COMM	on:			
5. Discharge Type Code: V	6. Stack Height: 343 feet		7. Exit Diameter: 18.1 feet				
8. Exit Temperature: 287 °F	9. Actual Vol Rate: 126		10. Water Vapor:	%			
11. Maximum Dry Standard Flo	11. Maximum Dry Standard Flow Rate: dscfm 12. Nonstack Emission Point Height: feet						
13. Emission Point UTM Coord	linates:						
Zone: 17 E	ast (km): 587.4	Norti	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.							

Segment Description and Rate: Segment1_ of7					
3. Segment Description (Process/Fuel Type) (limit to 500 characters): Natural gas burned in Unit 4 Boiler					
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 <i>i</i> 34,873	Annual Rate:	6. Estimated Annual Activity Factor:		
7. Maximum % Sulfur: 0.0031	8. Maximum 9		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				
Segment Description and Ra	ite: Segment	_2 of7			
Segment Description (Proc Number 6 fuel oil burned in U	·	(limit to 500 cha	aracters):		
 Source Classification Code (SCC): SCC Units: 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 9	% Ash:	9. Million Btu per SCC Unit: 152		
10. Segment Comment (limit t variable combination of No. 6 specification used oil from FP)	residual oil, natu				

P	PF.	Hn	it	4
		\mathbf{v}	u	7

Emissions	Unit Informatio	n Section	4	οf	4	
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Segment Description and Ra	Segment Description and Rate: Segment3_ of7_					
1. Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 4 boiler burning No. 2 fuel oil						
	٠,					
2. Source Classification Code 1-01-005-01	e (SCC):	3. SCC Units	: Thousand gallons burned			
4. Maximum Hourly Rate: 29.41	5. Maximum A 257,647		6. Estimated Annual Activity Factor:			
7. Maximum % Sulfur: 0.5	8. Maximum %	% Ash:	9. Million Btu per SCC Unit: 136			
variable combination of No. 6	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	te: Segment	4 of7				
Segment Description (Process/Fuel Type) (limit to 500 characters): Propane burned in Unit 4						
 2. Source Classification Code (SCC): 1-01-006-01 3. SCC Units: Million cubic feet burned 						
4. Maximum Hourly Rate: 4.18	5. Maximum Annual Rate: 6. Estimated Annual Activit 36,617 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 onspecification used oil from FPL operations.						

Segment Description and Rate:	Segment	5	of	7

On-Specification used oi	• •		aracters):				
2. Source Classification Cod 1-01-013-02	e (SCC):	3. SCC Units	: Thousand gallons burned				
4. Maximum Hourly Rate: 29.41	5. Maximum / 1,500	Annual Rate:	6. Estimated Annual Activity Factor:				
7. Maximum % Sulfur: 2.5	8. Maximum ⁶		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 is for Emission Units 001 through 004.							
Segment Description and Ra	ite: Segment	_6 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 thousand galle	s: Million cubic feet and ons				
4. Maximum Hourly Rate:	5. Maximum A	Annual Rate:	6. Estimated Annual Activity Factor:				
7. Maximum % Sulfur: 2.5	7. Maximum % Sulfur: 2.5 8. Maximum % Ash: 9. Million Btu per SCC Uni						
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.							

Segment Description and Rate: Segment ___7__ of __7__ 1. Segment Description (Process/Fuel Type) (limit to 500 characters): Boiler chemical cleaning waste evaporated in Unit 4. This process may be undertaken while firing natural gas or residual fuel oil. 3. SCC Units: Thousand gallons burned 2. Source Classification Code (SCC): 1-01-013-01 4. Maximum Hourly Rate: 5. Maximum Annual Rate: 6. Estimated Annual Activity 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). Segment Description and Rate: Segment _____ of ____ 1. Segment Description (Process/Fuel Type) (limit to 500 characters): 3. SCC Units: 2. Source Classification Code (SCC): 6. Estimated Annual Activity 4. Maximum Hourly Rate: 5. Maximum Annual Rate: Factor: 7. Maximum % Sulfur: 8. Maximum % Ash: 9. Million Btu per SCC Unit: 10. Segment Comment (limit to 200 characters):

F. EMISSIONS UNIT POLLUTANTS (All Emissions Units)

1 Dollutant Emitted	2 Drimary Contact	2 Casanda Caret 1	4 Delluteri
1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control	4. Pollutant
D) (Device Code	Regulatory Code
PM	011	NA	EL
PM ₁₀	011	NA	EL
·-			
	* ···		<u> </u>

