RECEIVED
APR 24 2003
BUREAU OF AIR REGULATION

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

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

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

April 2003
0237560

DISTRIBUTION:
4 Copies - FDEP
5 Copies – Florida Power and Light
1 Copy – Golder Associates Inc.

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 of Facility

1. Facility Owner/Company Name: Florida Power & Light Company	
2. Site Name: Port Everglades Plant	
3. Facility Identification Number: 0110036 [ ] Unknown	
4. Facility Location: Street Address or Other Locator: 8100 Eisenhower Blvd City: Ft. Lauderdale County: Broward Zip Code: 33316	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: Kevin Washington – Senior Environmental Specialist
2. Application Contact Mailing Address: Organization/Firm: Florida Power & Light - Environmental Services Street Address: 700 Universe Blvd. City: Juno Beach State: Florida Zip Code: 33408
3. Application Contact Telephone Numbers: 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

This 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:_____

[ ]Title V air operation permit revision for reasons other than construction or modification of an 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.

Operation permit number to be revised:_
Reason for revision:_ _____

Air Construction Permit Application

This 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

1. Name and Title of Owner/Authorized Representative or Responsible Official:
Rudy Sanchez

2. Owner/Authorized Representative or Responsible Official Mailing Address:
Organization/Firm: Port Everglades Plant
Street Address: 8100 Eisenhower Blvd.
City: Fort Lauderdale State: Florida Zip Code: 33316

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:
Telephone: (954) 527-3601 Fax: (954) 527-3636

4. Owner/Authorized Representative or Responsible Official Statement:

I, the undersigned, am the owner or authorized representative(check here [ ], if so) or the responsible official (check here [X], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

Signature 4/18/03 Date

* Attach letter of authorization if not currently on file.

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

* 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

4/23/03
Date

(seal) FS

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
01	Fossil Steam Boiler Unit 1	AC1B	N/A
02	Fossil Steam Boiler Unit 2	AC1B	N/A
03	Fossil Steam Boiler Unit 3	AC1B	N/A
04	Fossil Steam Boiler Unit 4	AC1B	N/A

Application Processing Fee

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

Construction/Modification Information

1. 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.

SUBPART Da 62.42a

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.

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: 17 East (km): 587383 North (km): 2885250			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 26-4-8 Longitude (DD/MM/SS): 80-7-31			
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4911
7. Facility Comment (limit to 500 characters): This facility contains four fossil steam boiler generating units units, and one bank of 12 gas turbines.			

Facility Contact

1. Name and Title of Facility Contact: Kathryn Pascale
2. Facility Contact Mailing Address: Organization/Firm: FPL Port Everglades Plant Street Address: P.O. Box 13118 City: Ft. Lauderdale State: Florida Zip Code: 33316
3. Facility Contact Telephone Numbers: Telephone: (954) 797-1338 Fax: (954) 797- 1579

Facility Regulatory Classifications

Check all that apply:

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

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.

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.
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

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

B. FACILITY POLLUTANTS

List of Pollutants Emitted

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

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 Unconfined 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 Construction Permit Application: [X] Attached, Document ID: Part II [ ] Not Applicable
7. Supplemental Requirements Comment:

Additional Supplemental Requirements for Title V Air Operation Permit Applications

8. List of Proposed Insignificant Activities:
   [ ] Attached, Document ID: _____ [X] 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

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Port Everglades Boiler Unit 1

4. Emissions Unit Identification Number: 001 [ ] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: A	6. Initial Startup Date: 05/01/60	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? [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 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: Combustion Engineering / Westinghouse
   Model Number:

2. Generator Nameplate Rating: 225 MW

3. Incinerator Information:
   Dwell Temperature: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

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 Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	8760 hours/year

1. Operating Capacity/Schedule Comment (limit to 200 characters):

The maximum heat input given above reflects natural gas firing. Maximum heat input while firing residual oil is 2300 mmbtu/hr. Compliance method for heat input is fuel sampling and analysis.

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

1. Identification of Point on Plot Plan or Flow Diagram? Unit 1 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 1, Port Everglades Unit 1 boiler		
5. Discharge Type Code: V	6. Stack Height: 343 feet	7. Exit Diameter: 14 feet
8. Exit Temperature: 289 °F	9. Actual Volumetric Flow Rate: 813928.9 acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: 17 East (km): 587.4 North (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.		

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

Segment Description and Rate: Segment ___1__ of __7___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Natural gas burned in Unit 1 boiler		
2. Source Classification Code (SCC): 1-01-006-01	3. SCC Units: Millions of cubic feet	
4. Maximum Hourly Rate: 2.29	5. Maximum Annual Rate: 20022.86	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 on-specification used oil from FPL operations.		

