

Monday, December 11, 2006

Al Linero, Professional Engineer Administrator Bureau of Air Regulation Division of Air Resources Management Department of Environmental Protection 2600 Blair Stone Road, MS#5505 Tallahassee, FL 32399-2400 RECEIVED

DEC 12 2006

BUREAU OF AIR REGULATION

Dear Mr. Linero,

Florida Power & Light Company is requesting an administrative change to the Turkey Point Unit 5 Combined Cycle Air Construction Permit for consistancy with the Martin, Manatee, and West County Combined Cycle Air Construction Permits. The facility requires additional cold start hours of allowable excess emissions with a change from six hours to eight hours of allowable excess emissions. FPL affirms that these changes do not affect the require public review requirements and proposed that they be adopted prior to the issuance of the Title V Permit to allow operation within air construction permit requirements. FPL is also requesting the modification of the Distillate Oil Sotrage Tank Subpart Kb applicability to identify applicability of this standard only if storage of products with a vapor pressure greater than 3.5kPa occurs.

Attached you will find the application for the modification of the existing Air Construction Permit ; for Turkey Point . Should you have any questions, or need any additional information, please do not hesitate to contact me at either 561-691-2894 (office) or 561-676-1838 (mobile).

Sincerely.

John C. Hampp Principle Specialist

Florida Power & Light Company JES-JB 700 Universe Blvd.

Juno Beach, FL 33408

Email: john hampp@fpl.com

Attachments.



Department of Environmental Protection

Division of Air Resource Management APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for any air construction permit at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air permit. Also use this form to apply for an air construction permit:

- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- Where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- Where the applicant proposes to establish, revise, or renew a plantwide applicability limit (PAL).

Air Operation Permit – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial/revised/renewal Title V air operation permit.

Air Construction Permit & Title V Air Operation Permit (Concurrent Processing Option) - Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Ide	Identification of Facility					
1.	1. Facility Owner/Company Name: Florida Power	& Light Com	pany			
2.	2. Site Name: Turkey Point Power Plant					
3.	3. Facility Identification Number: 025003					
4.	4. Facility Location					
	Street Address or Other Locator: 9.5 miles east of	of Homestead	on SW 344th Street			
	City: Homestead County: Miam	i-Dade	Zip Code: 33035			
5.	5. Relocatable Facility? 6.	Existing Title	V Permitted Facility?			
	☐ Yes 🗶 No	X Yes	☐ No			
<u>Ar</u>	Application Contact					
1.	1. Application Contact Name: John C. Hampp					
2.	2. Application Contact Mailing Address					
	Organization/Firm: Florida Power & Light Co	Organization/Firm: Florida Power & Light Company, Environmental Services Dept.				
	Street Address: 700 Universe Blvd					
	City: Juno Beach State: I	FL	Zip Code: 33408			
3.	3. Application Contact Telephone Numbers					
	Telephone: (561) 691 - 2894 ext. F	fax: (561) 691	- 7049			
4.	4. Application Contact Email Address:					
Application Processing Information (DEP Use)						
	· · · · · · · · · · · · · · · · · · ·	PSD Number	(if applicable):			

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2. Project Number(s): 035 Mp 3 - 007 - AC

Effective: 2/2/06

4. Siting Number (if applicable):

Purpose of Application

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Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Proc. Fee
5A	GE Frame 7FA Combustion Turbine/HRSG	AC1A	
5B	GE Frame 7FA Combustion Turbine/HRSG	AC1A	
5C	GE Frame 7FA Combustion Turbine/HRSG	AC1A	
5D	GE Frame 7FA Combustion Turbine/HRSG	AC1A	
"			
W • •			
Application	Processing Fee	·	
Check one: [Attached - Amount: \$	Not Applicable	

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Owner/Authorized Representative Statement

Complete if applying for an air construction permit or an initial FESOP.

1. Owner/Authorized Representative Name:

H.O. Nunez - Plant General Manager

2. Owner/Authorized Representative Mailing Address...

Organization/Firm: Florida Power & Light, Turkey Point Fossil Plant

Street Address: 9700 SW 344th Street

City: Homestead

State: FL

Zip Code: 33035

3. Owner/Authorized Representative Telephone Numbers...

Telephone: (305) 242-3822

ext. Fax: (305) 242-3821

4. Owner/Authorized Representative Email Address: ed_nunez@fpl.com

5. Owner/Authorized Representative Statement:

I, the undersigned, am the owner or authorized representative of the facility addressed in this air permit application. 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 and all other requirements identified in this application to which the facility is subject. 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 the facility or any permitted emissions unit.

