



June 23, 2000

Mr. Jonathan Holtom, P.E.
Bureau of Air Regulation
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Dear Mr. Holtom:

Re: Package Boiler Permit Application - FPC Tiger Bay Facility

As we discussed, enclosed are four originals of the appropriate pages of a modified construction permit application for the installation of a small, natural gas-fired package steam boiler at Florida Power Corporation's (FPC) Tiger Bay facility. The modification is a reduction in the proposed maximum annual hours of operation from 7,980 to 6,000. The pages affected by this change have been updated accordingly, including the potential annual pollutant emissions.

Please contact me at (727) 826-4334 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Michael Kennedy", written in a cursive style.

J. Michael Kennedy, Q.E.P.
Manager, Air Programs

**Department of
Environmental Protection**

**DIVISION OF AIR RESOURCES MANAGEMENT
APPLICATION FOR AIR PERMIT - LONG FORM**

I. APPLICATION INFORMATION

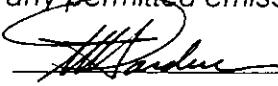
Identification of Facility Addressed in This Application

1. Facility Owner/Company Name : Florida Power Corporation	
2. Site Name : Tiger Bay Facility	
3. Facility Identification Number : 1050223	<input type="checkbox"/> Unknown
4. Facility Location : Ft. Meade Street Address or Other Locator : 3219 State Road 630 East City : Ft. Meade County : Polk Zip Code : 33841	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

I. Part 1 - 1

DEP Form No. 62-210.900(1) - Form
Effective : 3-21-96

Owner/Authorized Representative or Responsible Official

1. Name and Title of Owner/Authorized Representative or Responsible Official :	
Name :	W. Jeffrey Pardue, C.E.P.
Title :	Director, Environmental Services
2. Owner or Authorized Representative or Responsible Official Mailing Address :	
Organization/Firm :	Florida Power Corporation
Street Address :	P.O. Box 14042, MAC BB1A
City :	St. Petersburg
State :	FL
Zip Code :	33733
3. Owner/Authorized Representative or Responsible Official Telephone Numbers :	
Telephone :	(727)826-4301
Fax :	(727)826-4216
4. Owner/Authorized Representative or Responsible Official Statement :	
<p><i>I, the undersigned, am the owner or authorized representative* of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., 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 units.</i></p>	
 Signature	<u>6/23/00</u> Date

* Attach letter of authorization if not currently on file.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type
004	Natural gas-fired package steam boiler	

**C. EMISSIONS UNIT DETAIL INFORMATION
(Regulated Emissions Units Only)**

Emissions Unit Information Section 1
Natural gas-fired package steam boiler

Emissions Unit Details

1. Initial Startup Date :		
2. Long-term Reserve Shutdown Date :		
3. Package Unit :		
Manufacturer :	Cleaver-Brooks	Model Number : DL-94
4. Generator Nameplate Rating :		
	MW	
5. Incinerator Information :		
Dwell Temperature :		Degrees Fahrenheit
Dwell Time :		Seconds
Incinerator Afterburner Temperature :		Degrees Fahrenheit

Emissions Unit Operating Capacity

1. Maximum Heat Input Rate :		
	100	mmBtu/hr
2. Maximum Incinerator Rate :		
	lb/hr	tons/day
3. Maximum Process or Throughput Rate :		
4. Maximum Production Rate :		
	85000	lbs steam/hr
5. Operating Capacity Comment :		
Heat input capacity is 100 mmBtu/hr. Steam generating capacity is 85,000 lb/hr.		

Emissions Unit Operating Schedule

Requested Maximum Operating Schedule :		
	24 hours/day	7 days/week
	52 weeks/year	6,000 hours/year

Application Processing Fee

Check one :

[] Attached - Amount : \$0.00

[X] Not Applicable.