Segment Description and Rate: Segment ___2__ of __7___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): No. 6 oil burned in Unit 1 boiler		
2. Source Classification Code (SCC): 1-01-004-01	3. SCC Units: Thousand gallons burned	
4. Maximum Hourly Rate: 15.24	5. Maximum Annual Rate: 133472.56	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 on-specification used oil from FPL operations.		

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

Segment Description and Rate: Segment ___3__ of __7___

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

Segment Description and Rate: Segment ___4__ of __7___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Propane burned in Unit 1 boiler		
2. Source Classification Code (SCC): 1-01-006-01	3. SCC Units: Millions of cubic feet	
4. Maximum Hourly Rate: 2.4	5. Maximum Annual Rate: 21024	6. Estimated Annual Activity 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 on-specification used oil from FPL operations.		

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

Segment Description and Rate: Segment ___5__ of __7___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): On-specification used oil burned in Unit 1 boiler		
2. Source Classification Code (SCC): 1-01-013-02	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 on-specification used oil from FPL operations. Maximum Annual Rate is for Emission Units 001 through 004		

Segment Description and Rate: Segment ___6__ of __7___

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 (SCC): 1-01	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.		

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

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 1 boiler. This process may be undertaken while firing natural gas or residual oil.		
2. Source Classification Code (SCC): 1-01-013-01	3. SCC Units: Thousand gallons	
4. Maximum Hourly Rate: 3	5. Maximum Annual Rate: 500	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 _____

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):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

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

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

Pollutant Detail Information

1. Pollutant Emitted: Particulate Matter - Total	2. Total Percent Efficiency of Control:
3. Potential Emissions: 230 lb/hour 390.4 tons/year	4. Synthetically Limited? [N]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/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 Allowable Emissions ___1___ of ___2___

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: May 31, 2006
3. 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.	

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? [N]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___2___ of ___2___

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: May 31, 2006
3. Requested Allowable Emissions and Units: 0.1 lb/mmbtu	4. Equivalent Allowable Emissions: 230 lb/hour 125.9 tons/year
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce PM emissions of its fossil fueled steam boilers in Broward County. Equivalent allowable emissions are given for liquid fuel firing and sootblowing.	

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 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce the 6-minute average visible emissions of its fossil fueled steam boilers in Broward County to 20%. This limit becomes effective May 31, 2006. Compliance testing is performed annually using EPA Method 9.	

Visible Emissions Limitation: Visible Emissions Limitation ___2___ of ___3___

1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity: [ ] Rule [X] Other
3. Requested Allowable Opacity: Normal Conditions: 40 % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 24 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce visible emissions of its fossil fueled steam boilers in Broward County, and limits sootblowing & load changing to 40% opacity for up to 3hrs/24 hrs, with 4, six-minute periods of up to 100% opacity if unit has an operational COM. This limit becomes effective May 31, 2006	

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

Visible Emissions Limitation: Visible Emissions Limitation ___3___ of ___3___

1. Visible Emissions Subtype: VE100	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): DEP Rule 62-210.700(1) and (2), F.A.C. allow up to 100% opacity, for an unlimited time during start-up, shutdown, and up to 2hrs/24hrs for malfunctions.	

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

Continuous Monitoring System: Continuous Monitor __1___ of ___1__

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

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:_____ [ ] 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

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

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Port Everglades Boiler Unit 2

4. Emissions Unit Identification Number: 002 [ ] No ID
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]

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 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:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

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

NG

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 Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	8760 hours/year

2. Operating Capacity/Schedule Comment (limit to 200 characters):

The maximum heat input given above reflects natural gas firing. Maximum heat input while firing residual oil is 2300 mmbtu/hr. Compliance method for heat input is fuel sampling and analysis.

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	7. Exit Diameter: 14 feet
8. Exit Temperature: 289 °F	9. Actual Volumetric Flow Rate: 813928.9 acfm	10. Water Vapor: %
11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: 17 East (km): 587.4 North (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.		

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

Segment Description and Rate: Segment ___1__ of __7___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Natural gas burned in Unit 2 boiler		
2. Source Classification Code (SCC): 1-01-006-01	3. SCC Units: Millions of cubic feet	
4. Maximum Hourly Rate: 2.29	5. Maximum Annual Rate: 20022.86	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 on-specification used oil from FPL operations.		

Segment Description and Rate: Segment ___2__ of __7___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): No. 6 oil burned in Unit 2 boiler		
2. Source Classification Code (SCC): 1-01-004-01	3. SCC Units: Thousand gallons burned	
4. Maximum Hourly Rate: 15.24	5. Maximum Annual Rate: 133472.56	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 on-specification used oil from FPL operations.		

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

Segment Description and Rate: Segment ___3__ of __7___

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

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): 1-01-006-01	3. SCC Units: Millions of cubic feet	
4. Maximum Hourly Rate: 2.4	5. Maximum Annual Rate: 21024	6. Estimated Annual Activity 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 on-specification used oil from FPL operations.		