Signature

Date

12/1/06

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Application Responsible Official Certification

Complete if applying for an initial/revised/renewal Title V permit or concurrent processing of an air construction permit and a revised/renewal Title V permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1.	Application Responsible Official Name: H.O. Nunez
2.	Application Responsible Official Qualification (Check one or more of the following options, as applicable):
	For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C.
	For a partnership or sole proprietorship, a general partner or the proprietor, respectively.
	For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official.
	The designated representative at an Acid Rain source.
	Application Responsible Official Mailing Address
Or	ganization/Firm: Florida Power & Light, Turkey Point Fossil Plant
	Street Address: 9700 SW 344th Street
	City: Homestead State: FL Zip Code: 33035
4.	Application Responsible Official Telephone Numbers Telephone: (305) 242-3822 ext. Fax: (305) 242-3821
5.	Application Responsible Official Email Address: ed_nunez@fpl.com
6.	Application Responsible Official Certification:
	I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. 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 and all other applicable requirements identified in this application to which the Title V source is subject. 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 the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

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Pro	ofessional Engineer Certification			
1.	Professional Engineer Name: Kathryn S Salvador			
	Registration Number: 54726			
2.	Professional Engineer Mailing Address			
	Organization/Firm: Florida Power & Light Co. / Environmental Services Dept.			
	Street Address: 700 Universe Blvd.			
	City: Juno Beach State: FL Zip Code: 33408			
3.	Professional Engineer Telephone Numbers			
	Telephone: (561) 691 - 7054 Fax: (561) 691 - 7049			
4.	Professional Engineer Email Address: kathy_salvador@fpl.com			
5.	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.			
	(3) If the purpose of this application is to obtain a Title V 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 plan and schedule is submitted with this application.			
	(4) If the purpose of this application is to obtain an air construction permit (check here X , if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here \square , 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.			
	(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal 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.			
	Kuthen S Jahrada 12/11/06 Signature Date			
	(seal)			

* Attach any exception to certification statement.

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A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates			2. Facility Latitude/Longitude		
	Zone 17 East (km)			Latitude (DD/MM/SS)	
North (km)			Longitude (DD/MM/SS)		
3.	3. Governmental 4. Facility Status		5.	Facility Major	6. Facility SIC(s):
	Facility Code: Code:			Group SIC Code:	
	0	A		49	4911

7. Facility Comment:

Project consists of four 170-MW dual fuel, GE Frame 7FA CT/HRSGs that will use dry low-nitrogen oxide combustion technology when firing natural gas and water injection when firing distillate fuel oil, along with selective catalytic reduction (SCR). Each CT/HRSG will operate up to 8,760 hr/yr. Current facility Title V Permit No. 0250003-005-AV.

Facility Contact

1. 1	Faci	litv	Contact	Name:
------	------	------	---------	-------

Gary Andersen, Environmental Specialist

2. Owner/Authorized Representative Mailing Address...

Organization/Firm: Florida Power & Light, Turkey Point Fossil Plant

Street Address: 9700 SW 344th Street City: Homestead

State: **FL**

Zip Code: **33035**

3. Facility Contact Telephone Numbers:

Telephone: (305) 242-3826

ext. Fax:

(305) 242-3821

4. Facility Contact Email Address:

Facility Primary Responsible Official

Complete if an "application responsible official" is identified in Section 1. that is not the facility "primary responsible official."

1.	Facility Prin	nary Responsible Office	cial Name: I	I.O. Nun	ez
	-	nary Responsible Office	_		
Or	ganization/Fi	rm: Florida Power & I	Light, Turkey	y Point Fo	ossil Plant
	Street A	ddress: 9700 SW 344t	h Street		
		City: Homestead	State:	FL	Zip Code: 33035
3.	Facility Prin	nary Responsible Offic	cial Telephon	e Number	·S
	Telephone:	(305) 242-3822	ext.	Fax:	(305) 242-3821
4.	Facility Prin	nary Responsible Offic	ial Email Ad	dress: ed	_nunez@fpl.com

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Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a "major source" and a "synthetic minor source."