Construction/Modification Information

1. Description of Proposed Project or Alterations :	
Addition of natural gas-fired package steam boiler for providing supplemental steam.	
2. Projected or Actual Date of Commencement of Construction :	01-Jul-2000
3. Projected Date of Completion of Construction :	30-Aug-2000

Professional Engineer Certification

1. Professional Engineer Name : Jennifer A. Stenger Registration Number : 0052125	
2. Professional Engineer Mailing Address :	
Organization/Firm : Florida Power Corporation	
Street Address : P.O. Box 14042, MAC BB1A	
City : St. Petersburg	State : FL Zip Code : 33733
3. Professional Engineer Telephone Numbers :	
Telephone : (727)826-4132	Fax : (727)826-4216

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 pollutant 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 [] 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 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.

Jennifer A. Stenger

Signature

(seal)

6/23/00

Date

I. Part 6 - 1

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Application Contact

1. Name and Title of Application Contact :
Name : J. Michael Kennedy, Q.E.P. Title : Manager, Air Programs
2. Application Contact Mailing Address :
Organization/Firm : Florida Power Corporation Street Address : P.O. Box 14042, MAC BBIA City : St. Petersburg State : FL Zip Code : 33733
3. Application Contact Telephone Numbers :
Telephone : (727)826-4334 Fax : (727)826-4216

Application Comment

This application is for the proposed addition of a natural gas-fired package steam boiler in order to provide a backup steam supply. The heat input capacity of the boiler is 100 mmBtu/hr, which subjects it to 40 CFR Part 60, Subpart Dc.

F. SEGMENT (PROCESS/FUEL) INFORMATION

Emissions Unit Information Section 1

Natural gas-fired package steam boiler

Segment Description and Rate : Segment 1

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) : Natural gas	
2. Source Classification Code (SCC) : 20100201 102 006 02	
3. SCC Units : Million Cubic Feet Burned (all gaseous fuels)	
4. Maximum Hourly Rate : 0.10 96	5. Maximum Annual Rate : 600.00
6. Estimated Annual Activity Factor :	
7. Maximum Percent Sulfur : 0.00	8. Maximum Percent Ash : 0.00
9. Million Btu per SCC Unit : 1,040	
10. Segment Comment :	

2 10.300 (3/a) 2. < 150 mm cuft. to be exempt.

$0.1 \text{ MM CUFT} \times \frac{1040 \text{ MM BTU}}{\text{cuft}} = 104 \frac{\text{MM BTU}}{\text{m}} \times 0.1 \frac{\text{lb}}{\text{MM BTU}} = 10.4 \frac{\text{lb}}{\text{m}}$

III. Part 8 - 1

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$10.4 \frac{\text{lb}}{\text{m}} \times 6000 \frac{\text{hrs}}{\text{yr}} = 2000 \frac{\text{lb}}{\text{ton}} = 31.2 \text{ TPY}$

G. EMISSIONS UNIT POLLUTANTS
(Regulated and Unregulated Emissions Units)

Emissions Unit Information Section 1

Natural gas-fired package steam boiler

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
1 - SO ₂			EL
2 - NO _X			EL
3 - PM			EL
4 - PM ₁₀			EL
5 - CO			EL
6 - VOC			EL
7 - SAM			EL

III. Part 9a - 1

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H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1

Natural gas-fired package steam boiler

Pollutant Potential/Estimated Emissions : Pollutant 1

1. Pollutant Emitted : SO2		
2. Total Percent Efficiency of Control :		%
3. Potential Emissions :		
0.1400000 lb/hour		0.4200000 tons/year
4. Synthetically Limited?		
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
5. Range of Estimated Fugitive/Other Emissions:		
		to tons/year
6. Emissions Factor 1		Units : gr/100 CF
Reference : Fuel analysis		
7. Emissions Method Code : 2		
8. Calculations of Emissions :		
Assumed max. S content of 1 gr/100 CF and 6000 hours of operation/year.		
9. Pollutant Potential/Estimated Emissions Comment :		