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

Segment Description and Rate: Segment ___5__ of __7___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): On-specification used oil burned in Unit 2 boiler		
2. Source Classification Code (SCC): 1-01-013-02	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 on-specification used oil from FPL operations. Maximum Annual Rate is for Emission Units 001 through 004		

Segment Description and Rate: Segment ___6__ of __7___

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 (SCC): 1-01	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.		

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

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 2 boiler. This process may be undertaken while firing natural gas or residual oil.		
2. Source Classification Code (SCC): 1-01-013-01	3. SCC Units: Thousand gallons	
4. Maximum Hourly Rate: 3	5. Maximum Annual Rate: 500	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 _____

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):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

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

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

Pollutant Detail Information

1. Pollutant Emitted: Particulate Matter - Total	2. Total Percent Efficiency of Control:
3. Potential Emissions: 230 lb/hour 390.4 tons/year	4. Synthetically Limited? [N]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/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 Allowable Emissions ___1___ of ___2___

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: Oct. 31, 2005
3. 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.	

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 _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___2___ of ___2___

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: Oct. 31, 2005
3. Requested Allowable Emissions and Units: 0.1 lb/mmbtu	4. Equivalent Allowable Emissions: 230 lb/hour 125.9 tons/year
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce PM emissions of its fossil fueled steam boilers in Broward County. Equivalent allowable emissions are given for liquid fuel firing and sootblowing.	

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 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce the 6-minute average visible emissions of its fossil fueled steam boilers in Broward County to 20%. This limit becomes effective Oct. 31, 2005. Compliance testing is performed annually using EPA Method 9.	

Visible Emissions Limitation: Visible Emissions Limitation ___2___ of ___3___

1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity: [ ] Rule [X] Other
3. Requested Allowable Opacity: Normal Conditions: 40 % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 24 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce visible emissions of its fossil fueled steam boilers in Broward County, and limits sootblowing & load changing to 40% opacity for up to 3hrs/24 hrs, with 4, six-minute periods of up to 100% opacity if unit has an operational COM. This limit becomes effective Oct. 31, 2005	

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

Visible Emissions Limitation: Visible Emissions Limitation ___3___ of ___3___

1. Visible Emissions Subtype: VE100	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): DEP Rule 62-210.700(1) and (2), F.A.C. allow up to 100% opacity, for an unlimited time during start-up, shutdown, and up to 2hrs/24hrs for malfunctions.	

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

Continuous Monitoring System: Continuous Monitor __1___ of ___1__

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

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 Equipment [ ] 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 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

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

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Port Everglades Boiler Unit 3

4. Emissions Unit Identification Number: 003 [ ] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: A	6. Initial Startup Date: 06/01/64	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? [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 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: °F
   Dwell Time: seconds
   Incinerator Afterburner Temperature: °F

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 Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	hours/day	days/week
	weeks/year	8760 hours/year

2. Operating Capacity/Schedule Comment (limit to 200 characters):

The maximum heat input given above reflects natural gas firing. Maximum heat input for residual oil 4000 mmbtu/hr.

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

1. Identification of Point on Plot Plan or Flow Diagram? EU 3	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Emission Unit 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 Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: 17 East (km): 587.4 North (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.		

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

Segment Description and Rate: Segment ___1__ of __7___

2. Segment Description (Process/Fuel Type) (limit to 500 characters): Natural gas burned in Unit 3 Boiler		
2. Source Classification Code (SCC): 1-01-006-01	3. SCC Units: Million cubic feet burned	
4. Maximum Hourly Rate: 3.98	5. Maximum Annual Rate: 34,873	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): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-specification used oil from FPL operations		

Segment Description and Rate: Segment ___2__ of ___7__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Number 6 fuel oil burned in Unit 3 Boiler		
2. Source Classification Code (SCC): 1-01-004-01	3. 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 % Ash:	9. Million Btu per SCC Unit: 152
10. Segment Comment (limit to 200 characters): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-specification used oil from FPL operations		

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

Segment Description and Rate: Segment ___3__ of ___7__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 3 boiler burning No. 2 fuel oil		
2. Source Classification Code (SCC): 1-01-005-01	3. SCC Units: Thousand gallons burned	
4. Maximum Hourly Rate: 29.41	5. Maximum Annual Rate: 257,647	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.5	8. Maximum % Ash:	9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-specification 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 3		
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: 36,617	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 1	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1000
10. Segment Comment (limit to 200 characters): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-specification used oil from FPL operations		

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

Segment Description and Rate: Segment ___5__ of __7___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): On-Specification used oil burned in Unit 3 boiler		
2. Source Classification Code (SCC): 1-01-013-02	3. SCC Units: Thousand gallons burned	
4. Maximum Hourly Rate: 29.41	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): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-specification used oil from FPL operations. Maximum Annual Rate is for Emission Units 001 through 004.		