Emissions Unit Information Section _	4_	_ of _	4	_
Pollutant Detail Information Page	1	of	2	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

PPE Unit 4

(Regulated Emissions Units -

Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: PM - Total	2. Total Percent Efficie	ency of Control:			
3. Potential Emissions:		4. Synthetically			
400 lb/hour 679.8 tons/year	•	Limited? [N]			
5. Range of Estimated Fugitive Emissions:					
	to to:	ns/year			
6. Emission Factor: 0.1 lb/mmbtu		7. Emissions			
Reference: FPL, 2003		Method Code: 0			
8. Calculation of Emissions (limit to 600 chara	cters):				
0. 0.1 lb/mmbtu * 4000 mmbtu/hr = 400 lb/h 0.03 lb/mmbtu * 4000 mmbtu/hr = 120 lb/hr. 0.0388 lb/mmbtu * 4000 mmbtu/hr = 155.2 lb (155.2 lb/hr * 8760 hr/ yr) /2000 lb/ton = 679	(steady-state) hr. average				
9. Pollutant Potential/Fugitive Emissions Commatter emission limit for 3 hrs at 0.1 lb/mmbtu a equivalent to an average of 0.0388 lb/mmbtu.					
Allowable Emissions Allowable Emissions	_1 of2				
Basis for Allowable Emissions Code: OTHER	2. Future Effective Da Emissions: May 31.				
3. Requested Allowable Emissions and Units: 0.03 lb/mmbtu	4. Equivalent Allowab	ole Emissions: 25.6 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 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

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

allowable emissions are given for liquid fuel firing.

Emissions Unit Information Section	n4 of4	
Pollutant Detail Information Page	2_ of2	

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

Emissions-Limited and Preconstruction Review Pollutants Only)

Pollutant Detail Information

1. Pollutant Emitted:	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 to
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 charae	cters):
9. Pollutant Potential/Fugitive Emissions Com	ment (limit to 200 characters):
Allowable Emissions Allowable Emissions	_2 of2
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	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 liquid fuel firing and sootblowing.	pplicant agrees to reduce PM emissions of its

Emissions	Unit	Informat	ion	Section	4	ωf	4	
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H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emission	ons Limitation1 of3
1. Visible Emissions Subtype: VE20	2. Basis for Allowable Opacity:
	[] Rule [X] Other
3. Requested Allowable Opacity:	
	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). Rased on its negotiations with the
Department, applicant agrees to reduce the 6-m	, .
fueled steam boilers in Broward County to 20%	
Compliance testing is performed annually using	
Visible Emissions Limitation: Visible Emissi	ons Limitation2 of3
1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity:
	[] Rule [X] Other
3. Requested Allowable Opacity:	
	ceptional Conditions: 100 %
Maximum Period of Excess Opacity Allowe	ed: 24 min/hour
4. Method of Compliance: EPA Method 9	
5 Visible Emissions Comment (limit to 200 a	homostoms). Boond on its negative in with the
5. Visible Emissions Comment (limit to 200 c Department, applicant agrees to reduce visible of	
Broward County, and limits sootblowing & load	
hrs, with 4, six-minute periods of up to 100% o	
limit becomes effective May 31, 2007.	pacity if unit has an operational COM. This
minic becomes effective triay 51, 2007.	

Emissions	Unit	Information	Section	4	οf	4
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H. VISIBLE EMISSIONS INFORMATION (Only Regulated Emissions Units Subject to a VE Limitation)