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1

Natural gas-fired package steam boiler

Pollutant Potential/Estimated Emissions : Pollutant 2

1. Pollutant Emitted : NOX
2. Total Percent Efficiency of Control : 0.00 %
3. Potential Emissions : <div style="text-align: right; margin-right: 100px;">10.0000000 lb/hour</div> <div style="text-align: right;">30.0000000 tons/year</div>
4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
5. Range of Estimated Fugitive/Other Emissions: <div style="text-align: right; margin-right: 100px;">to</div> <div style="text-align: right;">tons/year</div>
6. Emissions Factor 0 Units : lb/mmBtu Reference : Manufacturer data
7. Emissions Method Code : 0
8. Calculations of Emissions : NOx emissions of 0.10 lb/mmBtu from manufacturer data. Annual max. tons of NOx from max. heat input of 100 mmBtu/hr and 6000 hours/year operation.
9. Pollutant Potential/Estimated Emissions Comment :

III. Part 9b - 2

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H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1

Natural gas-fired package steam boiler

Pollutant Potential/Estimated Emissions : Pollutant 4

1. Pollutant Emitted : PM10	
2. Total Percent Efficiency of Control :	%
3. Potential Emissions :	<div style="display: flex; justify-content: space-between;"> 0.8000000 lb/hour 2.4000000 tons/year </div>
4. Synthetically Limited?	
<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive/Other Emissions:	to tons/year
6. Emissions Factor 8	Units : lb/mmCF
Reference : AP-42, nat. gas fire	
7. Emissions Method Code :	3
8. Calculations of Emissions :	
<p>AP-42 factor for PM (assume all PM is PM10) of 8 lb/mmCF and boiler capacity of 0.10 mmCF/hour. Annual emissions based on hourly rate times 6,000 hours/year.</p>	
9. Pollutant Potential/Estimated Emissions Comment :	

H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
(Regulated Emissions Units Only - Emissions Limited Pollutants Only)

Emissions Unit Information Section 1

Natural gas-fired package steam boiler

Pollutant Potential/Estimated Emissions : Pollutant 5

1. Pollutant Emitted : CO		
2. Total Percent Efficiency of Control :		%
3. Potential Emissions :		
8.4000000 lb/hour		25.2000000 tons/year
4. Synthetically Limited?		
[] Yes [X] No		
5. Range of Estimated Fugitive/Other Emissions:		
		to tons/year
6. Emissions Factor 84 Units : lb/mmCF		
Reference : AP-42		
7. Emissions Method Code : 3		
8. Calculations of Emissions :		
AP-42 factor of 84 lb/mmCF and max. nat. gas firing capacity of 0.10 mmCF/hr. Annual emissions from hourly rate times 6,000 hours/year.		
9. Pollutant Potential/Estimated Emissions Comment :		

Emissions Unit Information Section 1
Natural gas-fired package steam boiler

SO₂

Pollutant Information Section 1

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	1.00	grain S/100 CF	
4. Equivalent Allowable Emissions :	0.14	lb/hour	0.42 tons/year
5. Method of Compliance :	Fuel analysis		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Allowable based on max. sulfur content of 1 gr/100 CF of natural gas.		

III. Part 9c - 1

Emissions Unit Information Section
 Natural gas-fired package steam boiler

1

NOx

Pollutant Information Section

2

Allowable Emissions

1

1. Basis for Allowable Emissions Code :	ESCPSD		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	0.10	lb/mmBtu	
4. Equivalent Allowable Emissions :	10.00	lb/hour	30.00 tons/year
5. Method of Compliance :	Stack test, EPA Method 20 <i>7E = Per Mike K. 7/15/00 Telecom.</i>		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	Based on emission rate of 0.10 lb/mmBtu and 6000 hours/year.		