1. Small Business Stationary Source Unknown
2. Synthetic Non-Title V Source
3. X Title V Source
4. X Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)
5. Synthetic Minor Source of Air Pollutants, Other than HAPs
6. X Major Source of Hazardous Air Pollutants (HAPs)
7. Synthetic Minor Source of HAPs
8. X One or More Emissions Units Subject to NSPS (40 CFR Part 60)
9. One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)
10. X One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)
11. Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))
12. Facility Regulatory Classifications Comment: CT and HRSGs are subject to NSPS Subpart GG and Da, respectively. CT may be subject to NESHAPS under YYYY.

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List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	A	N
PM ₁₀	A	N
VOC	A	N
SO ₂	A	N
NO _x	A	N
СО	A	N

B. EMISSIONS CAPS

Facility-Wide or Multi-Unit Emissions Caps

Tuelity Wide	or water clift	emissions Caps			
1. Pollutant Subject to Emissions	2. Facility Wide Cap	3. Emissions Unit ID No.s Under Cap	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap
Cap	[Y or N]? (all units)	(if not all units)			
		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
<u> </u>					
					-
					<u> </u>
/. Facility-W	ide or Multi-Uni	t Emissions Cap C	omment:		

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C. FACILITY ADDITIONAL INFORMATION

Additional Requirements for All Applications, Except as Otherwise Stated

1.	Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the
	previous five years and would not be altered as a result of the revision being sought)
	Attached, Document ID: X Previously Submitted, Date: 11/5/2003
2.	Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought)
	Attached, Document ID: X Previously Submitted, Date: 11/5/2003
3.	Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) Attached, Document ID: Previously Submitted, Date: 11/5/2003
<u>Ac</u>	Iditional Requirements for Air Construction Permit Applications
1.	Area Map Showing Facility Location:
	Attached, Document ID: X Not Applicable (existing permitted facility)
2.	Description of Proposed Construction, Modification, or Plantwide Applicability Limit
	(PAL):
	Attached, Document ID:
3.	Rule Applicability Analysis: Attached, Document ID:
4.	List of Exempt Emissions Units (Rule 62-210.300(3), F.A.C.):
	Attached, Document ID: Not Applicable (no exempt units at facility)
5.	Fugitive Emissions Identification:
	Attached, Document ID: X Not Applicable
6.	Air Quality Analysis (Rule 62-212.400(7), F.A.C.):
	Attached, Document ID: X Not Applicable
7.	Source Impact Analysis (Rule 62-212.400(5), F.A.C.):
	Attached, Document ID: Not Applicable
8.	Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.):
	Attached, Document ID: X Not Applicable
9.	Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.):
	Attached, Document ID: X Not Applicable
10	. Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.):
	Attached, Document ID: Not Applicable

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Additional Requirements for FESOP Applications 1. List of Exempt Emissions Units (Rule 62-210.300(3)(a) or (b)1., F.A.C.): Attached, Document ID: Not Applicable (no exempt units at facility) Additional Requirements for Title V Air Operation Permit Applications 1. List of Insignificant Activities (Required for initial/renewal applications only): Attached, Document ID: Not Applicable (revision application) 2. Identification of Applicable Requirements (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought): Attached, Document ID: Not Applicable (revision application with no change in applicable requirements) 3. Compliance Report and Plan (Required for all initial/revision/renewal applications): Attached, Document ID: Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing. 4. List of Equipment/Activities Regulated under Title VI (If applicable, required for initial/renewal applications only): Attached, Document ID: Equipment/Activities On site but Not Required to be Individually Listed ☐ Not Applicable 5. Verification of Risk Management Plan Submission to EPA (If applicable, required for initial/renewal applications only): Attached, Document ID:_____ Not Applicable 6. Requested Changes to Current Title V Air Operation Permit: Attached, Document ID: Not Applicable **Additional Requirements Comment**

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SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS A. UNIT 5 COMBINED CYCLE GAS TURBINE (EUs 005, 006, 007, AND 008)

FPL Proposes the following changes to the Turkey Point Combined Cycle Unit 5 Air Construction Permit:

- 15. Excess Emissions Allowed: As specified in this condition, excess emissions resulting from startup, shutdown, oil to-gas fuel switches and documented malfunctions are allowed provided that operators employ the best operational practices to minimize the amount and duration of emissions during such incidents. A "documented malfunction" means a malfunction that is documented within one working day of detection by contacting the Compliance Authority by telephone, facsimile transmittal, or electronic mail. For each gas turbine/HRSG system, excess emissions resulting from startup, shutdown, or documented malfunctions shall not exceed two hours in any 24-hour period except for the following specific cases.
 - a. For cold startup of the steam turbine system, excess emissions from any gas turbine/HRSG system shall not exceed six eight hours in any 24-hour period. Cold startup of the steam turbine system shall be completed within twelve hours. A cold "startup of the steam turbine system" is defined as startup of the 4-on-l combined cycle system following a shutdown of the steam turbine lasting at least 48 hours.
 - {Permitting Note: During a cold startup of the steam turbine system, each gas turbine/HRSG system is sequentially brought on line at low load to gradually increase the temperature of the steam-electrical turbine and prevent thermal metal fatigue. Note that shutdowns and documented malfunctions are separately regulated in accordance with the requirements of this condition.}
 - b. For shutdown of the combined cycle operation, excess emissions from any gas turbine/HRSG system shall not exceed three hours in any 24-hour period.
 - c. For cold startup of a gas turbine/HRSG system, excess emissions shall not exceed four hours in any 24- hour period. "Cold startup of a gas turbine/HRSG system" is defined as a startup after the pressure in the high-pressure(HP) steam drum falls below 450 psig for at least a one-hour period.
 - d. For oil-to-gas fuel switching excess emissions shall not exceed 1 hour 2 hours in any 24-hour period.

Ammonia injection shall begin as soon as operation of the gas turbine/HRSG system achieves the operating parameters specified by the manufacturer. As authorized by Rule 62-210.700(5)F, .A.C., the above conditions allow excess emissions only for specifically defined periods of startup, shutdown, fuel switching, and documented malfunction of the gas turbines. [Design; Rules 62-212.400(BACT) and 62-210.700, F.A.C.].

SECTION III. EMISSIONS UNIT SPECIFIC CONDITIONS B. DISTILLATE FUEL OIL STORAGE TANK (EU 009)

FPL Proposes the following changes to the Turkey Point Combined Cycle Unit 5 Air Construction Permit:

This section of the permit addresses the following emissions unit.

ID	Emission Unit Description
009	One distillate fuel oil storage tank for Unit 5 gas turbines (approximately4 .2 million gallons)

NSPS APPLICABILITY

1. NSPS Subpart Kb Applicability: The distillate fuel oil tanks are not subject to Subpart Kb, which applies to any storage tank with a capacity greater than or equal to 10,300 gallons (40 cubic meters) that is used to store volatile organic liquids for which construction, reconstruction, or modification is commenced after July 23, 1984. Tanks with a capacity greater than or equal to 40,000 gallons (151 cubic meters) storing a liquid with a maximum true vapor pressure less than 3.5 kPa are exempt from the General Provisions (40 CFR 60, Subpart A) and from the provisions of NSPS Subpart Kb,. [40 CFR 60.110b(a) and (c); Rule 62-204.800(7)(b), F.A.C.]

The listed emission units shall comply with 40 CFR 60, Subpart Kb only to the extent that the regulations apply to the emission unit and its operations.

EQUIPMENT SPECIFICATIONS

2. Equipment: The permittee is authorized to install, operate, and maintain two 6.3 million gallon distillate fuel oil storage tank designed to provide ultra low sulfur fuel oil to the gas turbines.

[Applicant Request; Rule 62-210.200(PTE), F.A.C.]

EMISSIONS AND PERFORMANCE REQUIREMENTS

3. <u>Hours of Operation</u>: The hours of operation are not restricted (8760 hours per year). [Applicant Request; Rule 62-210.200(PTE), F.A.C.]

NOTIFICATION, REPORTING AND RECORDS

- 4. Oil Tank Records: The permittee shall keep readily accessible records showing the dimension of each storage vessel and an analysis showing the capacity of each storage tank. Records shall be retained for the life of the facility. The permittee shall also keep records sufficient to determine the annual throughput of distillate fuel oil for each storage tank for use in the Annual Operating Report. [Rule 62-4.070(3) F.A.C]
- 5. Fuel Oil Records: The permittee shall keep readily accessible records showing the maximum true vapor pressure of the stored liquid. The maximum true vapor pressure shall be less than 3.5 kPa. [62-4.070(3) F.A.C.]

{Permitting Note: An evaluation of several Material Safety Data Sheets (MSDS) by the Department and applicant demonstrated that the vapor pressure is much less than 3.5 kPa for ultralow sulfur fuel oil.

Compliance with this condition may be demonstrated by using the information from the respective MSDS for the ultra low sulfur fuel oil(s) stored in the tanks.}