Segment Description and Rate: Segment ___6__ of ___7__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 3 boiler firing all possible combinations of natural gas, residual oil, on-specification used oil, #2 fuel oil, and propane		
2. Source Classification Code (SCC): 1-01	3. SCC Units: Million cubic feet and thousand gallons	
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 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.		

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

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 3. This process may be undertaken while firing natural gas or residual fuel oil.		
2. Source Classification Code (SCC): 1-01-013-01	3. SCC Units: Thousand gallons burned	
4. Maximum Hourly Rate: 3	5. Maximum Annual Rate: 500	6. Estimated Annual Activity 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):		
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):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

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

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

Potential/Fugitive Emissions

1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:
3. Potential Emissions: 400 lb/hour 679.8 tons/year	4. Synthetically Limited? [N]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 0.1 lb/mmbtu Reference: FPL, 2003	7. Emissions 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 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 Allowable Emissions ___1___ of ___2___

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: Oct. 31, 2007
3. Requested Allowable Emissions and Units: 0.03 lb/mmbtu	4. Equivalent Allowable Emissions: 120 lb/hour 525.6 tons/year
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce steady-state PM emissions of its fossil fueled steam boilers in Broward County to 0.03 lb/mmbtu. Equivalent allowable emissions are given for liquid fuel firing.	

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 _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___2___ of ___2___

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: Oct. 31, 2007
3. Requested Allowable Emissions and Units: 0.1 lb/mmbtu	4. Equivalent Allowable Emissions: 400 lb/hour 219 tons/year
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce PM emissions of its fossil fueled steam boilers in Broward County. Equivalent allowable emissions are given for liquid fuel firing and sootblowing.	

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 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce the 6-minute average visible emissions of its fossil fueled steam boilers in Broward County to 20%. This limit becomes effective Oct. 31, 2007. Compliance testing is performed annually using EPA Method 9.	

Visible Emissions Limitation: Visible Emissions Limitation ___2___ of ___3___

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

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

Visible Emissions Limitation: Visible Emissions Limitation ___3___ of ___3___

1. Visible Emissions Subtype: VE100	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): DEP Rule 62-210.700(1) and (2), F.A.C. allow up to 100% opacity, for an unlimited time during start-up, shutdown, and up to 2hrs/24hrs for malfunctions.	

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

Continuous Monitoring System: Continuous Monitor __1___ of ___1__

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

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 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:_____ [ ] 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: 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

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

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Regulated or Unregulated Emissions Unit? (Check one)

[X] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): Port Everglades Boiler Unit 4

4. Emissions Unit Identification Number: 004 [ ] No ID
ID: [ ] ID Unknown

5. Emissions Unit Status Code: A	6. Initial Startup Date: 04/01/65	7. Emissions Unit Major Group SIC Code: 49	8. Acid Rain Unit? [Y]

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 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: °F
Dwell Time: seconds
Incinerator Afterburner Temperature: °F

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 Throughput Rate:			
4. Maximum Production Rate:			
5. Requested Maximum Operating Schedule:			
	hours/day		days/week
	weeks/year		8760 hours/year

3. Operating Capacity/Schedule Comment (limit to 200 characters):

The maximum heat input given above reflects natural gas firing. Maximum heat input for residual oil 4000 mmbtu/hr.

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

1. Identification of Point on Plot Plan or Flow Diagram? EU 4	2. Emission Point Type Code: 1	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Emission Unit 4 – Port Everglades Unit 4 Boiler		
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:		
5. Discharge Type Code: V	6. Stack 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 Flow Rate: dscfm	12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone: 17 East (km): 587.4 North (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.		

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

Segment Description and Rate: Segment ___1__ of __7___

3. Segment Description (Process/Fuel Type) (limit to 500 characters): Natural gas burned in Unit 4 Boiler		
2. Source Classification Code (SCC): 1-01-006-01	3. SCC Units: Million cubic feet burned	
4. Maximum Hourly Rate: 3.98	5. Maximum Annual Rate: 34,873	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): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-specification used oil from FPL operations		

Segment Description and Rate: Segment ___2__ of ___7__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Number 6 fuel oil burned in Unit 4 Boiler		
2. Source Classification Code (SCC): 1-01-004-01	3. 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 % Ash:	9. Million Btu per SCC Unit: 152
10. Segment Comment (limit to 200 characters): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-specification used oil from FPL operations		

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

Segment Description and Rate: Segment ___3__ of ___7__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Unit 4 boiler burning No. 2 fuel oil		
2. Source Classification Code (SCC): 1-01-005-01	3. SCC Units: Thousand gallons burned	
4. Maximum Hourly Rate: 29.41	5. Maximum Annual Rate: 257,647	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 0.5	8. Maximum % Ash:	9. Million Btu per SCC Unit: 136
10. Segment Comment (limit to 200 characters): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-specification 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 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: 36,617	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: 1	8. Maximum % Ash:	9. Million Btu per SCC Unit: 1000
10. Segment Comment (limit to 200 characters): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-specification used oil from FPL operations.		