$$30 \text{ tons} = 60,000 \text{ lb/yr} \div 6000 \text{ hrs} = 10 \frac{\text{lb}}{\text{hr}} \div 0.1 \frac{\text{lb}}{\text{mmBtu}} = 100 \frac{\text{mmBtu}}{\text{hr}}$$

$$100 \frac{\text{mmBtu}}{\text{hr}} \div 1040 \frac{\text{Btu}}{\text{cu ft}} = 96153.85 \frac{\text{cu ft}}{\text{hr}} \times 6000 \text{ hrs} = 576,923 \frac{\text{MM cu ft}}{\text{yr}}$$

Emissions Unit Information Section 1
Natural gas-fired package steam boiler

PM₁₀

Pollutant Information Section 4

Allowable Emissions 1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	0.80	lb/hr	
4. Equivalent Allowable Emissions :	0.80	lb/hour	2.40 tons/year
5. Method of Compliance :	VE, EPA Method 9		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :	If VE < 10%, stack test not required.		

III. Part 9c - 5

Emissions Unit Information Section
Natural gas-fired package steam boiler

1

CO

Pollutant Information Section

5

Allowable Emissions

1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	8.40	lb/hr	
4. Equivalent Allowable Emissions :	8.40	lb/hour	25.20 tons/year
5. Method of Compliance :	Good combustion practices		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :			

III. Part 9c - 6

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Emissions Unit Information Section
Natural gas-fired package steam boiler

1

VOC

Pollutant Information Section

6

Allowable Emissions

1

1. Basis for Allowable Emissions Code :	OTHER		
2. Future Effective Date of Allowable Emissions :			
3. Requested Allowable Emissions and Units :	0.60	lb/hr	
4. Equivalent Allowable Emissions :	0.60	lb/hour	1.80 tons/year
5. Method of Compliance :	Good combustion practices		
6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) :			

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

VE

Emissions Unit Information Section 1
Natural gas-fired package steam boiler

Visible Emissions Limitation : Visible Emissions Limitation 1

1. Visible Emissions Subtype :				10
2. Basis for Allowable Opacity :				OTHER
3. Requested Allowable Opacity :				
	Normal Conditions :	10	%	<i>Requested</i>
	Exceptional Conditions :	0	%	
	Maximum Period of Excess Opacity Allowed :		min/hour	
4. Method of Compliance :				
				Annual compliance test, EPA Method 9
5. Visible Emissions Comment :				
				VE limit under normal conditions at full load.

I. VISIBLE EMISSIONS INFORMATION
(Regulated Emissions Units Only)

Emissions Unit Information Section 1
 Natural gas-fired package steam boiler

Visible Emissions Limitation : Visible Emissions Limitation 2

1. Visible Emissions Subtype :										
2. Basis for Allowable Opacity :	RULE									
3. Requested Allowable Opacity :	<table style="width:100%; border: none;"> <tr> <td style="text-align: right;">Normal Conditions :</td> <td style="text-align: center;">100</td> <td style="text-align: center;">%</td> </tr> <tr> <td style="text-align: right;">Exceptional Conditions :</td> <td style="text-align: center;">60</td> <td style="text-align: center;">%</td> </tr> <tr> <td style="text-align: right;">Maximum Period of Excess Opacity Allowed :</td> <td style="text-align: center;">60</td> <td style="text-align: center;">min/hour</td> </tr> </table>	Normal Conditions :	100	%	Exceptional Conditions :	60	%	Maximum Period of Excess Opacity Allowed :	60	min/hour
Normal Conditions :	100	%								
Exceptional Conditions :	60	%								
Maximum Period of Excess Opacity Allowed :	60	min/hour								
4. Method of Compliance :	EPA Method 9									
5. Visible Emissions Comment :										
1. Rule 62-210.700. 2. Max. period of excess opacity allowed - 2 hours/24 hours.										

2
 27% for 16 mi
 Per Mike
 7/19/00
 Knowlby

210,700 (1) 2 hrs in 24