<u>Vi</u>	sible Emissions Limitation: Visible Emissi	ons Limitation3_	_ of3
1.	Visible Emissions Subtype: VE100	2. Basis for Allowab	- *
		[X] Rule	[] Other
3.	Requested Allowable Opacity:		
	Normal Conditions: % Ex	ceptional Conditions:	100 %
	Maximum Period of Excess Opacity Allowe	ed: 60 min/hour	
4.	Method of Compliance: EPA Method 9		
5.	Visible Emissions Comment (limit to 200 c	haracters): DEP Rule 6	2-210.700(1) and (2),
F.4	A.C. allow up to 100% opacity, for an unlimi	ted time during start-up	o, shutdown, and up to
2hi	rs/24hrs for malfunctions.		•
L			
	I. CONTINUOUS MO (Only Regulated Emissions Units	- ·	
Co	ntinuous Monitoring System: Continuous	Monitor1 of	_1
	ntinuous Monitoring System: Continuous Parameter Code: VE	Monitor1 of 2. Pollutant(s): Opac	
1.			
1. 3.	Parameter Code: VE	2. Pollutant(s): Opac	city
1. 3.	Parameter Code: VE CMS Requirement:	2. Pollutant(s): Opac	city
1. 3.	Parameter Code: VE CMS Requirement: Monitor Information:	2. Pollutant(s): Opac [X] Rule	city
1. 3.	Parameter Code: VE CMS Requirement: Monitor Information: Manufacturer: Phoenix Instruments, Inc. Model Number: OPAC 20/20	2. Pollutant(s): Opac [X] Rule	[] Other r: OPAC - 1082
1. 3. 4.	Parameter Code: VE CMS Requirement: Monitor Information: Manufacturer: Phoenix Instruments, Inc. Model Number: OPAC 20/20	Pollutant(s): Opac [X] Rule Serial Number	[] Other r: OPAC - 1082
1. 3. 4.	Parameter Code: VE CMS Requirement: Monitor Information: Manufacturer: Phoenix Instruments, Inc. Model Number: OPAC 20/20 Installation Date: 12/19/00	2. Pollutant(s): Opac [X] Rule Serial Number 6. Performance Spector 1/12/00	City [] Other r: OPAC - 1082 cification Test Date:
 3. 4. 5. 	Parameter Code: VE CMS Requirement: Monitor Information: Manufacturer: Phoenix Instruments, Inc. Model Number: OPAC 20/20 Installation Date: 12/19/00	2. Pollutant(s): Opac [X] Rule Serial Number 6. Performance Spector 1/12/00	City [] Other r: OPAC - 1082 cification Test Date:
 3. 4. 5. 	Parameter Code: VE CMS Requirement: Monitor Information: Manufacturer: Phoenix Instruments, Inc. Model Number: OPAC 20/20 Installation Date: 12/19/00	2. Pollutant(s): Opac [X] Rule Serial Number 6. Performance Spector 1/12/00	City [] Other r: OPAC - 1082 cification Test Date:
 3. 4. 5. 	Parameter Code: VE CMS Requirement: Monitor Information: Manufacturer: Phoenix Instruments, Inc. Model Number: OPAC 20/20 Installation Date: 12/19/00	2. Pollutant(s): Opac [X] Rule Serial Number 6. Performance Spector 1/12/00	City [] Other r: OPAC - 1082 cification Test Date:
 3. 4. 5. 	Parameter Code: VE CMS Requirement: Monitor Information: Manufacturer: Phoenix Instruments, Inc. Model Number: OPAC 20/20 Installation Date: 12/19/00	2. Pollutant(s): Opac [X] Rule Serial Number 6. Performance Spector 1/12/00	City [] Other r: OPAC - 1082 cification Test Date:
 3. 4. 5. 	Parameter Code: VE CMS Requirement: Monitor Information: Manufacturer: Phoenix Instruments, Inc. Model Number: OPAC 20/20 Installation Date: 12/19/00	2. Pollutant(s): Opac [X] Rule Serial Number 6. Performance Spector 1/12/00	City [] Other r: OPAC - 1082 cification Test Date:

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 Equipm	
	[X] Attached, Document ID: Part II	[] Not Applicable [] Waiver Requested
4.	Description of Stack Sampling Facilities	es
	[] Attached, Document ID:	[X] Not Applicable [] Waiver Requested
5.	Compliance Test Report	
	[] Attached, Document ID:	_
	[] Previously submitted, Date:	
	[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 Construc	tion Permit Application
	[X] Attached, Document ID: Part II	[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	4	οf	4	
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Additional Supplemental Requirements for Title V Air Operation Permit Applications

11. Alternative Methods of Operation
<u> </u>
[] 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: 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

PART II

Port Everglades Plant (PPE) Electrostatic Precipitator Project

FPL

Introduction and Background

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 (PPE) 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 proposed emission limits for particulate matter are 0.03 lb/MMBtu when operating in steady-state and 0.1 lb/MMBtu for sootblowing and load change. The proposed emission limits are similar in duration to those currently applicable for these units in Rule 62-296.405 (1) (b) and Rule 62-210.700 (3) F.A.C. for steady-state and sootblowing/load changing (i.e., 3 hours in 24 hours), respectively. The compliance determination would be the same as-that currently applicable for the units (Rule 62-296.405(1)(e)2. The proposed emission limits are about a 70 percent reduction from current-emission limits. The reduction in potential particulate emissions from the installation of ESPs is about 4,800 tons per year.

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.