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

Segment Description and Rate: Segment ___5__ of __7___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): On-Specification used oil burned in Unit 4 boiler		
2. Source Classification Code (SCC): 1-01-013-02	3. SCC Units: Thousand gallons burned	
4. Maximum Hourly Rate: 29.41	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): This unit is currently permitted to burn a variable combination of No. 6 residual oil, natural gas, No. 2 fuel oil, propane, or on-specification used oil from FPL operations. Maximum Annual Rate is for Emission Units 001 through 004.		

Segment Description and Rate: Segment ___6__ of ___7__

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 (SCC): 1-01	3. SCC Units: Million cubic feet and thousand gallons	
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 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.		

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

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.		
2. Source Classification Code (SCC): 1-01-013-01	3. SCC Units: Thousand gallons burned	
4. Maximum Hourly Rate: 3	5. Maximum Annual Rate: 500	6. Estimated Annual Activity 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):		
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):		

F. EMISSIONS UNIT POLLUTANTS
(All Emissions Units)

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

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

Potential/Fugitive Emissions

1. Pollutant Emitted: PM - Total	2. Total Percent Efficiency of Control:
3. Potential Emissions: 400 lb/hour 679.8 tons/year	4. Synthetically Limited? [N]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: 0.1 lb/mmbtu Reference: FPL, 2003	7. Emissions Method Code: 0
8. Calculation of Emissions (limit to 600 characters): 0. 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 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 Allowable Emissions ___1___ of ___2___

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: May 31, 2007
3. Requested Allowable Emissions and Units: 0.03 lb/mmbtu	4. Equivalent Allowable Emissions: 120 lb/hour 525.6 tons/year
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce steady-state PM emissions of its fossil fueled steam boilers in Broward County to 0.03 lb/mmbtu. Equivalent allowable emissions are given for liquid fuel firing.	

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 _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions ___2___ of ___2___

1. Basis for Allowable Emissions Code: OTHER	2. Future Effective Date of Allowable Emissions: May 31, 2007
3. Requested Allowable Emissions and Units: 0.1 lb/mmbtu	4. Equivalent Allowable Emissions: 400 lb/hour 219 tons/year
5. Method of Compliance (limit to 60 characters): DEP Rule 62-296.405(1)(e)2.	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce PM emissions of its fossil fueled steam boilers in Broward County. . Equivalent allowable emissions are given for liquid fuel firing and sootblowing.	

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 % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce the 6-minute average visible emissions of its fossil fueled steam boilers in Broward County to 20%. This limit becomes effective May 31, 2007. Compliance testing is performed annually using EPA Method 9.	

Visible Emissions Limitation: Visible Emissions Limitation ___2___ of ___3___

1. Visible Emissions Subtype: VE40	2. Basis for Allowable Opacity: [ ] Rule [X] Other
3. Requested Allowable Opacity: Normal Conditions: 40 % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 24 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): Based on its negotiations with the Department, applicant agrees to reduce visible emissions of its fossil fueled steam boilers in Broward County, and limits sootblowing & load changing to 40% opacity for up to 3hrs/24 hrs, with 4, six-minute periods of up to 100% opacity if unit has an operational COM. This limit becomes effective May 31, 2007.	

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

Visible Emissions Limitation: Visible Emissions Limitation ___3___ of ___3___

1. Visible Emissions Subtype: VE100	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: 100 % Maximum Period of Excess Opacity Allowed: 60 min/hour	
4. Method of Compliance: EPA Method 9	
5. Visible Emissions Comment (limit to 200 characters): DEP Rule 62-210.700(1) and (2), F.A.C. allow up to 100% opacity, for an unlimited time during start-up, shutdown, and up to 2hrs/24hrs for malfunctions.	

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

Continuous Monitoring System: Continuous Monitor __1___ of ___1__

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

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 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:_____ [ ] 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: Part II__ [X] 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

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

PART II

PART II

PPEFSESP_.doc

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.

ok ok

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).