Electrostatic Precipitators

Electrostatic precipitators (ESPs) are most commonly used for controlling fuel oil-fired particulate. ESPs are typically placed between the Air Pre-heater and the Stack (Fig.1). The functions of an ESP are to charge electrically the ash particles in the flue gas and provide the means for their collection and proper removal. The unit is comprised of a series of parallel vertical plates (called collecting plates) through which the flue gas passes. Centered between the plates are charging electrodes which provide the electric field (Fig.2).

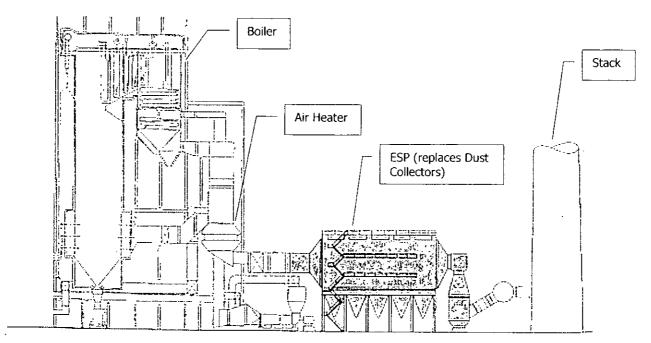


FIGURE 1 - TYPICAL ESP CONFIGURATION

The collecting plates are typically electrically grounded and configured as the positive electrode components. The discharge electrodes in the flue gas stream are connected to high voltage power source, typically 55-75 kV DC, with negative polarity. An electric field is established between the discharge electrodes and the collecting surface. As flue gas passes through the electric field, the particulate takes on a negative charge which, depending on the particle size, is accomplished by field charging or diffusion.

The negatively charged particles are attracted toward the grounded collection plates and migrate across the gas flow. The particles form an ash layer as they accumulate on the collection plates. The ash layer is then periodically removed. The most common removal method is rapping, which consists of suddenly striking the collection surface. This rapping force dislodges the ash. Because particulate tends to agglomerate, the ash layer is removed in sheets. This sheeting is important to prevent re-entrainment of individual particles into the flue gas stream. The dislodged particulate falls from the collection surface into a hopper, where is continuously removed and disposed.

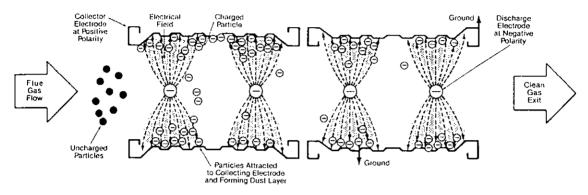
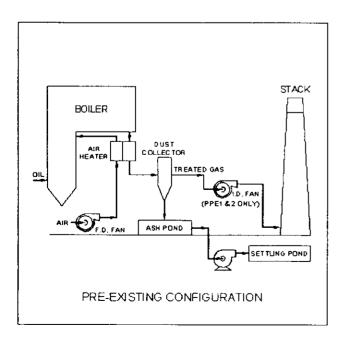


FIGURE 2 - CHARGING & COLLECTION OF PARTICLES WITHIN AN ESP

Project Scope

The project includes the engineering, design, modeling, fabrication, assembly, erection, and optimization of electrostatic precipitators in all four Port Everglades Units (i.e., PPE-1&2 each at 200MW & PPE-3&4 at 400MW). ESPs will replace the existing mechanical dust collectors, which will either be removed or abandoned in place. Figure 3 shows the pre and post-ESP upgrades.



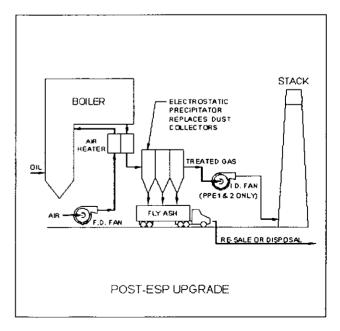


FIGURE 3 - PRE & POST ESP UPGRADE AT PPE

Due to the high collection efficiency of the ESPs, a significant increase on fly ash by-product is expected. Preliminary estimates indicate the need to dispose between 900-1,100 tons/year of ash, which equates to approximately 1 dump-truck per week. Commercial use of this fly ash will be investigated for metal (mainly V & Ni) recovery and concrete aggregate application.

PPE ESPs will require larger footprint than the existing dust collectors. Consequently, special considerations will be made to optimize their design and installation, and minimize the impact on the availability of the station. As an example, ESPs may be built on top of the existing dust collectors/ductwork to the stack (Fig. 4&5) in order to reduce outage time requirement and avoid potential layout interference between the units (particularly between PPE-2 & PPE-3).