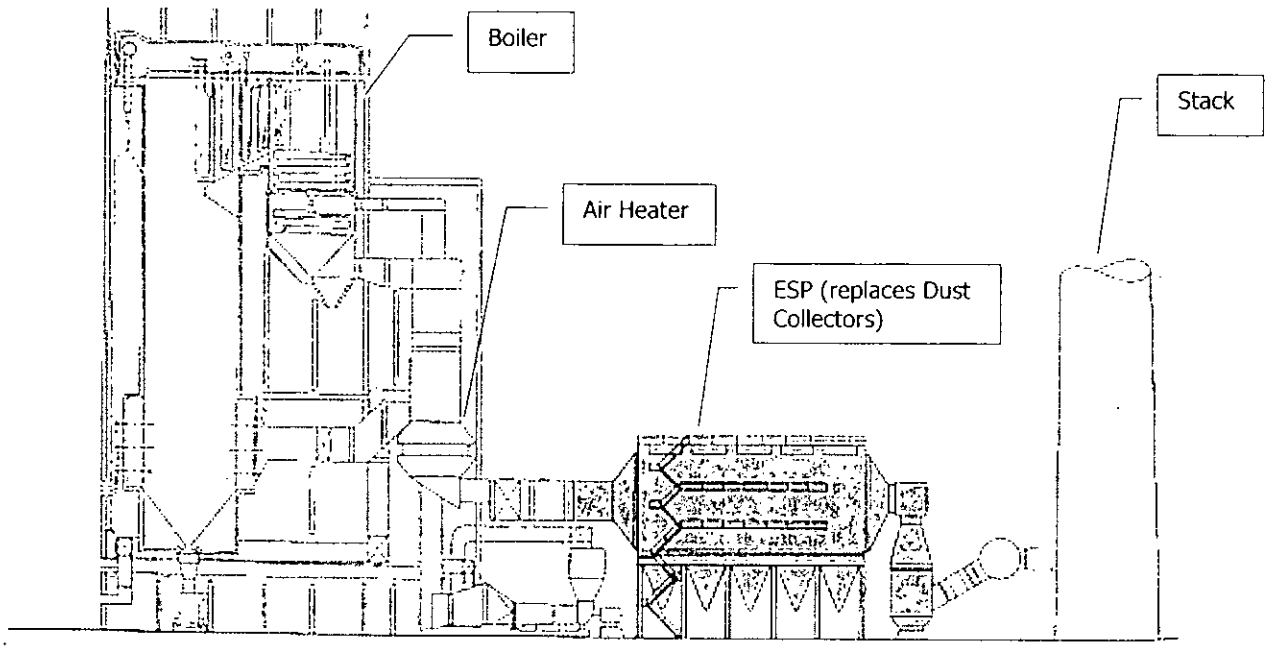

FIGURE 1 – TYPICAL ESP CONFIGURATION

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.

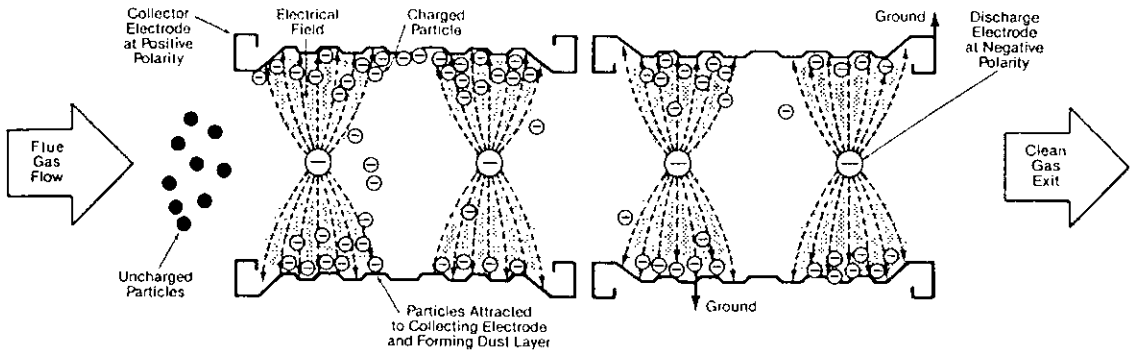

FIGURE 2 – CHARGING & COLLECTION OF PARTICLES WITHIN AN ESP

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.