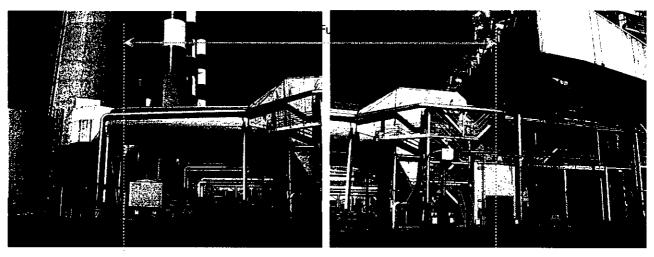


FIGURE 4 - UNIT 3&4 EXISTING BACKEND ARRANGEMENT

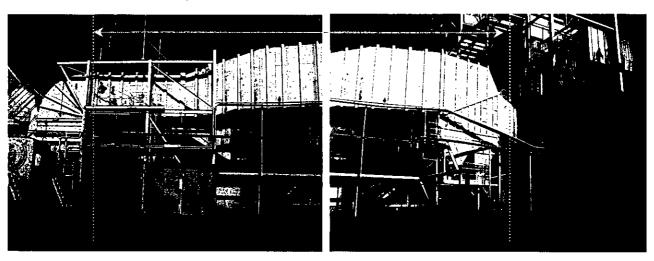


FIGURE 5 - UNIT 1&2 EXISTING BACKEND ARRANGEMENT

The handling of flyash will be controlled using techniques to minimize particulate emissions. This may included the use of bagfilters for flyash handling and enclosed trucks. These techniques will be determined during design engineering.

Project Schedule

Execution of the project would be completed between approximately 21 to 40 months (first to last units) from the date of contract award, in accordance to the <u>following preliminary schedule</u>:

- a. Proposal Evaluation Completión 01/01/04
- b. Contract Award 02/01/04
- c. Begin On-site Construction 09/01/04 (First Unit)
- d. Complete On-site Construction 04/01/05 (First Unit)
- e. Achieve First Unit Emission Compliance 10/31/05
- f. Achieve Second Unit Emission Compliance 05/31/06
- g. Achieve Third Unit Emission Compliance 05/31/07 —
- h. Achieve Fourth Unit Emission Compliance 10/31/07 (Last Unit)

For reference, the overall preliminary plan is shown below. This master schedule is based on the current (as of 1Q'03) outage plan for the PPE units.

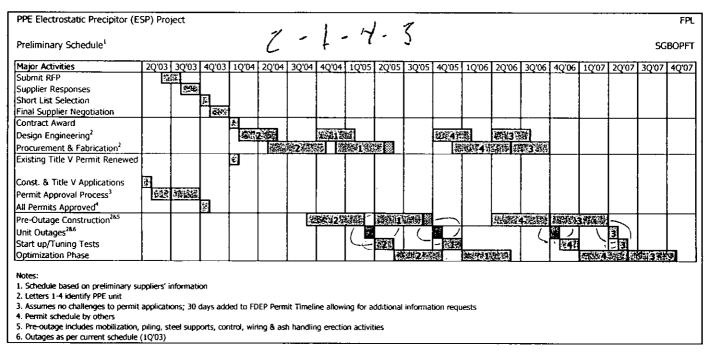


FIGURE 6 - ESP UPGRADE SCHEDULE FOR PPE STATION

Regulatory Applicability

The addition of ESPs will reduce the emissions of particulate matter and not involve any other changes related to emissions of other pollutants or operational parameters (e.g., stack flow and temperature). The project is a "pollution control project" as defined in 40 CFR Part 52.21 (b)(32) and meets the requirements cited in Rule 62-212:400(2)(a)2. F.A.C. and 40 CFR 52.21 (b) (2)(iii)(h). As such, the project is not a modification under the Department regulations.

References

- Air & Waste management Association, (2000). Air Pollution Engineering Manual. Edited by Wayne T. Davis. John Wiley & Sons, Inc. New York.
- U.S. Environmental Protection Agency, (1998). Stationary Source Control Techniques Document for Fine Particulate Matter. EPA No. 68-D-98-026, October 1998. Research Triangle Park, North Carolina.
- U.S. Environmental Protection Agency, (1998). Compilation of Air Pollutant emission Factors. Volume I: Stationary Point and Area Sources. Section 1.3, Fuel Oil Combustion. AP-42