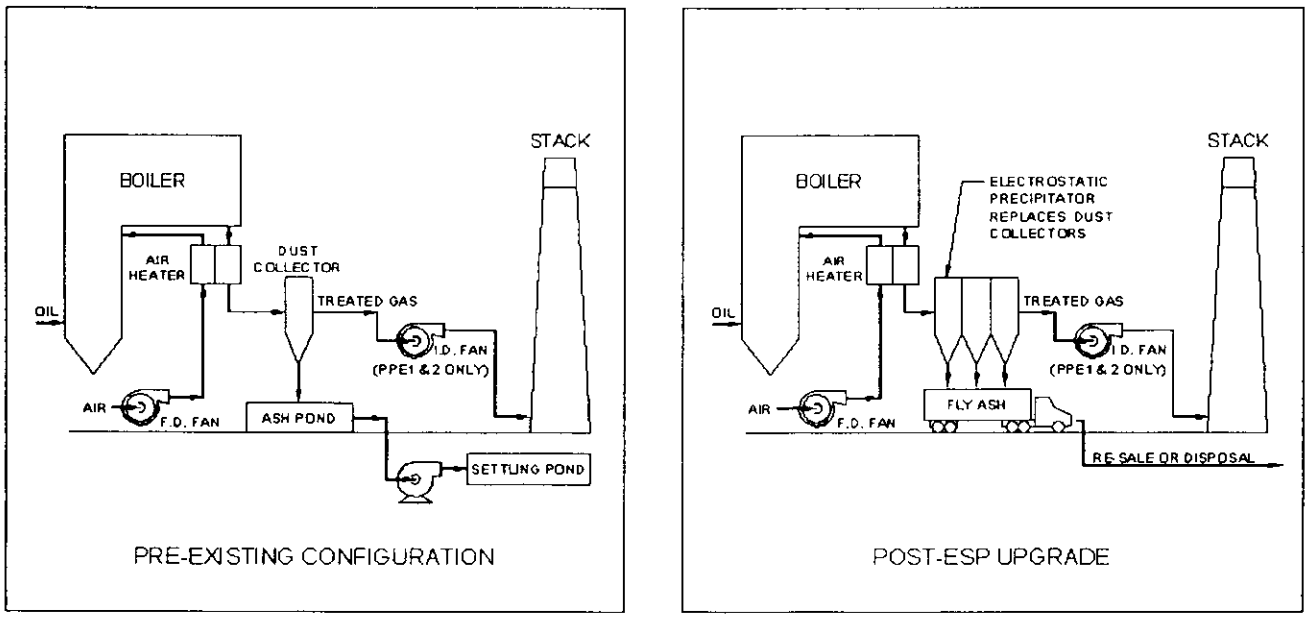

FIGURE 3 – PRE & POST ESP UPGRADE AT PPE

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).

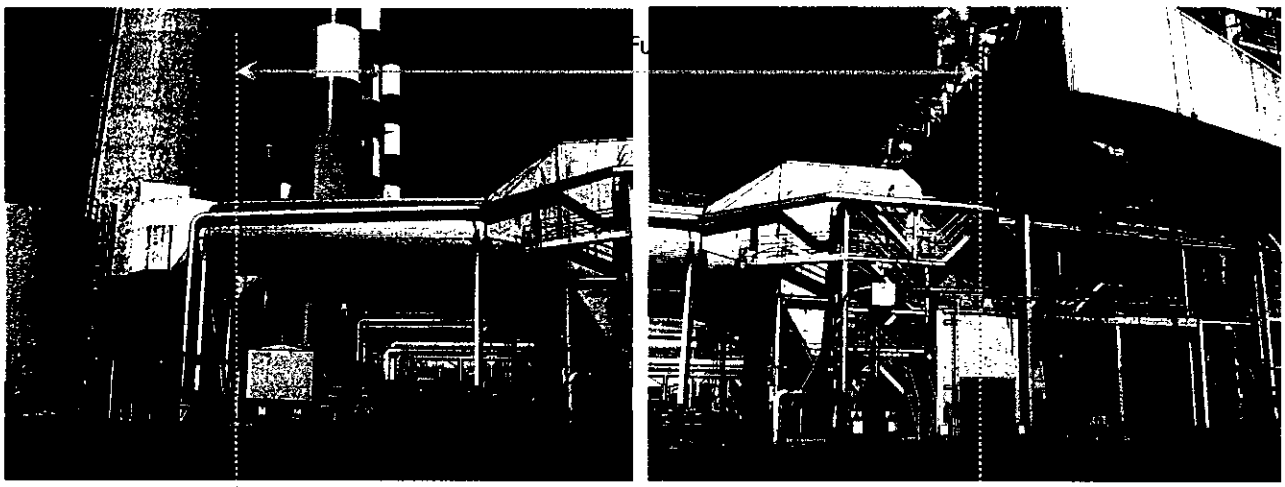

FIGURE 4 – UNIT 3&4 EXISTING BACKEND ARRANGEMENT

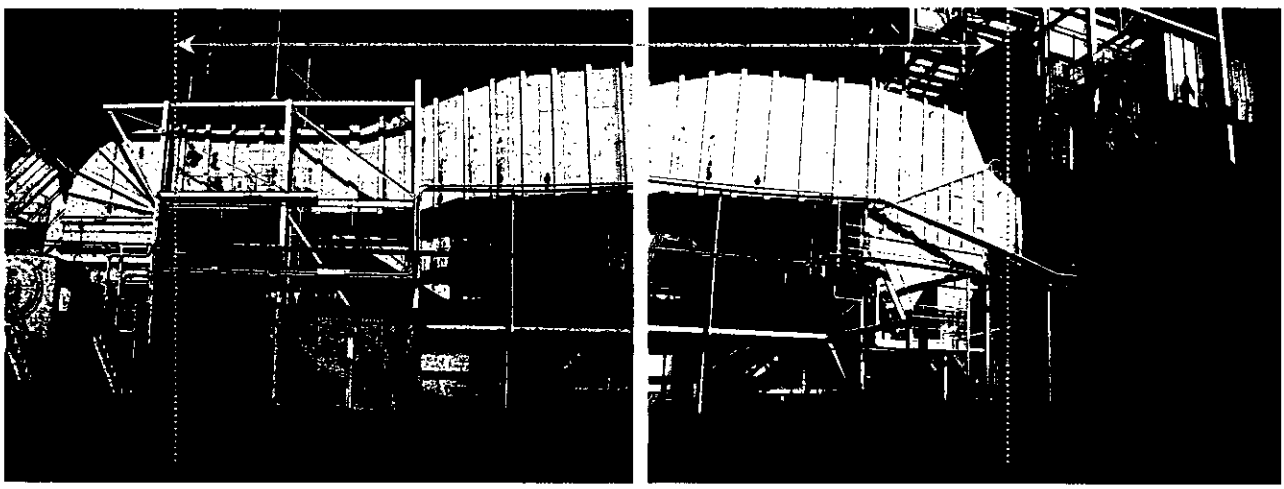

FIGURE 5 – UNIT 1&2 EXISTING BACKEND ARRANGEMENT

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 following preliminary schedule:

a. Proposal Evaluation Completion – 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.

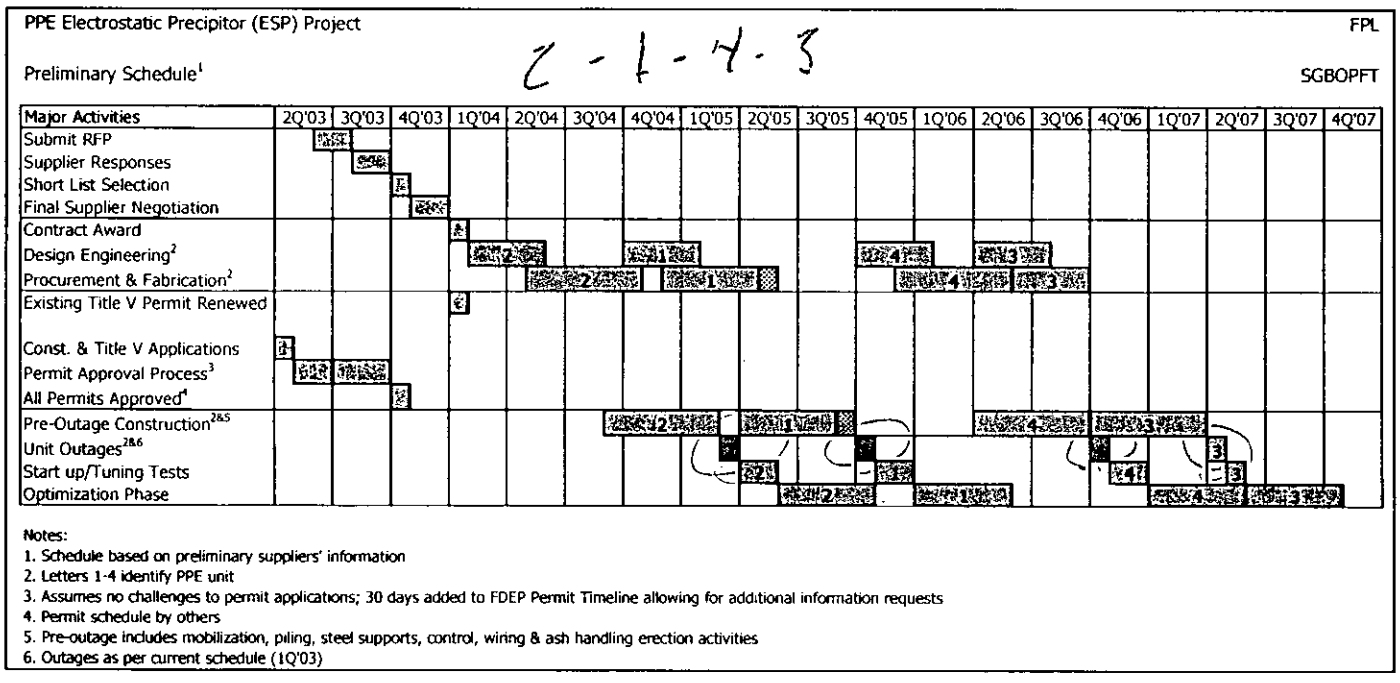

FIGURE 6 – ESP UPGRADE SCHEDULE FOR PPE STATION

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